KT4D
Knowledge Technologies for Democracy

Framework for Democratic AI Governance

Roadmap and recommendations for European policymakers

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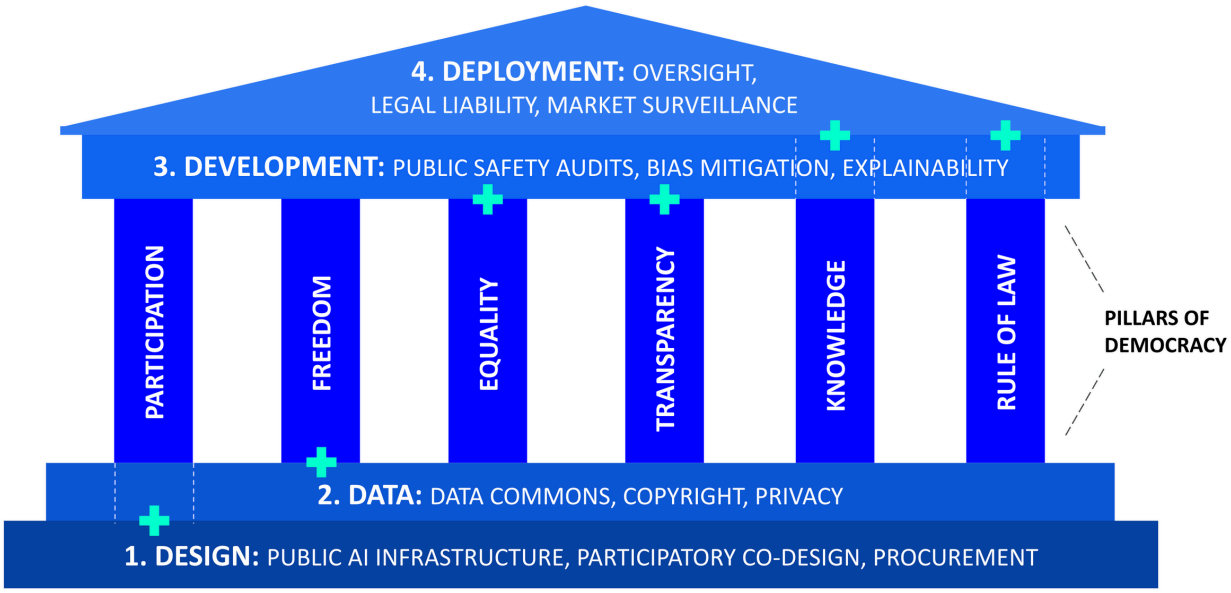
1. Reclaiming democratic agency in AI governance

While the European Union has pioneered regulation of artificial intelligence (AI), a dangerous gap is widening globally between legal ambition and governing reality. We stand at a critical crossroads: the governance of AI is being dictated by **rapid technological development and concentration of power rather than public deliberation.** As power consolidates in the hands of a few private AI companies, democratic oversight is slipping. In response, policy must actively reclaim the technology for democratic and public good. Yet, current policies fall short as they:

- **Intervene too late** by reactively focusing on the deployment of AI systems, treating symptoms rather than causes of democratic harms
- **Lack the capacity** to safeguard fundamental rights when the infrastructure, data, and compute underpinning AI systems remain privately controlled
- **Fail to address** broader systemic threats to the public sphere and information integrity by treating AI as a mere consumer product.

Accepting this challenge, we present **a framework for democratic governance of AI that embeds the key pillars of democracy into every stage of the AI lifecycle:** design, data, development and deployment. While democratic impacts are most visible when AI systems are deployed in society (e.g., spreading of disinformation), such safeguards ought to cover the whole lifecycle of the technology. Failing to do so risks delegating upstream design choices to private corporations with limited accountability, entrenching democratic deficits long before systems reach the public. Hence, democratic pillars must cut across every layer of AI governance, starting from the infrastructure underlying the technology, so that **democratic safeguards are built in by default**. This structure is visualized in the framework below.

Layers of democratic AI governance



To implement the framework in practice, this brief presents a policy roadmap and a list of concrete governance recommendations for European policymakers, co-created with AI policy experts as part of the KT4D (2023-2026) project.

The roadmap consists of five policy categories, outlining how AI can be governed not only to safeguard but reinforce democracy by 2035: regulatory enforcement, public AI infrastructure, investments and innovation, AI literacy as well as research and standards. With substantial investments into the AI ecosystem, the roadmap also gives the private sector the certainty and resources needed for democratic values to serve as a competitive driver of European innovation. In what follows, the policy brief will: 1) outline the risks current AI development poses to democracy, 2) propose a framework for democratic governance across the lifecycle of AI systems, and 3) present a practical policy roadmap for EU policymakers to position Europe as a model for public-interest AI innovation.

2. Democratic threads across the AI lifecycle

Impact of AI on pillars of democracy

The rapid and opaque deployment of AI is fundamentally disrupting democratic systems. Widespread integration of AI systems into society generates systemic economic and psychological tensions that threten to compromise democratic agency. Most importantly, from a democratic perspective, AI and big data threaten to significantly centralize power to a few large AI companies. This power spans monopolistic control of data collection and compute resources, dominance over public information platforms, ownership of critical technological infrastructure (such as undersea cables and data centres), and growing influence over state institutions.

We analyse the impact of AI on democracy through six key pillars. The pillars – participation, freedom, equality, rule of law, knowledge, and transparency – represent the core elements of democracy that AI technologies affect and intersect with. Figure 1 maps the **dual nature of AI technologies,** identifying risks and opportunities for each pillar of democracy. For example, democratic participation is threatened by power concentration, while AI can be used to enhance citizen deliberation at the same time. Surveillance and algorithmic biases have also been widely recognized as risks that undermine democratic values like freedom and equality. Yet even in this context, AI systems could be used to identify existing social discrimination, track the use of power and advance equality through algorithmic fairness.

While most of these opportunities depend on how AI systems are used, approaching AI as a neutral tool is an overly narrow perspective. We should rather understand AI as sociotechnical systems, where the technology interacts with the social context in which it is deployed. From the perspective of democracy, these structural and indirect risks appear to be the most problematic. For instance, it might be the diminishing epistemic agency of citizens as they become more reliant on AI systems, rather than direct electoral manipulation that poses the greatest threat to democratic participation. Nevertheless, this does point to an important divergence: **the risks of AI systems tend to emerge spontaneously, whereas conscious efforts are required to advance democracy through AI.**

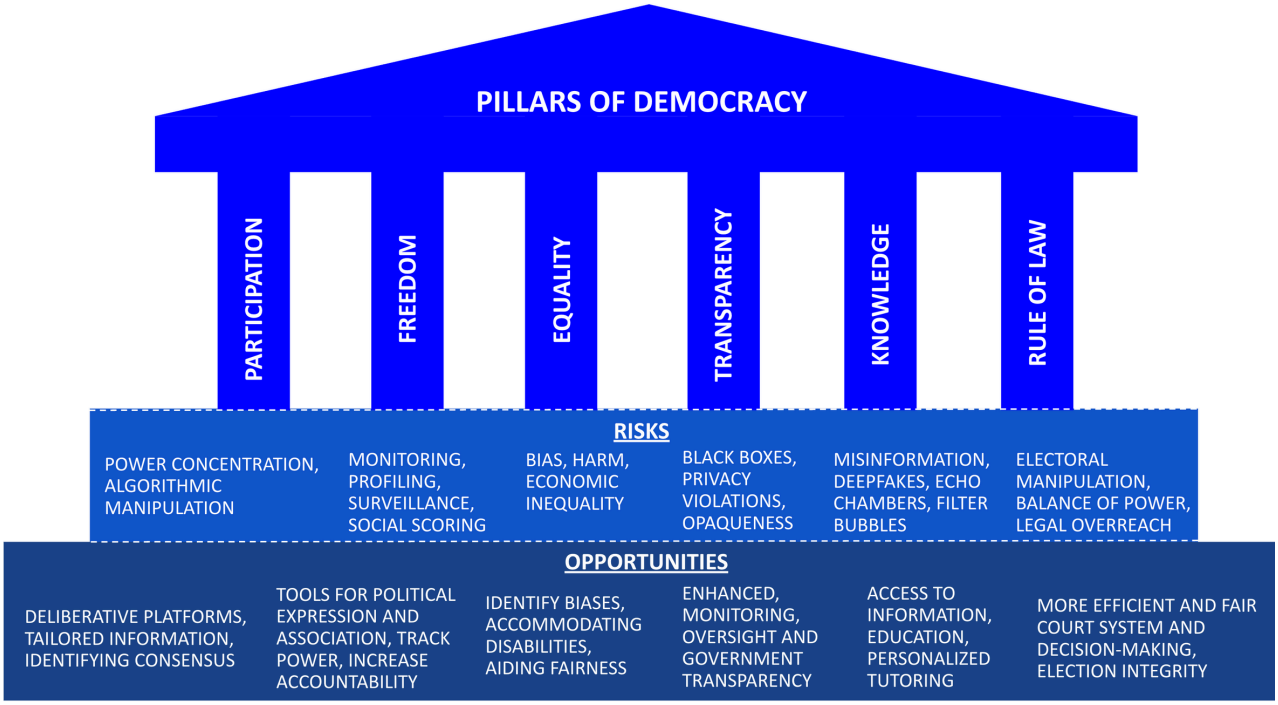


Figure 1 – Pillars of democracy and how they are potentially affected by AI.

AI governance across the lifecycle of systems

To truly understand how AI impacts democracy, one should consider the stages of the AI lifecycle. **Different parts of the AI lifecycle pose distinct threats to democracy,** requiring different governance approaches to be tackled. Identifying specific intervention points, such as privacy or compute governance, along the lifecycle of AI systems can reveal the most effective stages to address different democratic harms.

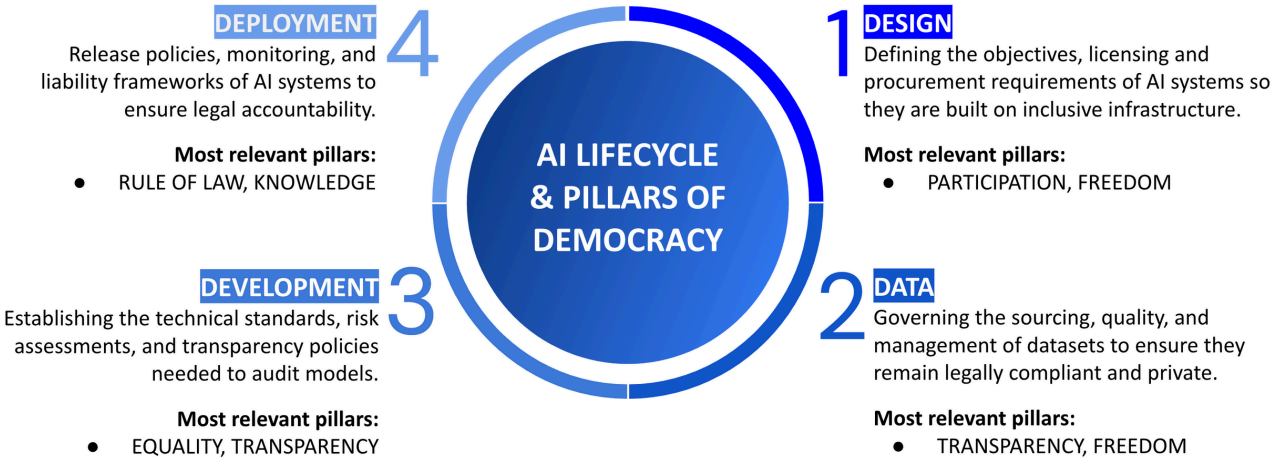


Figure 2 – Illustration of how pillars of democracy intersect with AI lifecycle.

A standard lifecycle of AI systems can be depicted as consisting of four stages: 1) Design and requirements setting, 2) Training data collection and processing, 3) Model development and training, and 4) Deployment of the system. As outlined, different policy and governance domains are relevant depending on the lifecycle stage in question:

- **Design:** Pre-design and procurement, compute governance & licensing, digital public infrastructure, participatory design requirements
- **Data:** Data quality criteria, copyright legislation, privacy governance
- **Development:** Safety & risk assessment standards, bias mitigation, explainability and transparency policies, model audits and evaluation
- **Deployment:** Staged release and access policies, monitoring and oversight, liability and legal remedies, competition and market legislation

The six fundamental pillars of democracy can be mapped to the relevant stages of the AI lifecycle (see Figure 2) to identify which governance mechanisms are particularly critical in supporting these pillars.

Combining pillars of democracy and the AI lifecycle

Notably, **different stages of the AI lifecycle do not impact democratic values equally.** For instance, development practices are especially relevant for equality and transparency pillars whereas deployment most affects the rule of law. There are also considerable interdependencies between the pillars and AI lifecycle as governance failures at early stages like biased data can easily cascade into downstream harms. Moreover, different stages of the AI lifecycle are not isolated but part of an interactive process where decisions at 'later stages' can also retroactively affect 'earlier stages' (e.g., redesign based on deployment feedback).

Figure 3 summarizes these findings into an overall framework that combines pillars of democracy with the AI lifecycle. **Democratic AI governance can be seen as consisting of four layers of AI lifecycle that build on top of each other, with the pillars of democracy cross-cutting them.** Yet as noted, some pillars are more closely connected to certain stages of the AI lifecycle than others.

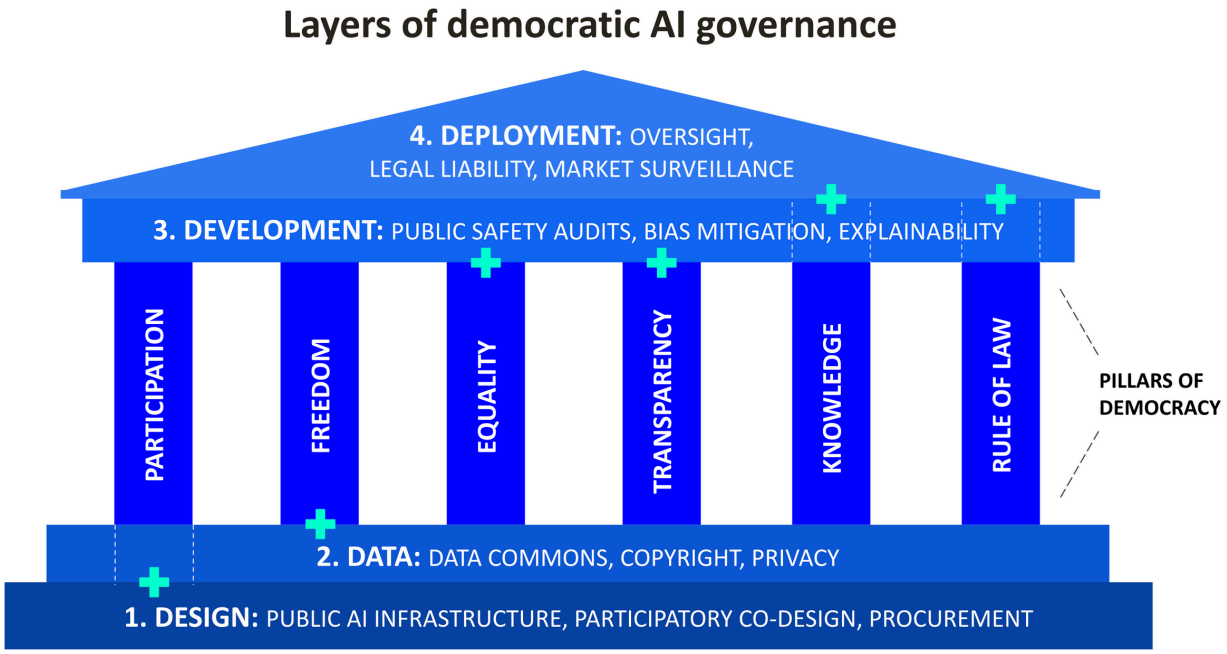


Figure 3 – How different layers of the AI lifecycle relate to pillars of democracy, with the strongest connections marked with a + sign.

This mapping of democratic pillars in relation to the AI lifecycle illustrates the importance of deployment policies for safeguarding democracy, as this is the stage where societal and democratic effects of AI systems actualize in practice. However, merely focusing on deployment risks disregarding earlier stages of the AI lifecycle, where significant design and development decisions are already made. This includes the values and objectives steering the development of AI systems in the first place, such as participation and freedom. The procedural aspect of **democracy is challenging to realize if all of the digital infrastructure that grounds the modern public sphere is owned by private platforms** and large technology companies with profit incentives. Therefore, when assessing the democratic implications of AI, there is a need to holistically evaluate the entire lifecycle of AI systems, starting from the infrastructure and design considerations that underlie the AI build-up.

3. Roadmap to implement the framework in European AI governance

The framework has particular relevance for the **European Union, which currently lacks the sovereign AI infrastructure necessary for democratic governance.** In an increasingly polarized geopolitical landscape, defined by the US laissez-faire model and China's state-centric approach to AI, the EU has sought a third way by prioritizing digital regulations like the AI Act. By leveraging the Brussels effect, the EU seeks to position itself as a global standard-setter in AI regulation. However, this focus on risk-based product legislation might fail to address the broader sociotechnical and infrastructural issues AI presents. It is crucial to consider how AI algorithms reshape the social fabric as part of digital platforms, posing systemic risks to democratic participation. Yet, such vision is under threat: since 2025, EU policy has shifted away from trustworthiness toward deregulation, driven by the pressures of economic competitiveness and geopolitical ruptures.

To implement the framework for democratic AI governance in the EU context, we outline a policy roadmap with key recommendations and interventions for European policymakers. We used background research and co-creation with AI policy experts to develop the roadmap around five AI policy tracks: **regulatory enforcement, public AI infrastructure, investments and innovation, AI literacy as well as research and standards.** The roadmap is organized into a sequence of short-, mid- and long-term policy actions, which support the goal of AI strengthening democracy by 2035.

Short-term 2026–2028: Enforcing regulation & building public AI infrastructure

- This phase focuses on defending and enforcing existing regulation while initiating build-up of public AI infrastructure. It recognises that democratic AI governance depends not only on rules and standards, but on digital sovereignty across the technical stack itself, alongside sufficient public-sector capacities to implement, oversee, and enforce regulation in practice.

Mid-term 2029–2032: Democratic adoption

- As European AI infrastructure matures, this phase emphasises democratic AI adoption. Democratic safeguards move from isolated requirements to default practices embedded across the AI lifecycle through capable institutions, aligned incentives, and public accountability. Democratic practices at this stage ensure that the public infrastructure and regulatory frameworks are not co-opted by private interests.

Long-term 2033–2035: Exercising AI sovereignty

- At this point public AI infrastructure and democratic practices converge, enabling public oversight of AI. It centres on establishing AI sovereignty, understood as the ability of citizens and public institutions to meaningfully govern critical AI infrastructures, data, and capabilities rather than remaining dependent on external, commercial actors. It is only as public AI infrastructure and democratic participation meet that democratic AI governance becomes possible.

An overview of the roadmap is provided in Figure 4, outlining how the vision of stronger democracies through AI could be actualised across the three successive timeframes.

2035 vision: AI strengthens rather than undermines democracy

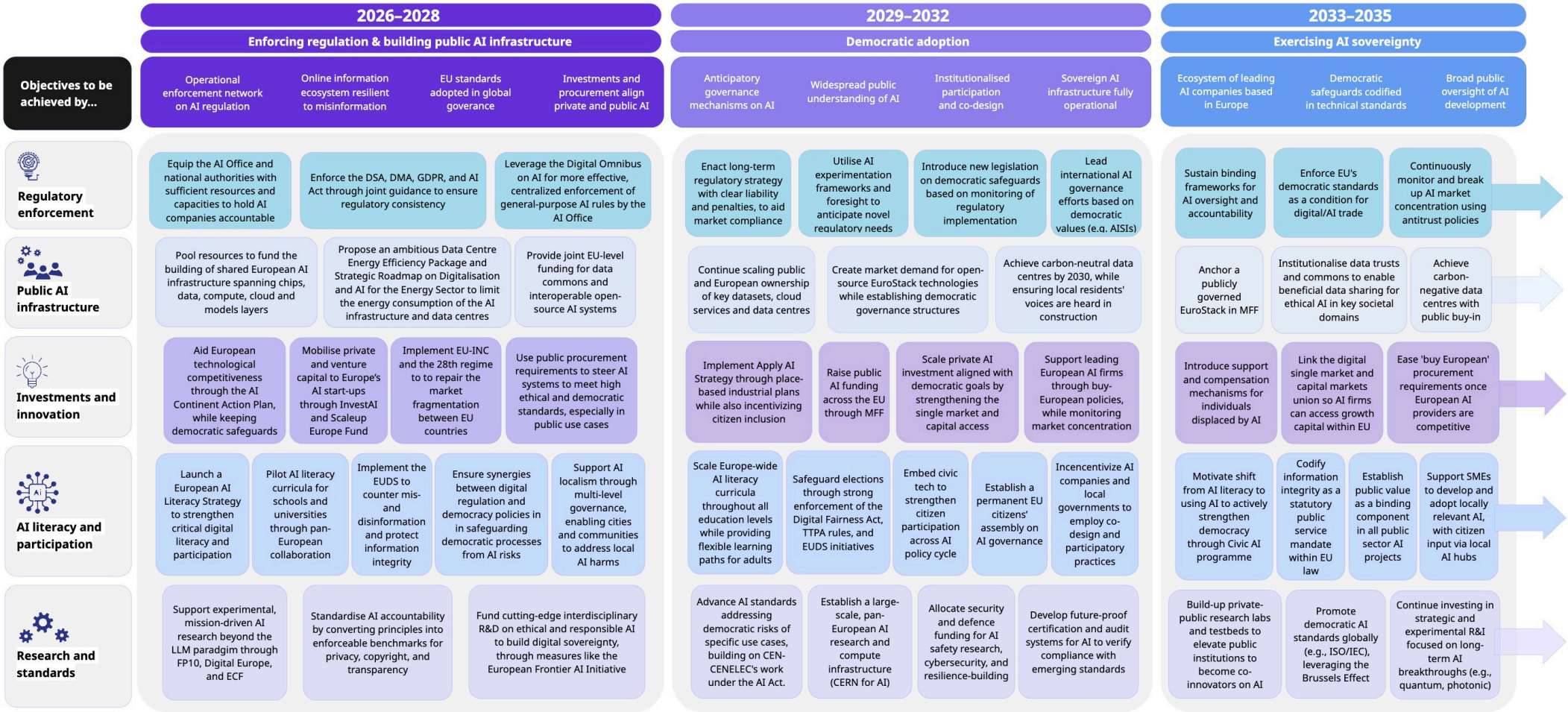


Figure 4 – Visualisation of the policy roadmap, detailing policy actions to be taken between 2026 and 2035 to advance democratic AI governance in Europe.

In the short-term, the roadmap proposes the following recommendations for the EU over the next three years:

Regulatory enforcement:

- **Build regulatory enforcement capacity by providing sufficient resources, training and tools** for the Commission's AI Office and national authorities to hold AI companies accountable and protect democratic values, as full enforcement powers of the AI Act kick-in 2026 and 2027.

- **Enforce the DSA, DMA, GDPR and AI Act (including Code of Practice) in coordination through joint guidance and supervision** to streamline overlapping obligations and ensure these rules apply consistently across platforms and AI systems (e.g., FRIA and systemic risk requirements) .

- **Leverage the Digital Omnibus on AI for more effective, centralized enforcement of general-purpose AI rules** by the AI Office (including algorithms by VLOPs/SEs) and expanded pre-market conformity testing of high-risk systems.

Public AI infrastructure:

- **Fund the building of shared European AI infrastructure through pooled resources,** following the Eurostack model, including chips, data, compute, cloud, and model layers to reinforce EU's digital sovereignty, while also including provisions for their public use.

- **Ensure joint EU-level funding for development of data commons, interoperable open-source AI** systems and scaffolding as part of EU Open Source agenda to reduce dependency on private, proprietary systems (e.g., through Digital Commons EDIC).

- **Propose an ambitious Data Centre Energy Efficiency Package** and Strategic Roadmap on Digitalisation and AI for the Energy Sector to limit the energy consumption of the AI infrastructure and data centres to a sustainable, net zero trajectory.

Investments and innovation:

- **Aid European technological competitiveness while enforcing democratic safeguards** by implementing the AI Continent Action Plan initiatives like the Apply AI Strategy, Cloud and AI Development Act and Data Union Strategy.

- **Mobilise private equity and venture capital for investments into the ecosystem of European AI start-ups, scale-ups and SMEs through** initiatives like the InvestAI and Scaleup Europe Fund.

- **Advance the digital single market and unified capital markets in the EU through** structures such as the EU-INC and 28th regime to repair the fragmentation between European countries.

- **Use public procurement conditions to steer AI systems to meet high ethical and democratic standards (e.g., transparency, explainability),** especially in public use cases, and mandate "Buy European" rules where appropriate to aid fair competition against hyperscaler companies.

AI literacy and participation:

- **Launch a European AI literacy strategy under the European Democracy Shield (EUDS)** to strengthen critical digital literacy, skills, and participation across population groups, while also funding civil society organisations and communities on work democratizing AI.

- **Develop and pilot AI literacy curricula for schools and universities** through pan-European collaboration, aligning teacher guidelines on disinformation and digital literacy, while coupling this with efforts to support open-source and citizen coding initiatives.

- **Implement the actions within the European Democracy Shield to counter misinformation** and disinformation and safeguard the integrity of the information space by establishing the European Centre for Democratic Resilience and strengthening civic tech innovations in the EU.

- **Ensure synergies between the digital regulation (AI Act, DSA) and democracy policies,** including the EUDS, European Media Freedom Act, Digital Fairness Act, and Transparency and Targeting of Political Advertising (TTPA) regulation in safeguarding free and fair elections from risks of AI.

- **Support AI localism through a distributed, multi-level governance approach,** so that cities and local communities can play an active role in addressing governance gaps left from the EU-level, e.g., through city AI registers that allow for citizen-led oversight and audits of AI systems.

Research and standards:

- **Support experimental and novel research on emerging technologies that extends beyond current LLM paradigm** through DARPA-like mission-driven innovation policy under the FP10, Digital Europe programme and ECF, prioritising explainable and low-carbon AI approaches.

- **Fund cutting-edge interdisciplinary research and development on democratic and responsible AI** to build digital sovereignty through cross-national measures like the European Frontier AI Initiative, augmenting existing networks of excellence like ELLIS and RAISE programme.

- **Standardize AI accountability by converting broad regulatory principles into accessible, enforceable benchmarks** for privacy, copyright and transparency, fit for evaluating democratic implications of AI, building on the AI Act and GPAI CoP.

In conclusion, democratic AI governance requires holistic efforts across multiple policy areas to encompass the entire technological lifecycle, ranging from infrastructure to deployment of AI. Rather than focusing solely on direct electoral manipulation, governance must address the structural risks posed to democracy. Such risks manifest throughout the AI lifecycle, requiring upstream policy efforts instead of mere downstream regulation. These recommendations seek to ensure that different dimensions of democracy like transparency and participation are not merely theoretical ideals but operational realities of AI governance.

While we call for the EU to strengthen its AI sovereignty, this should not mean the securitization of digital policy. If sovereignty is used merely to legitimize deregulation or to replace foreign hyperscaler companies with domestic ones, Europe will only undermine the democratic values it seeks to protect. In other words, digital sovereignty should not come at the price of rights-based governance. This can be enabled through shared European initiatives founded on open, auditable, and public AI infrastructure. **By upholding fundamental rights alongside infrastructure investments, Europe can transcend the US-China binary and position itself as a model for public-interest innovation – one that walks the talk.**

This policy brief is based on the Knowledge Technologies for Democracy (KT4D) project Deliverable 5.1: Framework for Democratic AI Governance, which can be found on **the KT4D website**.

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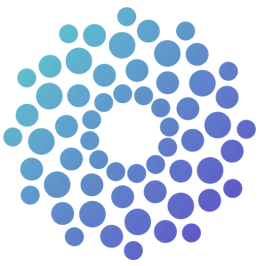

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