European digital sovereignty requires a wide adoption of open source principles

- Jarosław Kopeć, Instrat (Poland) - jaroslaw.kopec@instrat.pl
- Maria Drabczyk, Centrum Cyfrowe (Poland)

With support from:

- Jakub Orlik, "Internet. Time to act!" Foundation (Poland)

1. Introduction

In order for the European Union's effort to build a sovereign digital ecosystem to succeed, the EU's digital strategy has to be based on the principles of open source. Thus, both Instrat and Centrum Cyfrowe share the view that expanding the current Open Source Software Strategy (2020-2023) to cover more areas of the Commission's activities (including those aimed at impacting the whole European economy, not just the operations of the Commission itself) is essential to reduce dependence on non-EU vendors, increase transparency, and strengthen European values such as privacy, collaboration, climate responsibility and competitiveness.

Recent political developments reinforce this need. The European Parliament resolution of 22 January 2026 (2025/2007(INI)) defines technological sovereignty as the ability to "build capacity, resilience and security by reducing dependencies, preventing reliance on foreign actors and single service providers." It highlights the concentration of power in non-EU companies as a barrier to innovation and democratic control.

In line with the Tallinn Declaration (6 October 2017) and the EU's AI strategies, we propose concrete actions that will make open source the default choice for public procurement, research funding and digital services.

2. Open-source as a default

2.1 Benefits from wide adoption of open-source

1. **Transparency & Trust** – Open source code can be audited by government bodies, NGOs, academia and citizens, allowing all kinds of third parties to verify whether particular solutions respect the privacy safeguards and comply with European values and laws.
2. **Interoperability** – Proliferation of shared, openly licensed components and standards simplify data exchange between applications, fostering a common digital market with less lock-ins and gatekeeping.
3. **Innovation** – Thriving ecosystem of open source solutions lowers the entry barriers for new firms, encouraging innovative solutions.
4. **Healthy competition** – In the ecosystem with robust open source libraries, companies compete on quality and features rather than fend off the competition by locking in their users, which accelerates overall sector growth.

2.2 Recommendations

1. **Make Open-Source a Default Requirement in Public Tenders and Funding Schemes** – Require bidders and participants to (a) use open-source solutions where feasible, (b) publish results as open-source, and (c) commit to releasing any improvements upstream.
2. **Fund Core Technologies** – Map the strategic sectors dominated by non-EU actors (e.g., cloud, AI, social media, data analytics) and set up schemes to fund the development and deployment of open-source, interoperable alternatives.

These measures will help the Commission turn open-source adoption into a measurable driver of digital sovereignty.

3. Open-Source for Research, Culture & AI

3.1 Current Challenges

- **Black-Box Dominance** – Critical digital services rely on proprietary platforms owned by a few global tech giants, creating a sovereignty gap.
- **Language and Culture Bias** – Commercial AI models treat European languages, including Polish, as "low-resource," leading to cultural inaccuracies.

- **Carbon Cost** – Large closed-source models consume disproportionate amounts of energy, conflicting with the European Green Deal.

3.2 Benefits of an Open-Source Approach

- **Reproducibility & Education** – Researchers can inspect, modify and share code, improving scientific rigor and training the next generation of engineers.
- **Public-Private Collaboration** – Shared infrastructure enables universities and SMEs to co-develop models on public data and super-computing resources.
- **Energy Efficiency** – Smaller, specialised open-source models deliver comparable performance in particular contexts at a fraction of the carbon cost.

3.3 Recommendations

1. **Invest in Democratically Governed Public Infrastructure** – Build and maintain open-source platforms that serve the public interest rather than corporate profit.
2. **Provide Legal Clarity for Public-AI Training** – Confirm that Article 3 of the CDSM Directive applies to publicly funded AI model training, reducing uncertainty for researchers. Europe should not only regulate AI but also enable it by maintaining a balance between research and rights holders.
3. **Fund "Small Language Models" (SLMs)** – Prioritise European made, energy-efficient, open-source models tailored to national languages and sector-specific use cases (e.g., Poland's *Bielik* and *PLLuM* - see attached report for details).
4. **Create European Data Commons** – Establish European high-quality, multilingual text corpora that are freely accessible to open-source projects to reduce barriers for developing sovereign AI.
5. **Support Community-Public Synergies** – Encourage collaborative development of models like *SpeakLeash*, where grassroots groups partner with academic computing centres. The EU should champion this "community-public" synergy as a viable alternative to Big Tech dominance.
6. **Mandate Open-Source in Public Procurement of AI** – Require that AI systems used by administrations expose their weights and source code, enabling independent audits and avoiding vendor lock-in.

4. Joint Conclusion

By embedding the open-source principles in policies addressing the economy, public administration, research, culture and AI, the EU can:

- Reduce strategic dependencies on non-EU providers.
- Enhance transparency, accountability and citizen trust.

- Strengthen collaboration and knowledge distribution between various European sectors
- Foster a competitive, innovative digital market that respects European values and environmental goals.

We therefore urge the Commission to adopt the recommendations above and to embed open-source as a cornerstone of the forthcoming European Open-Source Strategy.

5. Attachments

- Report: AI speaks Polish. The ecosystem of open language models in Poland [English]
- Zamówienia na pozór otwarte. Nierówne szanse producentów oprogramowania w zamówieniach publicznych polskiej administracji [Polish]