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AI AND GENAI ADOPTION BY LOCAL AND REGIONAL ADMINISTRATIONS

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TRILATERAL RESEARCH
Ethical AI

Aim and approach to the study

Artificial Intelligence (AI) is **integrated in several sectors of society** and its role and influence on economic and social domains are expected to increase in the years to come. The AI Act, adopted on 21 May 2024, marks a turning point in ensuring responsible AI use across Europe.

In this respect, there is much potential for the fruitful exploitation of AI by the **public sector**. Despite to date, it is noted that AI is most widely employed at national level across Europe, exploitation of AI by local and regional authorities (LRAs) – as the closest level to citizens - is essential to foster the spreading and public acceptance of this technology.

With the aim of delving deeper into the **opportunities and challenges** that European subnational authorities face with respect to AI and GenAI technologies, this study draws and expands on research conducted to date on their adoption at local and regional level.

MIXED-METHODS APPROACH

- Desk research and literature review
- Data collection through a survey and interviews

INITIATIVES AND CASE STUDIES

Analysis of eight case studies of LRAs implementing AI to understand best practices and challenges

The recommendations

To foster responsible and effective AI adoption across LRAs, the study proposes eight recommendations highlighting the following key areas for action:

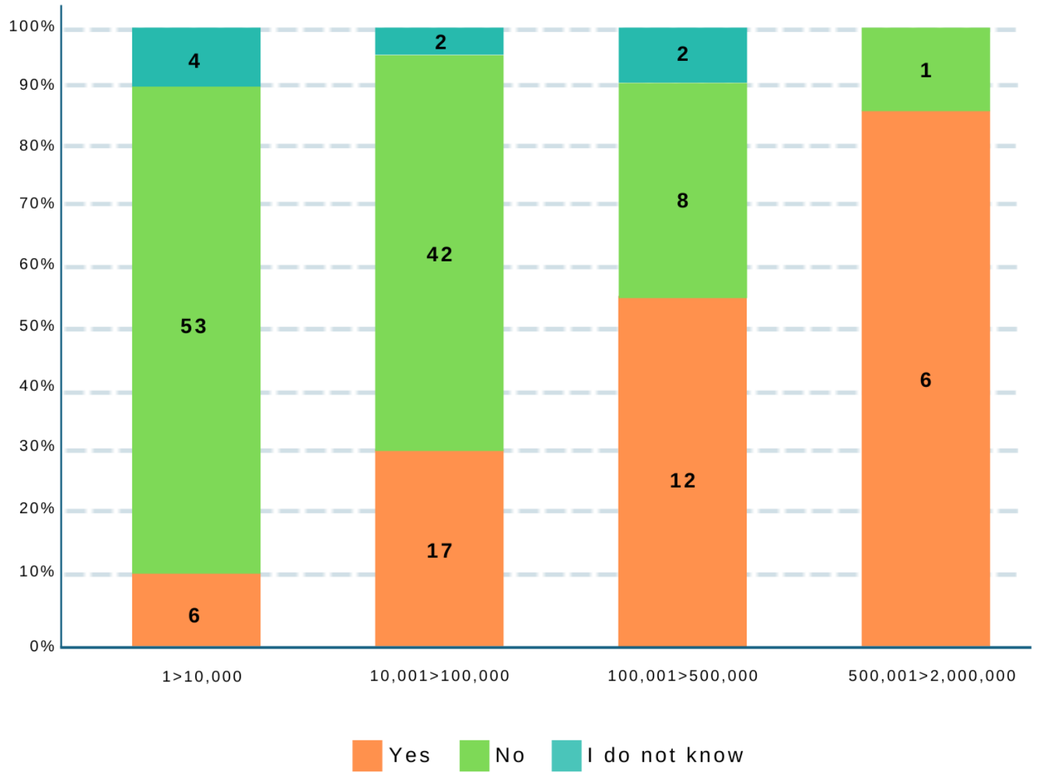
1. **AI Governance & Monitoring** – Establishing standardised frameworks and KPIs to assess AI impact and effectiveness.
2. **Citizen Engagement & Transparency** – Ensuring inclusive AI adoption through co-creation, public consultation, and trust-building mechanisms.
3. **Testing & Innovation Environments** – Promoting controlled environments, such as test beds and regulatory sandboxes, to support AI experimentation.
4. **Digital Inclusion & Accessibility** – Addressing the digital divide through training and affordable access to AI tools.
5. **Cross-Sector Collaboration** – Facilitating partnerships between public, private, and academic sectors to enhance AI expertise and capacity.
6. **Open-Source & Digital Sovereignty** – Encouraging the adoption of open-source AI solutions to reduce dependency on proprietary systems.
7. **Data Governance & Interregional Cooperation** – Strengthening frameworks for data sharing and interoperability among LRAs.
8. **AI & Sustainability** – Leveraging AI to support environmental goals while minimising its ecological footprint.

Disparities in AI adoption

The adoption of AI by LRAs presents a major opportunity to enhance public service efficiency. However, data from our study reveal a critical challenge: AI adoption is not uniform, and **disparities in digital access** persist across different population groups.

- **Digital divides,** if unaddressed, may result in certain groups – such as older populations, low-income communities, and rural residents – being excluded from the benefits of AI-driven public services.
- Aligning the AI-related policies to include the concept of **digital cohesion**, advocated by the CoR.

📌 **Recommendation**: LRAs should promote inclusive practices such as training and affordable access to digital tools to prevent disparities in AI adoption.



LRAs adopting AI by demographic group

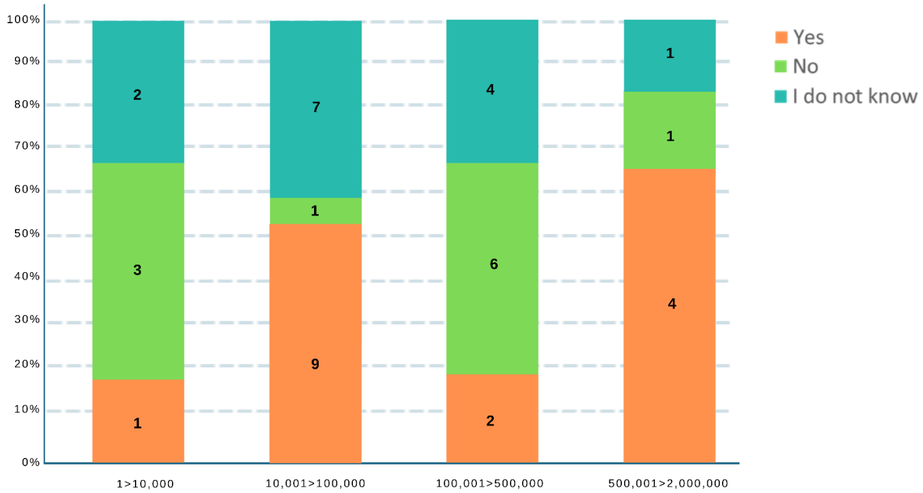
Citizen engagement, transparency and supplier independence

Public trust is essential for AI adoption, yet many LRAs develop AI solutions **without citizen involvement in co-creation processes.**

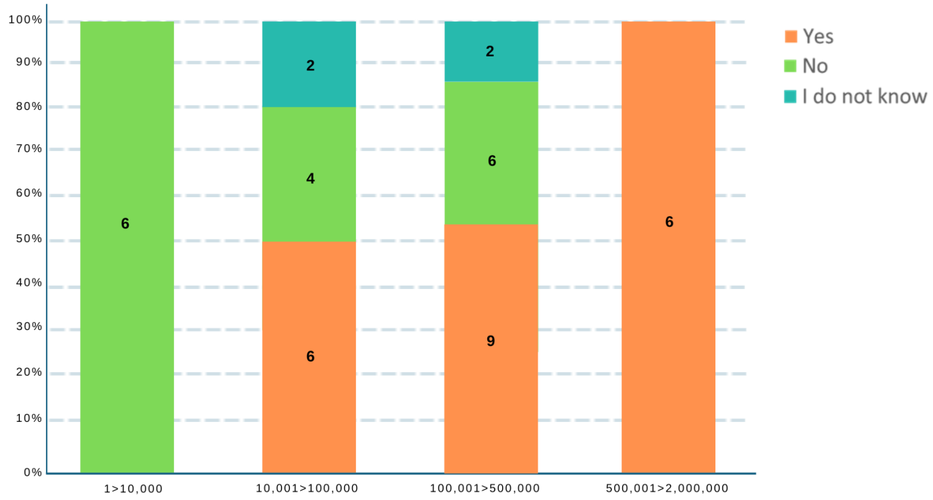
- Co-Creation Improves Outcomes
- Public Consultation Boosts Adoption

📌 **Recommendation:** LRAs should involve citizens through co-creation, feedback collection, and transparent communication.

LRAs gathering or not public feedback on AI solutions



LRAs outsourcing or not AI development



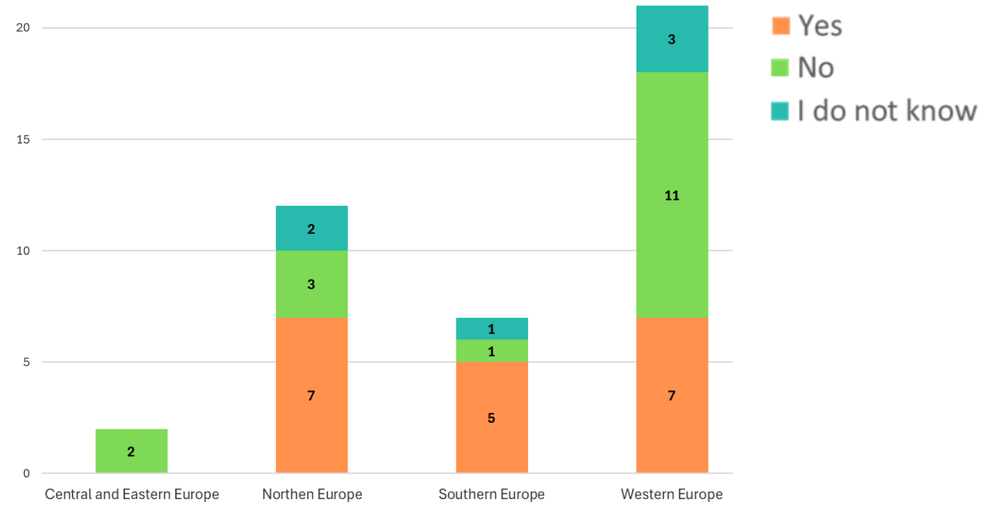
At the same time, the study found extremely low presence of initiatives based on open-source technology solutions, such as **Explainable AI (XAI),** which reduce the **dependence on external providers** and enhance **transparency and interoperability.**

📌 **Recommendation:** National governments should prioritise the adoption of open-source technologies to reduce dependency on proprietary systems, promote interoperability, and enhance EU digital sovereignty. Focus should be on initiatives, e.g., OpenGPT-X and SiloGEN for inclusive AI development.

Partnerships, Data sharing and Scalability

Effective partnerships and structured data governance are essential for AI adoption by LRAs. However, many administrations **struggle to establish collaborations** and **lack data-sharing frameworks**, limiting AI scalability.

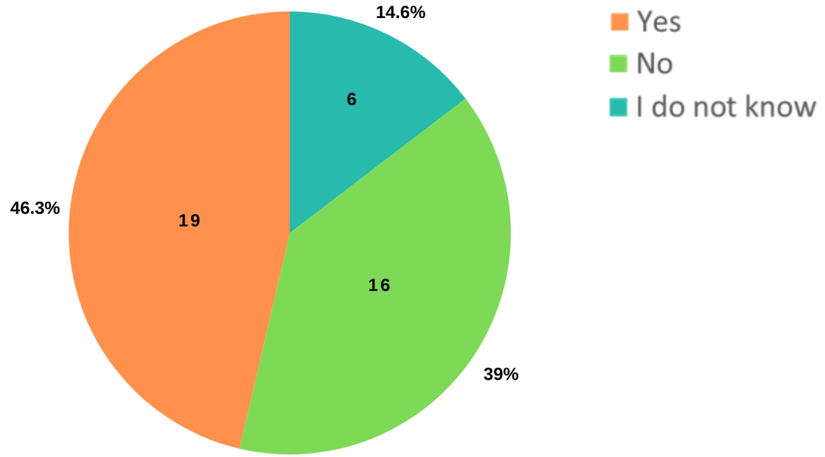
LRAs reporting partnerships with the private sector, academia, and other stakeholders



Only one-third of LRAs in Western Europe have **AI-related collaborations.** Smaller LRAs lack in-house expertise; cooperation with academia and industry can mitigate this challenge.

📌 **Recommendation:** The EU, together with Member States, should facilitate partnerships between public, private, and academic sectors that can support LRAs' access to advanced technologies and expertise.

LRAs working on data interoperability and security



Regulatory Barriers to Data Sharing: 46.3% of LRAs work on data interoperability, yet 39% have taken no action, leading to low scalability of initiatives.

📌 **Recommendation:** LRAs shall invest in creating governance procedures to facilitate inter-regional data sharing and cooperation. Efforts should include workshops and events for building networks and improving data governance across stakeholders.

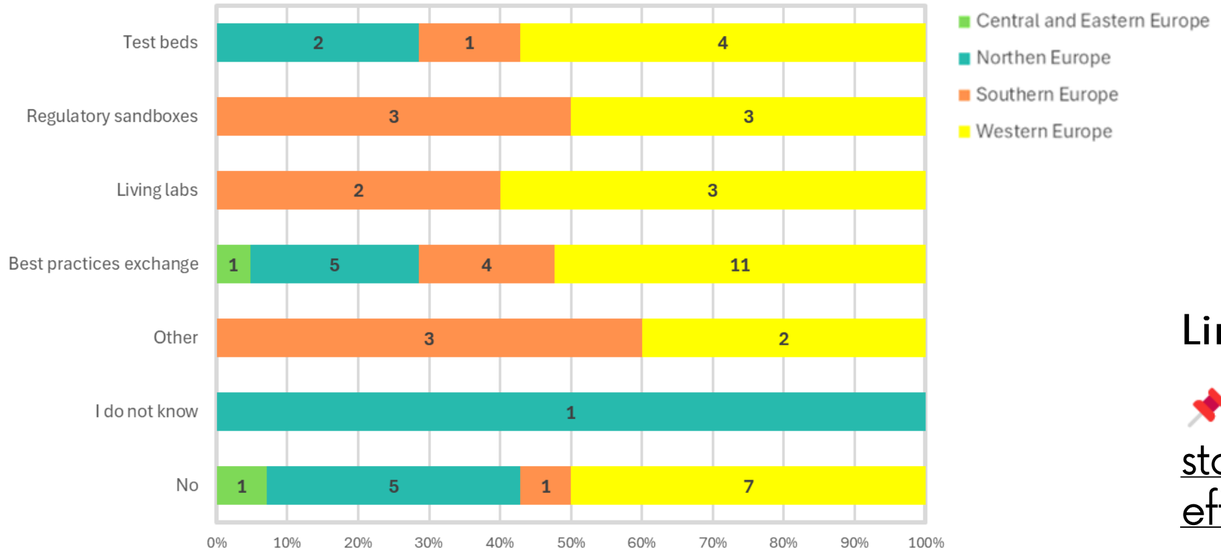
Governance, Testing and Monitoring

Ensuring **responsible AI adoption** requires a **solid governance, controlled testing environments** and **structured monitoring frameworks.** However, many LRAs **lack mechanisms** to test before full deployment and evaluate AI solutions.

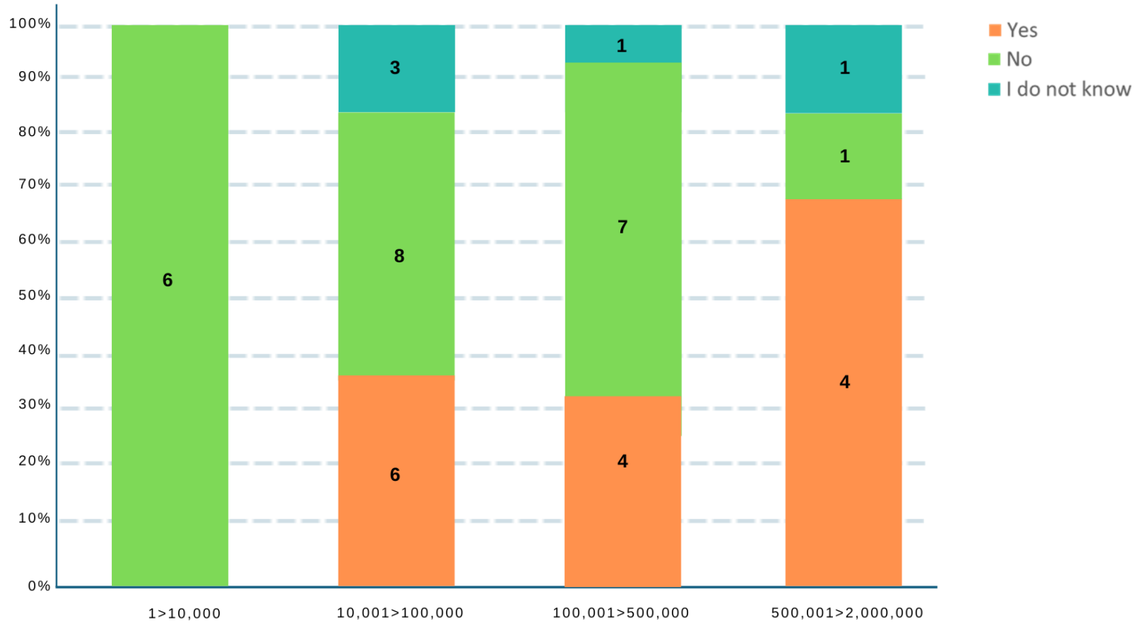
Geographic Disparities: One-third of LRAs adopting AI do not implement any pre-deployment activity.

📌 **Recommendation:** The EU and Member States should encourage the establishment of controlled environments to test AI solutions before deployment, ensuring compliance and innovation.

LRAs implementing AI Pre-Deployment activities



LRAs assessing or not the effectiveness and efficiency of AI



Limited AI Evaluation: 53.7% of LRAs do not assess AI performance.

📌 **Recommendation:** The EU should support LRAs with standardised frameworks and KPIs to assess AI's impact and effectiveness.

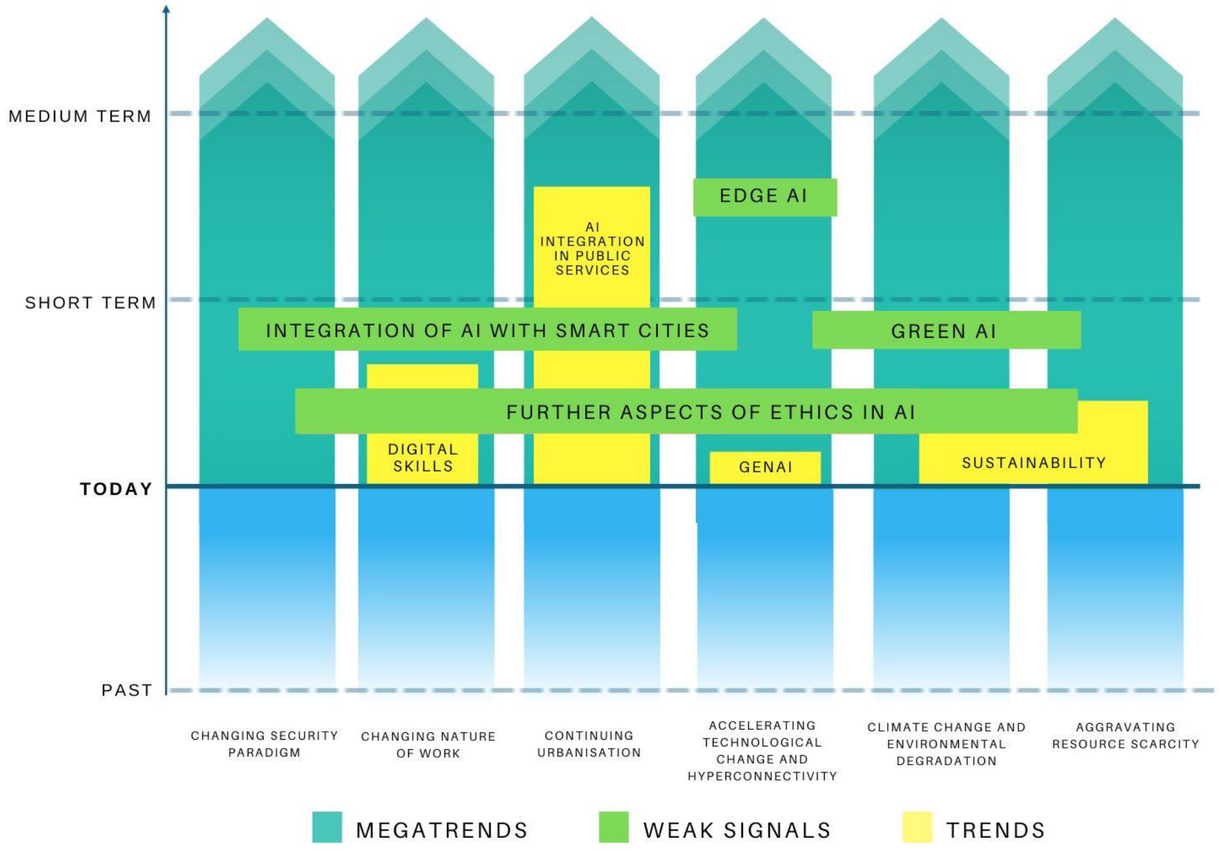
AI and sustainability

A foresight analysis conducted within the study revealed AI-related topics that will gain momentum in the next years.

Among these, there is the "Green AI".

It does not only relate to the environmental footprint of AI, which is recognised but not yet systematically monitored or mitigated.

In fact, AI has the potential to support evidence-based policymaking for achieving sustainability targets, yet its use in this field remains underdeveloped. AI-driven data analytics, predictive modelling, and monitoring tools could enhance climate action strategies, resource management, and urban sustainability policies.



📌 **Recommendation:** The EU and Member States should leverage AI to support international sustainability goals while reducing its environmental footprint.

The key actions for the AI uptake at local level

AI adoption by LRAs offers transformative potential for public services, but success depends on:


Bridging the Digital Divide and promote Digital Cohesion


Enhancing Citizen Engagement and Transparency


Facilitating Partnerships and Secure Data Sharing


Encouraging AI Experimentation, Monitoring and Governance


Ensuring Sustainable AI

Collaboration across all governance levels is key to scaling AI adoption responsibly.

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Thank you for your attention!

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