

Forum on Connected by Design

Building Inclusive Digital Infrastructure for Future-Ready Cities

Digital Public Infrastructure for Inclusive Cities: Transforming Urban Services through Responsible AI



Soumaya Ben Dhaou

Research Specialist coordinating Digital transformation, Emerging Technology and innovation



UNU
EGOV



Global assessment of responsible AI in cities



- AI is increasingly used in cities to improve public services, urban management, and sustainability (e.g., mobility, energy, waste, safety, health).
- Risks include bias, privacy violations, and deepening inequalities if AI is not governed ethically and inclusively.
- Many cities, especially in the Global South, face major gaps in expertise, Infrastructure and governance for responsible AI adoption.
- The report calls for people-centered, multi-stakeholder governance and context-specific guidance to ensure AI advances human rights, SDGs, and sustainable urban futures.

Objectives of the U4SSC FAIR cities working Group:



Fostering AI for inclusive and responsible Cities



Develop a comprehensive guideline that empowers cities to initiate AI projects aligned with their specific priorities, needs, and values, while adhering to principles of sustainability, responsibility, and inclusion.



Create a robust assessment tool enabling cities to evaluate their current AI capabilities, identify gaps in implementation, governance, and utilization, and establish a roadmap for improvement.



Foster a collaborative environment among cities, technology providers, and other stakeholders to share knowledge, best practices, and lessons learned in responsible AI implementation.

Responsible AI for cities

AI for Cities: Tools for automation, prediction, decision-making, and engagement across city services.

57% of cities report time savings from AI-driven public service automation; 53% improved city management.

Mobility, safety, health, education, water/waste management.

AI chatbots (24%) for citizen service delivery

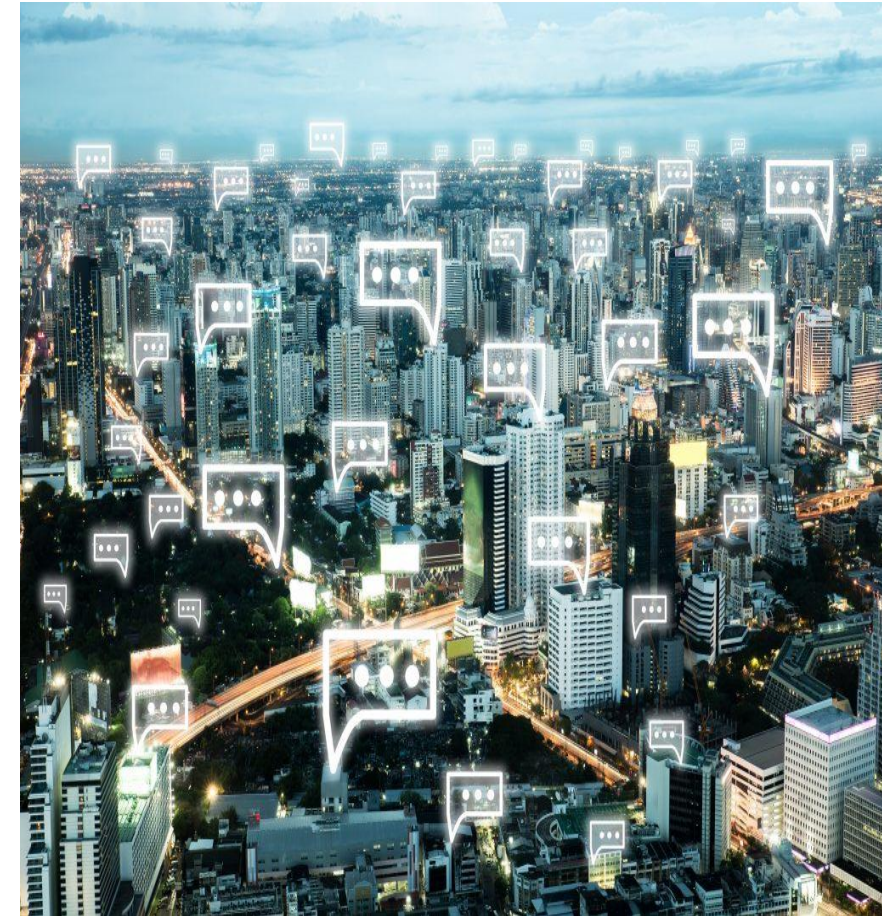
Decision support for resource allocation and emergency management.

Predictive analytics for city planning, fraud detection, public sentiment analysis

AI must be responsible: Fair, transparent, privacy-respecting, and accountable.

Only 15% of surveyed cities have dedicated AI governance. Most rely on traditional ICT governance—often inadequate for AI risks.

Inclusion, ethics, and rights protection should be core DPI values.

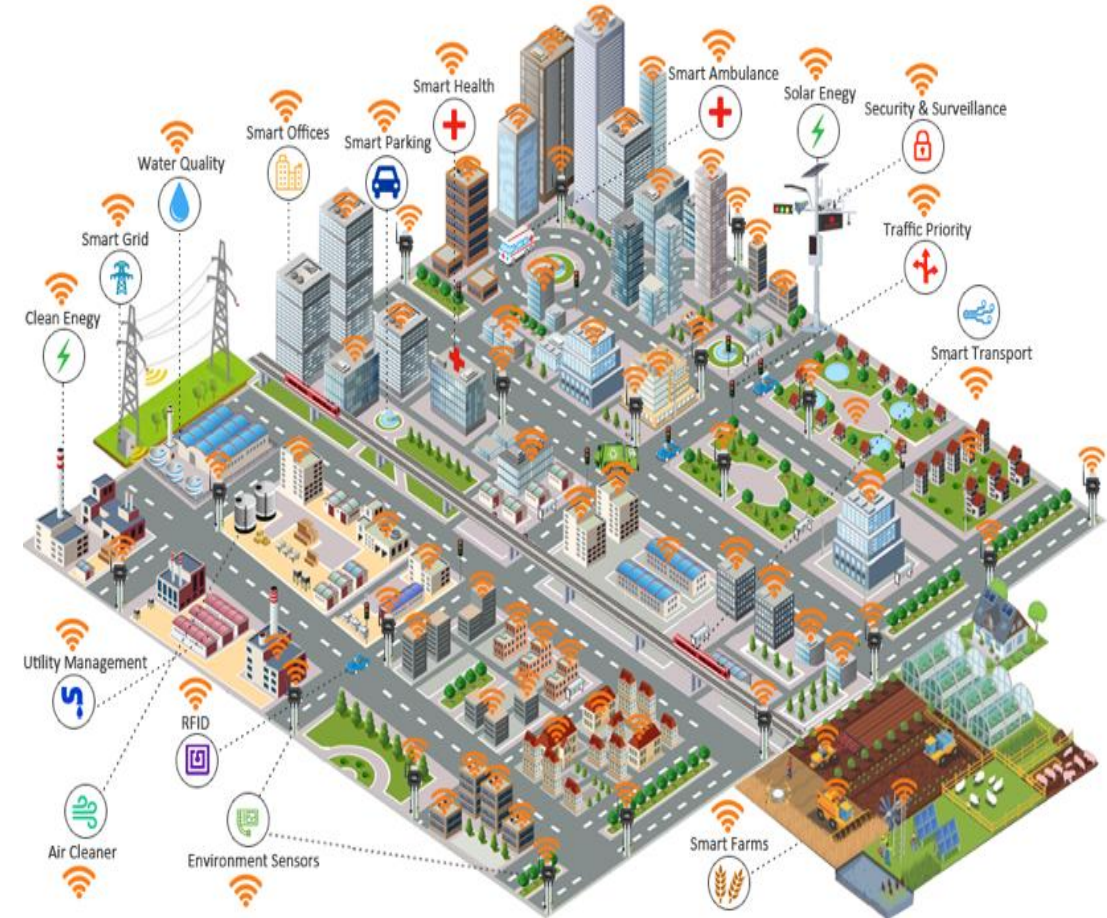


Dublin City Beats

<https://smartdublin.ie/the-dublin-beat-understanding-citizen-sentiment/>

City as a digital Ecosystem

- Cities face rapid urbanisation, complex service demands, and growing expectations for inclusivity and resilience
- Digital Public Infrastructure (DPI) as the backbone of future-ready cities
 - foundational digital building blocks for public benefit (identity, payments, data sharing)
 - DPI Principles: inclusion, openness, modularity, privacy-by-design, strong governance
- Role in improving access to city services and reducing digital divides
- AI transform DPI to drive inclusive, resilience and urban governance



Intersection between AI and DPI



The foundational linkage between DPI and AI, where DPI provides the backbone that makes AI effective, scalable and relevant for people.



The real-world applications that demonstrate how AI and DPI together serve public needs across sectors.



The principles that help guide AI integration across DPI, underscoring the need for safeguards to ensure value for all.

Foundations for Inclusive cities at the intersection of AI & DPI

- DPI offers a shared digital backbone **AI-powered services sustainable and scalable**
- Aligning AI with DPI improves inclusion, affordability, and meaningful impact for society.
- DPI provides the trusted, interoperable data foundation for smarter, more relevant AI for public services (e.g., India's Aadhaar/UPI platforms).
- Growing recognition, coordination among global policy leadership is **aligning AI with DPI** for maximizing public value
- DPI's interoperability enables systems (identity, healthcare, payments, social protection) to connect and share data
- Connecting health, education, payments, and social protection through DPI enables diverse datasets for richer, AI-powered services (e.g., voice payments, language platforms, agri-networks)



Benefits of AI and DPI integration

- DPI provides large volumes of high-quality, consent-based data to power advanced AI models.
- Standardized, structured DPI data boosts AI accuracy (e.g., Mauritius).
- Inclusive DPI captures marginalized communities' data, reducing AI bias.
- Large-scale consented data from DPI systems supports city AI innovation
- DPI data drives local AI innovation and tailored services.
- AI integrated into DPI enable multilingual chatbots, fraud detection, and better access
- Modular DPI supports diverse AI solutions in health, transport, agriculture.
- AI-DPI integration helps governments scale services efficiently and affordably.



Challenges and Risks of integrating AI and DPI



- High AI inference costs can strain budgets and infrastructure
- Legacy systems hinder AI-DPI interoperability, requiring costly updates.
- Marginalized groups may be excluded, risking biased AI outcomes.
- biases and exclusion in AI applications.
- Strong privacy, consent, and security policies are essential.
- Clear policies needed to separate AI and DPI governance roles.

Conclusion: Transformative Synergy for Public Good

AI and Digital Public Infrastructure are reshaping societies

- AI is revolutionizing every sector as a general-purpose technology.
- DPI provides a foundational digital layer for millions, unlocking broader public value and wellbeing.

Mutual Benefits

- AI personalizes services, enhances language accessibility, and drives innovation across DPI platforms (e.g., India's Bhashini, Estonia's e-services).
- DPI enables better, fairer frontier AI through high-quality, consent-based, standardized data and inclusive governance (e.g., Aadhar data powering Indian AI startups).

Key Takeaway

Together, AI and DPI offer powerful synergy for public good—if we address interoperability, technical costs, and ethical governance. Overcoming these challenges is essential for building a trusted, inclusive digital future.

Thank you

bendhaou@unu.edu