Thematic Group on Artificial intelligence in cities

Update on the work of the U4SSC Thematic Groups and Working Groups

Presented by:
Soumaya Ben Dhaou, Co-leader of U4SSC Thematic Group on Artificial intelligence in cities
31 October 2025

Thematic Group on Artificial intelligence in cities

Thematic Group Leaders

Okan Geray (Digital Dubai) and Soumaya Ben Dhaou (UNU-EGOV)

Thematic Group Scope

This thematic group will develop frameworks and methodologies to harness AI in conjunction with other frontier technologies such as big data, IoT, cloud computing, and robotics to deliver urban services more efficiently and effectively. The Group will explore how agentic AI systems, capable of autonomous interaction and adaptive decision-making, can support city management, sustainability goals, and citizen engagement in an ethical, transparent, and human-centred manner.

Thematic Group Topic Areas

This Thematic Group will set guidelines for implementing AI solutions efficiently and sustainably in cities. It will have a perspective in enhancing and automating decision making while taking into account AI principles and targets set in the Sustainable Development Goals and other international commitments.

Completed Working Groups and Deliverables

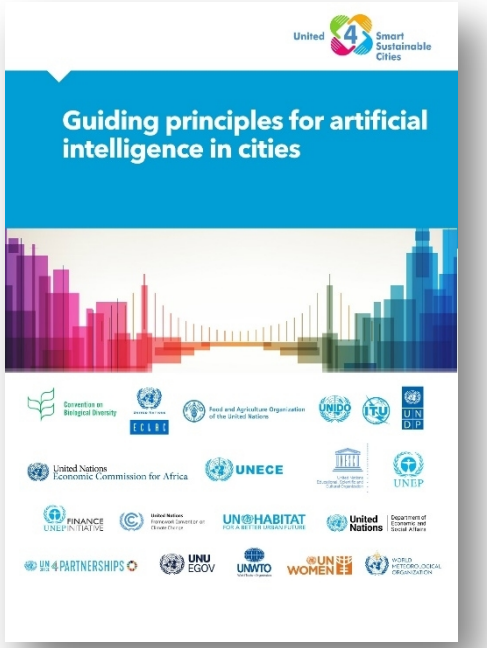
Working Group 1

1

Guiding Principles for Artificial Intelligence in Cities

Co-leaders: Okan Geray (Digital Dubai) and Victoria Papp (BOMA)

Completed



Ongoing Working Groups and Deliverables

Working Group 2

2

Autonomous Cities

Leader: Okan Geray
(Digital Dubai)

Ongoing

Scope

This Working Group will explore the potential of running urban services and operational processes autonomously and will develop a framework to assess its viability and requirements. The "autonomous city" concept and the extent of its practical application will be illustrated with real life cases. The cases will help in determining gaps and real-life considerations. The "autonomous city" framework will utilize AI/ML along with other supporting frontier technologies. The framework will have a "system of systems" approach reflecting the true nature of cities in real life.

Expected deliverable

A Guide to Autonomous Cities
10 Case Studies

Upcoming Meetings in 2025

- 26 November 2025, 13:00-13:30 hours Geneva time (Final Meeting)

Ongoing Working Groups and Deliverables

Working Group 3

3

AI-Driven KPIs Measurement

Leader: Okan Geray (Digital Dubai)

Ongoing

Scope

This working group aims to utilize non-traditional methods to measure KPIs by using Data and Artificial Intelligence. Novel data sources such as next generation sensing and satellite imagery enable increased sensitivity, accuracy, and speed for data collection and in turn, facilitate AI techniques to measure KPIs.

Expected deliverable

A Guide to AI-Driven KPIs
Several case studies from across the globe

Upcoming Meetings in 2025 and 2026

- 14 January 2026, 13:30-14:30 hours, Geneva time
- 26 February 2026, 13:30-14:00, Geneva time
- 2 April 2026, 13:30-14:00, Geneva time

Ongoing Working Groups and Deliverables

Working Group 4

4

FAIR Cities – Foster AI for Inclusive and Responsible cities

Leader: Soumaya Ben Dhaou (UNU-EGOV)

Ongoing

Scope

This working group will ensure that the guideline incorporates gender-sensitive approaches across the AI lifecycle. Stakeholder engagement will involve a diverse range of participants, to gather comprehensive insights and ensure the guidelines address their specific needs.

The working group will address the following research questions:

- How can **cities align their AI initiatives with their specific priorities and needs** while ensuring compliance with principles of sustainability, responsibility, and inclusion?
- What are the **critical gaps** between cities' current capacities and the requirements for effectively implementing, governing, and utilizing AI responsibly and inclusively?
- What **tools and methodologies** can be developed to assess and bridge the gap between cities' existing conditions and the necessary frameworks for responsible AI governance and implementation?

Expected deliverable

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.

WG 4 FAIR Cities Progress

- Conducted **4 working group meetings** where **1 is a brainstorming session** using Miro, and **4 thematic subgroup meetings** since inception

- Discussed and agreed on **4 thematic areas**:
  - Fair AI
  - Inclusive AI
  - Responsible AI
  - Sustainable AI

- Discussed the following **topics** for each thematic area:
  - Core Concepts and Principles
  - Key Issues and Challenges
  - Existing Measurements, Frameworks, and Practices

- Continuous **offline collaboration** through Google Docs/Sheets

WG 4 FAIR Cities Key Findings

Fair AI

- Core Concepts and Principles
  - Algorithmic Justice, Equality & Non-Discrimination, etc.
- Key Issues and Challenges
  - Bias in Data, Service Inequalities, etc.
- Existing Measurements, Frameworks, and Practices
  - Bias detection, Human oversight, Data representation, etc.

Inclusive AI

- Core Concepts and Principles
  - People-centeredness, Accessibility, Participation, etc.
- Key Issues and Challenges
  - Digital divide, Dependency to tech providers, etc.
- Existing Measurements, Frameworks, and Practices
  - Participatory design, Digital inclusion, Digital rights literacy, etc.

Responsible AI

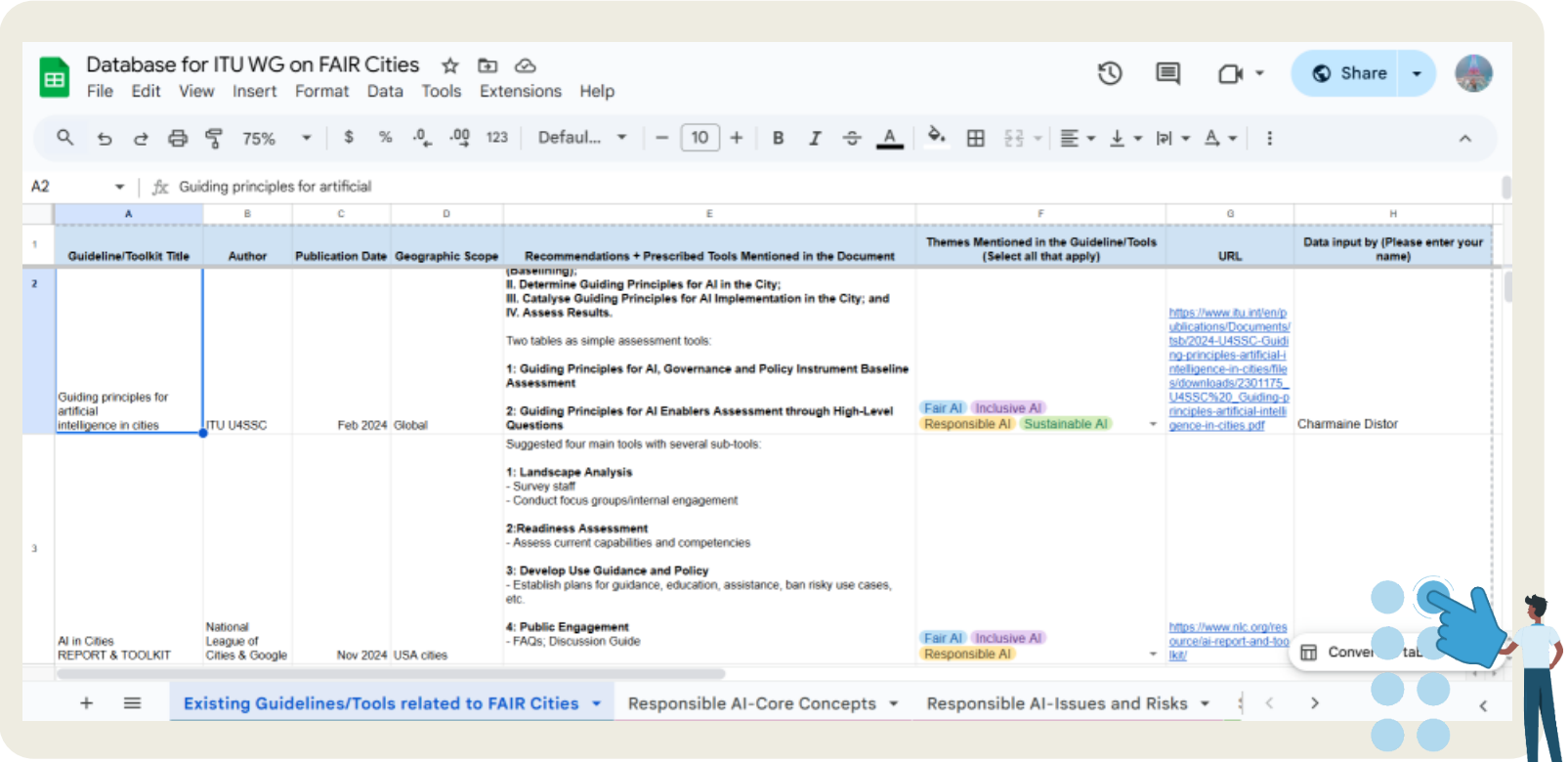
- Core Concepts and Principles
  - Transparency & Accountability, Explainability, etc.
- Key Issues and Challenges
  - Data quality & Privacy, Overreliance, etc.
- Existing Measurements, Frameworks, and Practices
  - Governance frameworks, Technical robustness & safety, etc.

Sustainable AI

- Core Concepts and Principles
  - Environmental responsibility, Circular economy, etc.
- Key Issues and Challenges
  - Environmental impact, Energy demands, etc.
- Existing Measurements, Frameworks, and Practices
  - Sustainable development goals, Greed data centers, AI life cycle assessment, etc.

Upcoming Priorities and Meetings

- **10 November 2025**: Deadline for all working group members to contribute in the collaborative Google Docs/Sheets
- **November and December 2025 Meetings**: To be announced



Scan to view our collaborative Google Docs/Sheets:

New Working Group

Working Group 5

Kick off

Scope

The Agentic AI for Cities Working Group (WG) aims to define and investigate the deployment of autonomous AI agents in urban domains. It intends to accelerate cities' smart and sustainable transformations by leveraging goal-oriented, multi-agent systems including predictive and dynamic optimization. The scope entails developing high-level architectures for distributed agent communication, establishing ethical tool-use and data governance protocols for agents interacting with urban data, and creating validation frameworks for ensuring agent stability, transparency, and safety under real-world conditions. The Working Group will also investigate developing an assessment framework for Agentic AI. The work conducted in this WG will complement and supplement the Autonomous Cities Working Group.

Upcoming Meetings in 2025 and 2026

- 26 November 2025, 13:30-14:30 hours, Geneva time
- 14 January 2026, 13:30-14:30 hours, Geneva time

For more information, please contact:

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Thank you!