Executive Briefing:
AI, Spatial Intelligence & the AI-Enabled Citiverse

Dino Cataldo Dell'Accio (UNJSPF) & Cristina Bueti (ITU)

FROM ARISTOTLE TO INTELLIGENT WORLDS

> "What is the purpose of a city?"
>
> — Aristotle, 384–322 BC

Human Flourishing

Cities exist to help people live well and realize their full potential.

Today humanity stands at another historic turning point.

How do we govern intelligent worlds where physical and digital realities increasingly converge?

Four Waves Converging Simultaneously

These are not separate trends — they are reinforcing forces arriving together, compressing a generation of change into just a few years.

Generative AI

Machines that work with language, knowledge, and creativity transforming how information is produced and consumed.

Agentic AI

AI that can pursue objectives autonomously and coordinate complex, multi-step actions without constant human direction.

Physical AI

Intelligence moving into roads, robots, infrastructure and machines, blurring the boundary between digital and physical.

Spatial AI

AI that understands space, context, and movement in the real world making environments themselves intelligent.

Spatial AI — The Breakthrough Capability

Generative AI understands language.

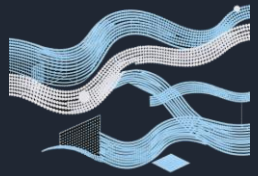
It transforms how we communicate and create.

Spatial AI understands reality.

It perceives **where** things happen, reasons about **why** they happen, and predicts **what could happen next.**

AI knows *what* is happening. Spatial AI understands *where*, *why* and what could happen next.

The AI-Enabled Citiverse



Converging Forces

AI · Spatial Intelligence · Digital Twins · Real-time Urban Data

Simulate Before You Build

Test policies, predict failures, improve planning

Anticipatory Governance

From observation → simulation and citizen participation

The Governance Transformation

Before

Governed through **reports about the past**. Reacting to crises *after* they occur. Testing policies on real society with real consequences.

Today & Tomorrow

Governing through **simulations of the future**. Anticipating crises *before* they strike. Testing policies **before** society lives with them.

> "What if governments could test policies before society has to live with the consequences?"

This Is Not About Technology — It Is About People

The Citiverse's ultimate measure of success is the same as Aristotle's: does it improve human life? Every sensor, algorithm, and digital twin must serve a human outcome.

Faster Emergency Response

Ambulances routed in real time, arriving faster when minutes determine survival.

Flood Prediction

Early-warning systems predicting floods days in advance, saving lives and livelihoods.

Safe Navigation for All

Elderly and vulnerable citizens navigating cities safely with intelligent assistance.

Cleaner Air

Children breathing cleaner air as AI optimizes traffic, energy, and emissions in real time.

Better Decisions

Governments acting on evidence before crises occur, not reports written after them.

Equitable Services

Public services delivered more equitably, reaching those most often left behind.

Five Barriers That Must Be Addressed From the Outset

1. Technical Complexity & Interoperability Gaps
2. Trust, Safety, Inclusivity & Reliability
3. Data Quality & Algorithmic Transparency
4. Institutional Readiness & Skills Gaps
5. Risk of Local, Regional and Global Fragmentation

⚠ Without governance and interoperability, digital transformation may **deepen** fragmentation.

The Citiverse Is Not Built with Headsets

It is built with institutions, standards, and trust.

Connectivity

Universal, reliable digital infrastructure as the non-negotiable foundation.

Standards

Open interoperability standards that prevent fragmentation and vendor lock-in.

Trusted Governance

Transparent frameworks ensuring accountability, human rights, and democratic oversight.

Institutional Capacity

Public sector capability to procure, regulate, and provide meaningful oversight of AI.

Interoperability

Systems that work seamlessly across borders, vendors, and sectors by design.

A Global Public Good — Not a Technical Detail

Interoperability is a **must-have** for fair access. When systems don't work together, costs rise and options shrink.

Stop Vendor Lock-In

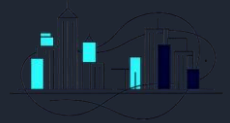
Open choices keep costs down and preserve flexibility.

Break Data Silos

Shared systems help cities act as one.

Connect Across Borders

International standards improve crisis response and cooperation.



Close the Digital Divide

Without shared standards, poorer cities fall behind.

⚠ Set open standards **before** systems are bought and built.

> **Adopt international standards now to unlock fair, connected systems.**

Why Now — The Window That Still Exists

History shows that the earliest phases of technological transitions matter most. **The rules being written today will govern intelligent societies for decades.**

1

Standards

Who defines the technical standards for intelligent urban systems and whose values do they embed?

2

Investment

Which economies attract AI and spatial intelligence talent, capital, and infrastructure?

3

Governance

Whose values shape the governance models of intelligent societies and who is left out?

Strategic Priorities for Ministers & Mayors

1

DELIVER GLOBAL COMMITMENTS LOCALLY

Map the Global Digital Compact, SDG 11 and New Urban Agenda directly to city budgets, actors and timelines.

2

USE DATA & SIMULATION TO MAKE SMARTER AND INCLUSIVE DECISIONS

Require digital twin scenario analysis before any major infrastructure investment. 100 virtual tests = 1 avoided mistake.

3

BUILD TRUSTED, PEOPLE-FIRST AI

Transparency, privacy-by-design and accountability chains are not optional. They are the licence to operate AI in public life.

4

UNLOCK RESPONSIBLE, INCLUSIVE ECONOMIC AND SOCIAL GROWTH

Ensure the benefits of AI, spatial intelligence and the AI-enabled citiverse drive shared prosperity, local innovation, inclusive skills, and stronger, more resilient communities for all

5

SCALE THROUGH GLOBAL COLLABORATION AND ADOPT INTERNATIONAL STANDARDS

Advance interoperable standards and trusted governance to ensure the AI-enabled citiverse scales securely and seamlessly across cities and countries.

For Mayors & City Leaders — Where It Becomes Real

> Mayors may become the first real governors of AI-enabled environments — because cities are where these technologies become real, and where the consequences are felt most directly.

Pilot

Test AI governance in real urban environments before national rollout, cities are the ideal sandbox.

Procure

Shape market standards through purchasing power, requirements, and public contracts.

Engage

Bring residents into the design of intelligent city systems to ensure inclusion and legitimacy.

The Global Initiative on AI and Virtual Worlds – *Discovering the Citiverse*

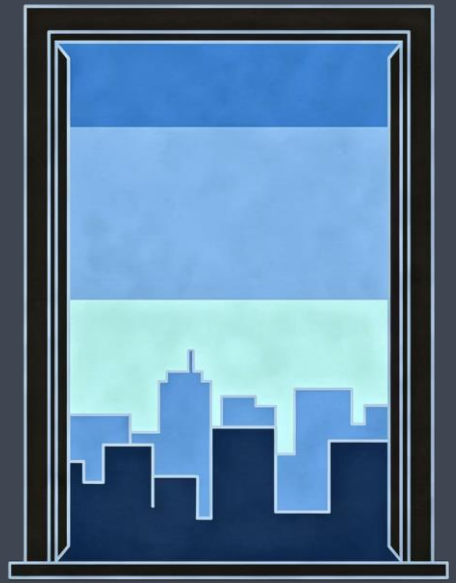
Launched by

- International Telecommunication Union (ITU)
- UN International Computing Centre (UNICC)
- Digital Dubai

Supported by 70+ Partners

Governments · Cities · UN entities · Industry · Academia · Standards bodies

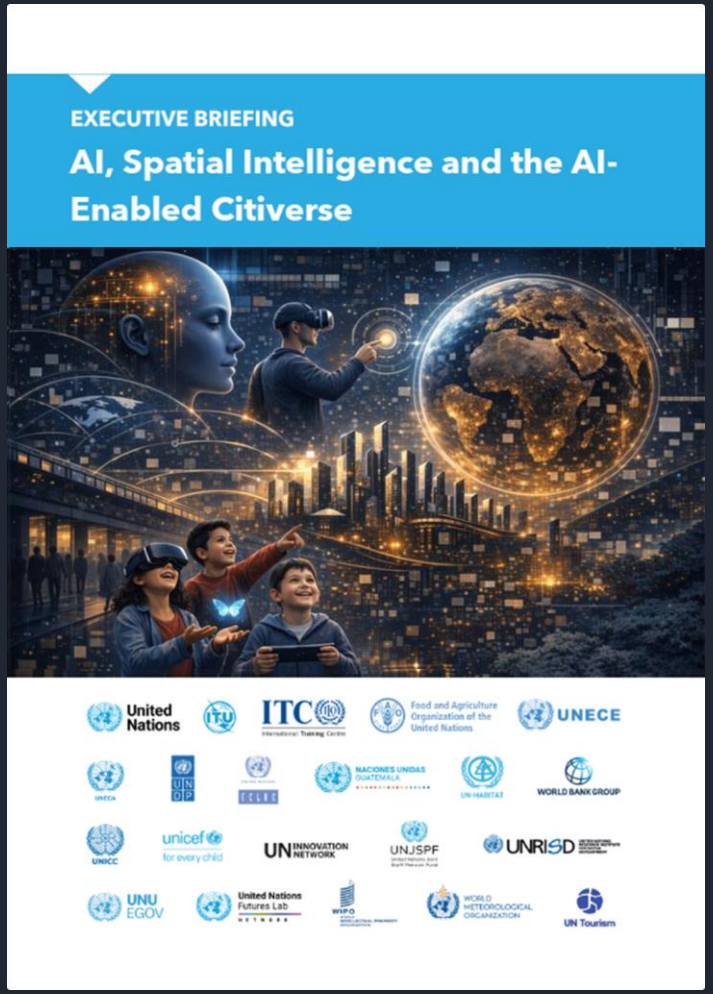
ⓘ Trusted digital futures require **global collaboration** — no single institution can do it alone.



More than 2000 years ago, Aristotle Aristotle reminded us that cities exist not only to live...but to live well.

The Window Is Open — But Not Forever

> The future is not something we simply enter. It is something we **design together.**



Thank you from the UN team

🌐 **Web**
https://www.itu.int/un-virtual-worlds-day/2026/