

Building Future-Ready Cities

Why the AI-enabled Citiverse Matters Now

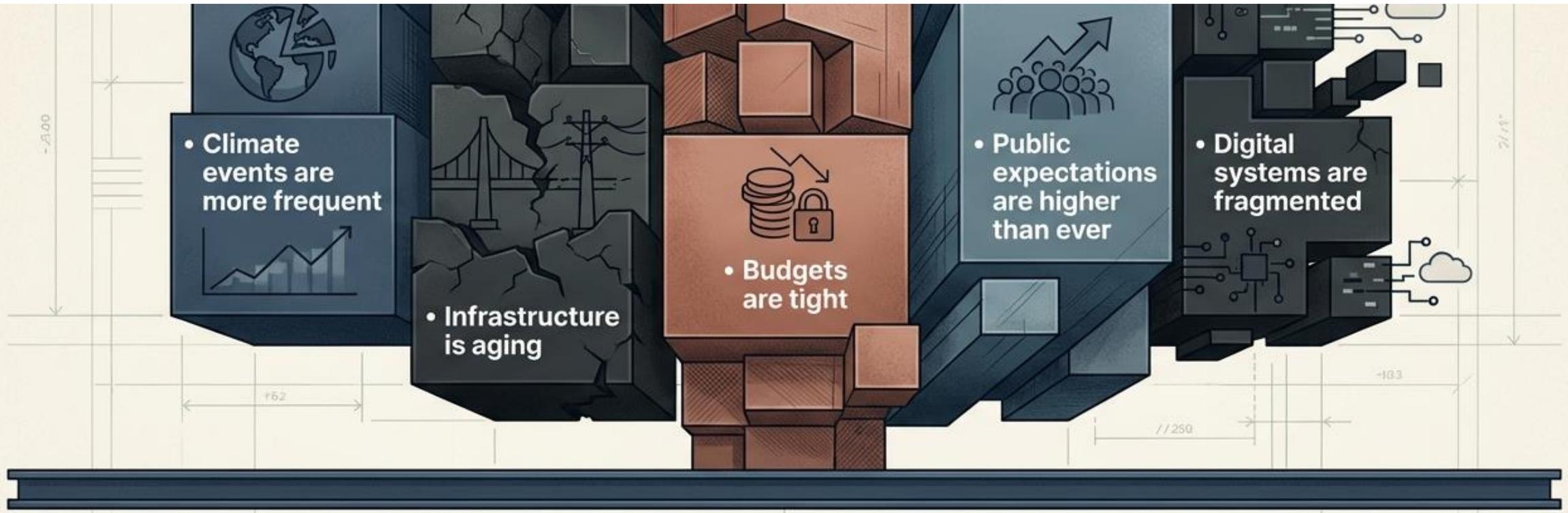
Cristina Bueti

Focal Point on Smart Sustainable Cities and Communities and AI-Powered Virtual Worlds
International Telecommunication Union (ITU)

4 March 2026



Cities Are Facing Higher-Stakes Decisions



Every mayor decision now affects:

Budgetary sustainability

Operational resilience

Public confidence

How does your city typically evaluate major investments (transport, zoning, energy, infrastructure)?

- Static reports and consultant studies
- Excel-based modelling and dashboards
- Digital twin or spatial simulations
- Real-time AI-assisted scenario testing

Please use the Zoom poll to respond and share any additional comments via the chat function.



Before approving a major urban project, can your city simulate:

- Financial impact
- Climate impact
- Social equity impact (by neighbourhood)
- Citizen behavioural response
- Crisis stress-testing
- None of the above



Please use the Zoom poll to respond and share any additional comments via the chat function.

How integrated are your city's data systems today?

- Fully interoperable across departments
- Partially connected
- Mostly siloed
- I honestly don't know



Please use the Zoom poll to respond and share any additional comments via the chat function.

Yet City's Decision Tools Remain Reactive



Dashboards describe the past



Reports that take months to compile



Public consultations rely on documents



Departments operate in silos

Cities are planning tomorrow with tools built for yesterday

What If Cities Could Test Decisions Before Making Them?

From reacting to anticipating

Before investing

Simulate impact

Before approving

Compare scenarios

Before construction

Visualize results

Before crisis

Rehearse response



A Structural Shift Is Underway:

Three forces are redefining the future of cities



AI is becoming more capable

It understands text, maps, images, and sensor data
It can assist with tasks and coordination



Cities already hold valuable digital assets

Data platforms, identity systems, operational models—
but often disconnected



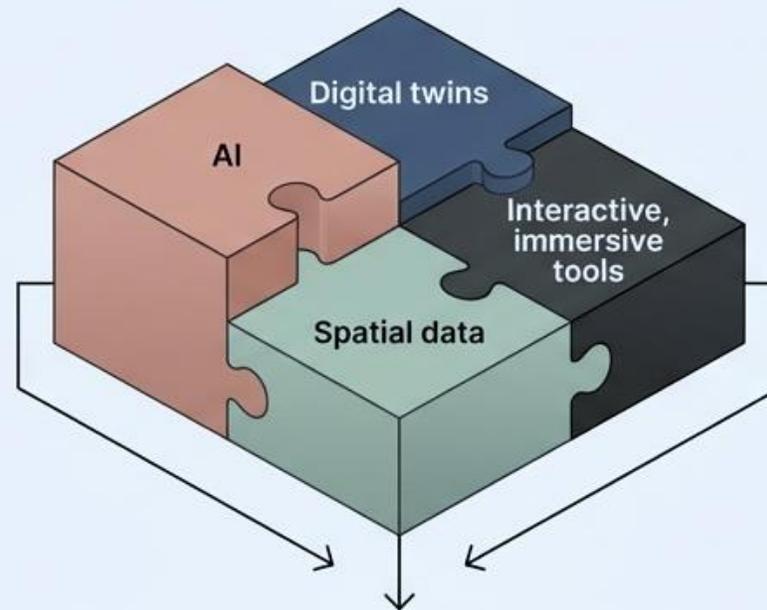
The demand for faster, evidence-based decisions is rising

Projects move faster; crises escalate quicker
Leaders need clarity before committing resources

The Citiverse — In Simple Terms

The citiverse brings together:

- AI
- Digital twins
- Spatial data
- Spatial intelligence
- Interactive, immersive tools



One shared decision environment

It helps cities:

- See consequences before acting
- Coordinate across departments
- Engage people in clearer ways

It is not a virtual reality project

It is not a technology showcase

What It Enables in Practice?



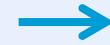
AI



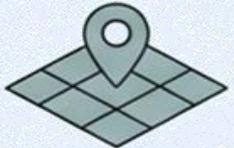
Accelerate decision cycles and interdepartmental coordination



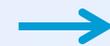
Digital twins



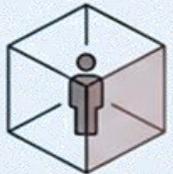
Simulate policies and infrastructure before investing public funds



Spatial intelligence



Measure impact by neighborhood, community, and demographic group



Immersive/Interactive environments



Make complex plans visible, participatory, and understandable

Better Decisions

Faster Delivery

Greater Public Trust

Who Benefits?

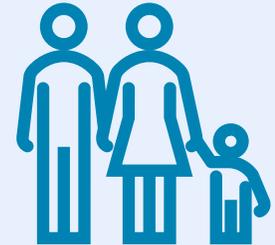
City administration:

- Smarter Governance
- Better coordination
- Fewer repeated efforts



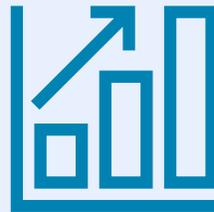
Inhabitants:

- Simpler services
- Clearer explanations
- More meaningful participation



Local economy and industries:

- New innovation opportunities
- Skilled workforce
- Safer and smarter workplace

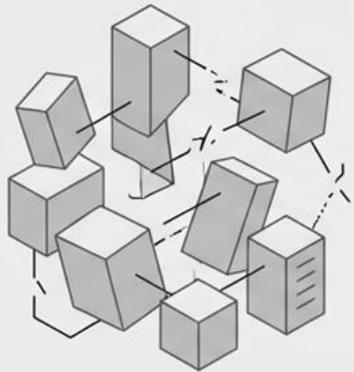


Partners:

- Better collaboration
- Shared information
- Faster results



Why Act Now?

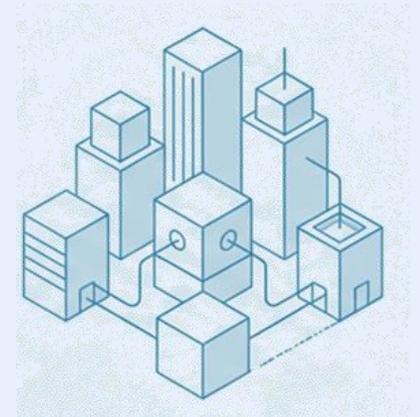


If cities wait:

- Systems become harder to integrate
- Suppliers define the architecture
- Fragmentation increases
- Opportunities are missed

Early engagement means:

- Setting clear principles
- Building internal capability
- Starting with focused pilots
- Not scaling too fast, but scaling wisely



The next few years are critical

How International Telecommunication Union Can Help

ITU: United Nations specialized agency for digital technologies



194

Member States



1000+

companies, universities, research institutes and international organisations



Global Initiative on Virtual Worlds and AI – Discovering the Citiverse

A Growing Coalition of 70+ Partners:

Founding partners:



UNICC

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DIGITAL DUBAI



Champions:



Ministry of Internal Affairs
and Communications

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OPEN & AGILE SMART CITIES & COMMUNITIES

Smart City
Institute Japan

45
Federación Española de
Municipios y
Provincias

TAMPERE

STUTTGART
TECHNICAL
UNIVERSITY
OF APPLIED
SCIENCES

Smart
Cities
Council

SHARING CITIES ALLIANCE

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城市创新
Guangzhou Institute for
Urban Innovation

S2GRUPO

CAICT
Korea Center for Accessible ICT



DirectRelief VIRTUAL DIMENSION CENTER



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XIDIAN UNIVERSITY

METAWORLDX

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FC Ciências
ULisboa

LASIGE
driven by
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MANCHESTER

ICT TECHNOLOGY CENTRE

AJUNTAMENT DE VALÈNCIA

SWPS University

CMAD
Centro de
Ciberseguridad
Ayuntamiento
de Madrid

University of
Staffordshire

And more...

3 Key Pillars of Action

Pillar 1 – Bringing Virtual Worlds to Life:

- Strategic Guidance
- Digital Inclusion and Accessibility
- Scaling Framework
- Evaluation and Assessment

Pillar 2 – Connecting Cities with the Virtual and Real Worlds:

- Emerging Technologies
- Use-case Identification
- Security and Trust
- Interoperable Citiverse
- Sandbox Experiment Facility

Pillar 3 – Tunneling the Citiverse:

- Citiverse Assembly
- Citiverse Challenge
- Citiverse Alliance
- Awareness Building
- Virtual Worlds Toolkit
- Annual Training
- Talent Grants Programme

Scan me



2nd Citiverse Assembly

12 May 2026

Geneva, Switzerland

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itu.int/metaverse/virtual-worlds/

Supported by:



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Deliverables in the Spotlight:

Citiverse Use Case Taxonomy Series

A structured map to pick high-value use cases quickly:



Urban Planning,
Placemaking, and
Infrastructure



City Administration,
Services, and Public
Participation



Public Safety, Health
and Disaster
Resilience



Economic Development,
Education and Tourism



Transport and Mobility

Urban Planning Place Making and Infrastructure

Horizon
3

Agentic Urban Environment for Social Simulation

Description

An agentic urban simulation provides a sophisticated computational virtual platform for urban planners, architects, and policy-makers to explore complex social dynamics and spatial interactions within emerging virtual world infrastructures. By leveraging multi-agent AI systems, the simulation generates emergent behavioral patterns that dynamically respond to urban design interventions, allowing experts to test urban design scenarios through high-fidelity agent-based simulations or to predict community engagement and spatial utilization in proposed virtual environments. The use-case describes thereby a responsive, data-driven environment with individual preferences, behaviors, and adaptive responses of agents.

Example

Project Sid, simulates AI agents working together in a Minecraft server to create virtual civilizations complete with economies, governments, cultural practices, and even religious institutions. What makes this experiment unique is the agents' ability to operate independently for extended periods without human intervention. The programmers first introduce the PIANO (Parallel Information Aggregation via Neural Orchestration) architecture, which enables agents to interact with humans and other agents in real-time while maintaining coherence across multiple output streams.

Impacts

- Risk-Free Urban Design Experimentation
- Cost-Effective Strategic Planning
- Enhanced Community Engagement
- Gender equality in urban places

SDG Alignment



Target 10.2



Target 8.3

Risk Level

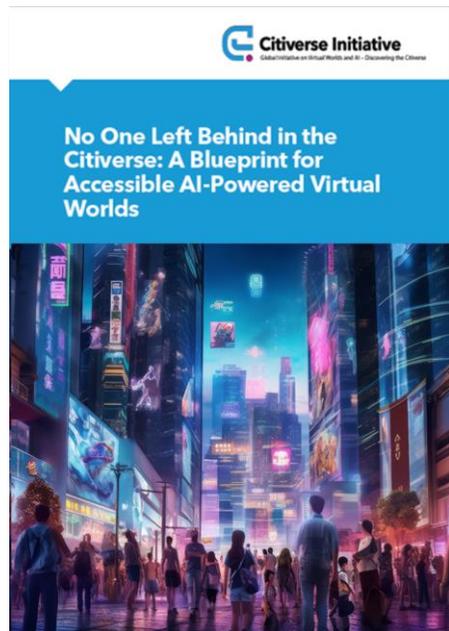
Public safety	Low	Medium	High
Stakeholder acceptance	Low	Medium	High
Data privacy and security	Low	Medium	High
Financial/operational	Low	Medium	High

Key Technologies

- Digital Twin
- Metaverse
- AR
- VR
- MR
- GAI
- AI
- IoT

Deliverable in the Spotlight:

No One Left Behind in the Citiverse: A Blueprint for Accessible AI-Powered Virtual Worlds



Framework for virtual worlds interaction



Atomic interactions



Support services



User-centric design



UN Virtual Worlds Day

*AI, Spatial Intelligence, and the Citiverse:
Shaping Trusted Digital Futures*

11-12 May 2026
Geneva, Switzerland

itu.int/un-virtual-worlds-day/



20+ UN Partners





The question is not whether the Citiverse will emerge. It already is.
The question is: Will your city lead, or will it follow?

**Join the Global Initiative.
Govern the future, together.**



Thank you!



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