COP31 GLOBAL CALL TO ACTION
for Smart, Resilient, Sustainable Cities powered by Artificial Intelligence, Digital Twins & Internet of Things

We, the Parties and non-Party stakeholders — cities, private sector organisations, academic institutions and international organisations — endorsing this Call to Action:

Recognising that the responsible use of artificial intelligence (AI), digital twins and the Internet of Things (IoT) can help cities reduce emissions, use energy and resources more efficiently, strengthen climate resilience, and maintain essential services;

Recalling the outcome of the first Global Stocktake under the Paris Agreement and reaffirming the importance of the Sustainable Development Goals and the Pact for the Future, including its Global Digital Compact;

Acknowledging the role of cities in advancing four of the COP31 Presidency's global implementation targets for 2035: increasing electricity's share of global final energy consumption to 35%; reducing the projected increase in global annual municipal solid waste generation by at least 50%; reducing operational energy use intensity in the building sector by at least 25%; and increasing the global circular material use rate to at least 15%;[1]

Recognising that AI, digital twins and IoT can support progress towards these targets by helping cities forecast electricity demand, improve grid operations, optimise waste collection, reduce landfill methane emissions, improve building energy performance and track materials for reuse, while also helping cities map climate risks, stress-test critical infrastructure and strengthen early warning systems;

We therefore call on all relevant stakeholders – governments, cities, companies, academic and research institutions, and international organisations – to support the following actions, in line with local needs and capacities:

1. Scale AI, Digital Twins & IoT for Smart, Resilient Cities

- Accelerate deployment of AI, digital twins, digital tools, and IoT platforms for energy, water, mobility, waste, and building efficiency in cities of all sizes, prioritising applications that deliver tangible benefits such as improved risk assessment, resilient infrastructure, better urban planning, better-informed investment decisions and stronger early warning systems.
- Invest in open, interoperable digital infrastructure and data architectures that enable cities to adopt and scale proven digital solutions more efficiently and sustainably while supporting the COP31 Resilient Cities target on building energy intensity.
- Promote interoperable urban data systems that enable cities to monitor climate risks, identify infrastructure vulnerabilities and support timely, evidence-based decisions for climate adaptation and disaster risk reduction.
- Ensure that digital solutions are themselves sustainable, by powering AI systems, data centres and other digital infrastructure with renewable energy and applying energy-, water- and resource-efficient practices, so that efficiency gains are not offset by increased energy and water use.

2. Build conditions to harness Digital Technology for Climate Action & Sustainability

- Strengthen local capacities to use AI, digital twins and IoT for climate risk assessment, disaster preparedness, emergency response and the continuity of essential urban services in the face of climate-related disruptions.

[1] https://unfccc.int/news/cop31-presidency-announces-new-targets-on-global-electrification-cutting-waste-resilient-cities

- Implement international interoperability standards (e.g. ITU-T Recommendations) to ensure that digital solutions deployed across different cities and vendors can seamlessly connect, exchange data, scale, and be compared on a common technical basis.
- Align smart city investments with national climate commitments, the UAE Framework for Global Climate Resilience, notably its target on infrastructure and human settlements, and the Sustainable Development Goals, in particular SDG 11.
- Share data, models, and lessons learned openly, in the spirit of the Global Digital Compact, to help other cities act faster and avoid duplication.
- Build local capacity and skills so cities can design, run, and maintain these technologies themselves.

3. Deliver Practical Implementation & Measurable Outcomes

- Move from pilots to at-scale deployment, with clear timelines and owners for delivery.
- Put in place the enabling conditions needed to scale innovative urban technologies — access to quality data, financing, technical expertise, institutional capacity and multi-stakeholder partnerships — with particular attention to cities in developing countries, where solutions need to be affordable, accessible and responsive to local circumstances.
- Track and report measurable outcomes — emissions reduced, resources saved, resilience improved — using shared indicators such as the Key Performance Indicators developed by the UN United for Smart Sustainable Cities Initiative (U4SSC), aligned with the UN-Habitat Urban Monitoring Framework, to ensure results are consistent, comparable, and SDG-aligned. This should include energy-related indicators from the Environment dimension of the U4SSC KPIs, such as renewable energy share and energy efficiency.
- Review progress annually and report publicly on results.

From Antalya to implementation

We encourage continued dialogue, knowledge sharing and voluntary collaboration among governments, cities, regional organisations and partners beyond COP31.

The UN Climate Change Global Innovation Hub provides a forum for this engagement, bringing together cities, technology providers, researchers and international partners to exchange experience on urban climate innovation, digital twin applications and urban resilience initiatives.

At the annual gathering organised by ITU and UNFCCC, stakeholders will have opportunities to share experiences, review progress and report on achievements on a voluntary basis. The gathering will help showcase good practices and identify where stakeholders can work together to implement the Call to Action.

We invite governments, cities, companies, academic and research institutions, and international organisations to endorse this Call to Action, and welcome partnerships and initiatives that support its implementation.

Launched at the COP31 High-Level Dialogue: Resilient Cities, Reimagined — AI, Digital Twins & IoT for a Sustainable Future.