UN-HABITAT

Brief on the international guidelines on people centred smart cities

ROA retreat

Innovation Unit, UN-Habitat

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- The World Smart Cities Outlook 2024 (empirical findings)
- What’s next – opportunities
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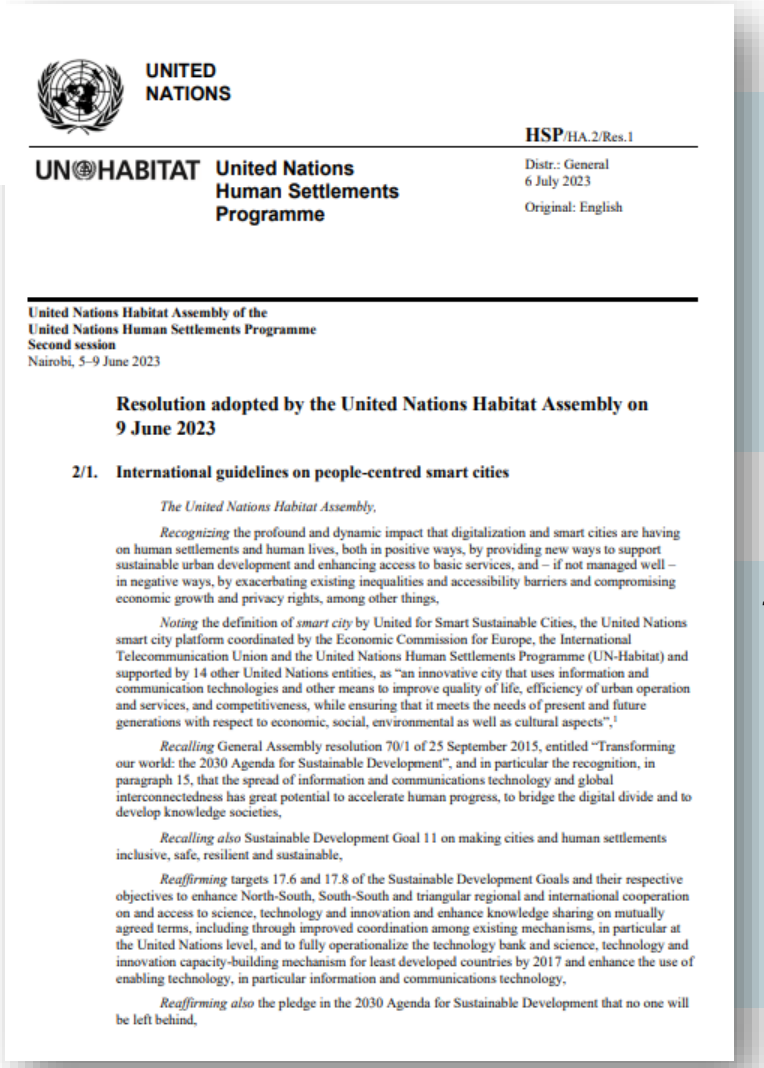
The international guidelines – The resolution



UNITED NATIONS

HSP/HA.2/Res.1

UN-HABITAT United Nations Human Settlements Programme

Distr.: General
6 July 2023

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United Nations Habitat Assembly of the United Nations Human Settlements Programme
Second session
Nairobi, 5–9 June 2023

Resolution adopted by the United Nations Habitat Assembly on 9 June 2023

2/1. International guidelines on people-centred smart cities

The United Nations Habitat Assembly,

Recognizing the profound and dynamic impact that digitalization and smart cities are having on human settlements and human lives, both in positive ways, by providing new ways to support sustainable urban development and enhancing access to basic services, and – if not managed well – in negative ways, by exacerbating existing inequalities and accessibility barriers and compromising economic growth and privacy rights, among other things,

Noting the definition of *smart city* by United for Smart Sustainable Cities, the United Nations smart city platform coordinated by the Economic Commission for Europe, the International Telecommunication Union and the United Nations Human Settlements Programme (UN-Habitat) and supported by 14 other United Nations entities, as "an innovative city that uses information and communication technologies and other means to improve quality of life, efficiency of urban operation and services, and competitiveness, while ensuring that it meets the needs of present and future generations with respect to economic, social, environmental as well as cultural aspects",[1]

Recalling General Assembly resolution 70/1 of 25 September 2015, entitled "Transforming our world: the 2030 Agenda for Sustainable Development", and in particular the recognition, in paragraph 15, that the spread of information and communications technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies,

Recalling also Sustainable Development Goal 11 on making cities and human settlements inclusive, safe, resilient and sustainable,

Reaffirming targets 17.6 and 17.8 of the Sustainable Development Goals and their respective objectives to enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and to fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology,

Reaffirming also the pledge in the 2030 Agenda for Sustainable Development that no one will be left behind,

With Resolution Res.2/1, 193 Member States mandated UN-Habitat to devise **global guidelines**, acting as a **foundational structure** for shaping smart city policies, strategies, and regulations at national and local scales

The guidelines are "a non-binding framework for developing national & local smart city regulations, plans & strategies, which will ensure that digital urban infrastructure & data contribute to making cities sustainable, inclusive , participatory & prosperous and respectful of human rights."

Objectives of the international guidelines

- **Develop a global normative framework**
- **Advocate for people-centred smart cities**
- **Provide practical guidance**
- **Enable global cooperation**

Expected impact

*Enhanced **knowledge, skills and policymaking** in people-centred smart city development*

***The Global Digital Compact is localized through** practical guidance and tools to implement it at the city levels*

*Cities globally adopt the principles and put people at the centre of sustainable digital urban development, reducing the **digital divide** across countries, regions and cities.*

***Global multi-stakeholder coalition** to advocate for - and collaborate on - people-centred smart cities, sharing solutions and knowledge*

The international guidelines - milestones

MEMBER STATES REQUESTS	UN-HABITAT MILESTONES
An **inclusive consultation process** to inform the development of the guidelines (including UNH RO/COs, Member States, national and international associations and organizations of local authorities, UN, IFI, development agencies, non-governmental organizations, academia, civil-society organizations, the private sector and other relevant stakeholders.	Consulted over **800 stakeholders** through: • ***3 Global consultations (EGM)*** *with EWG* • ***7 Stakeholder Consultations*** • ***3 Regional Online Consultations*** *across 5 global regions* • ***Regional in-person Consultation*** *for WEOG and EEG* • ***13 Advocacy Events*** *to promote the guidelines* • **1 Open Online Consultation** for external stakeholders to contribute to the drafting process directly.
Collect best practices, guidelines and lessons learned from different contexts and at different scales to inform the drafting	Collected **data and good practices** through the World Smart Cities Outlook 2024
Leverage technological platforms, such as **UNITAC** to support the development of international guidelines	Engaged **UNITAC** as technical partner

Consultation process: meetings unpacked

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Global consultation		
Meeting	**Date**	**Location**
EGM1	17-18/04	Strasbourg
EGM2	26-28/09	Online
EGM3	22-23/01/25	Online

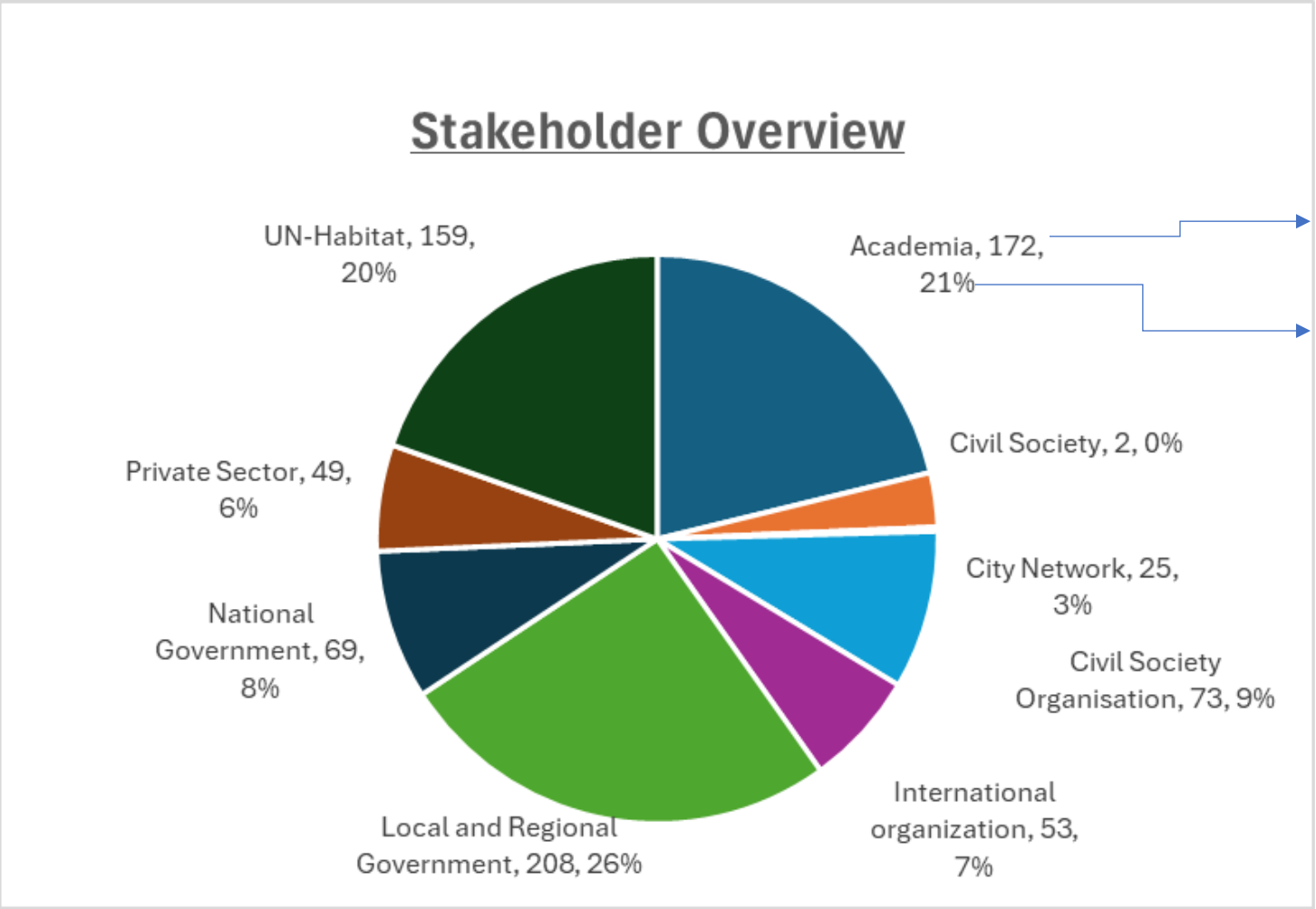
Stakeholders and thematic consultations		
Stakeholder	**Date**	**Location**
CSO	9-10/05	Civil Society Conference (Nairobi)
Academia	18-20/06	UNITAC (Hamburg)
LRGs	10/09	Online
Climate	11/09	Innovate4Cities (Montreal)
UN-Habitat consultation	12/09	Nairobi/online
International organizations	25/09	Online
Private Sector	2/10	Carnegie (California)
Open Online consultation	Oct/Nov	Online

Regional online consultations	
Region	**Date (2024)**
Latin /North America	*21 November*
Eastern Europe	*22 November*
Africa*/ Europe*	*26 November*
Asia Pacific	*28 November*

Regional consultation (in-person)	
Region	**Date (2025)**
Eastern Europe + Western European and other group	*28-29 January*

Consultation process: Stakeholders overview

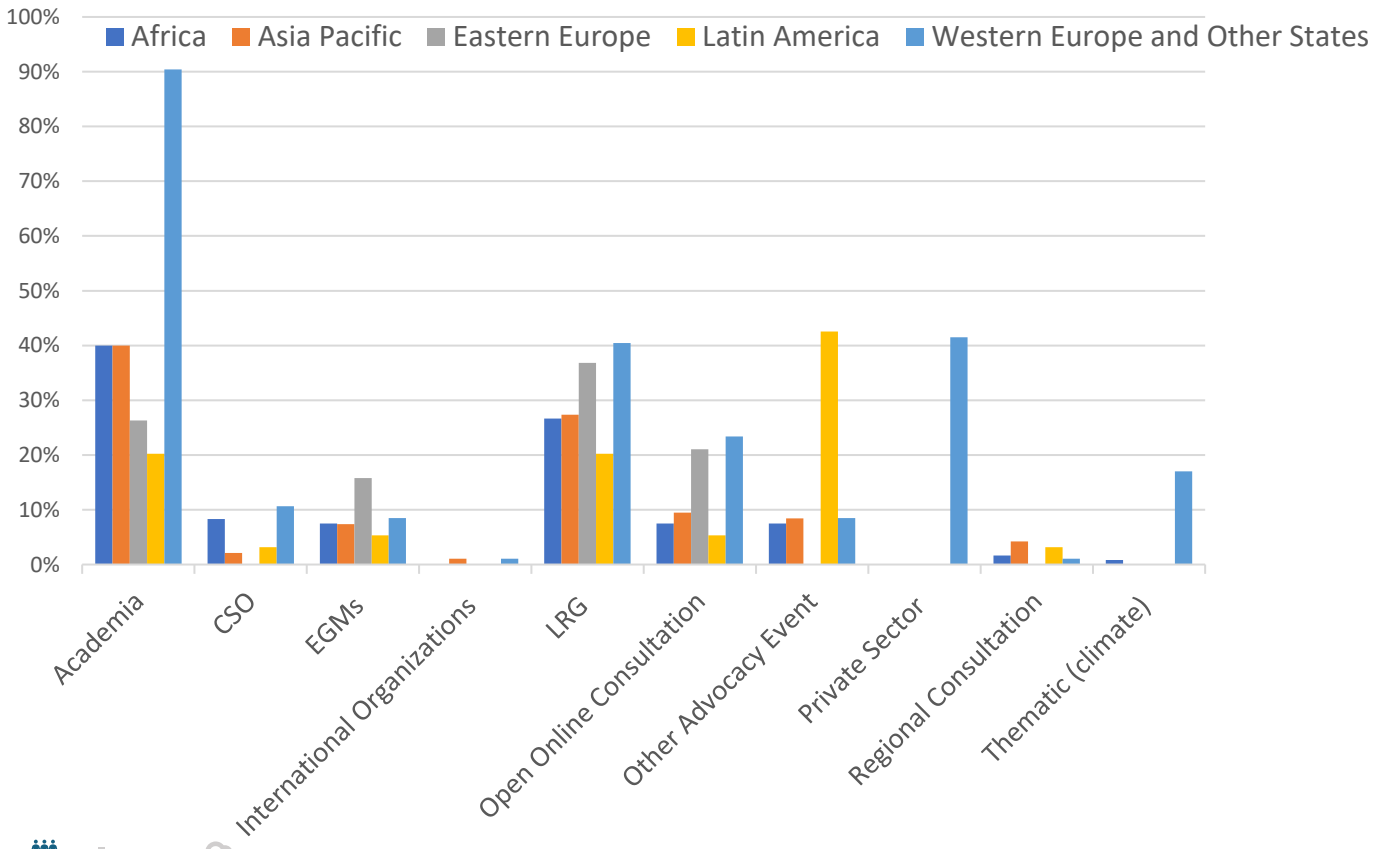
PARTICIPATION BY STAKEHOLDER GROUP TO THE CONSULTATIONS*



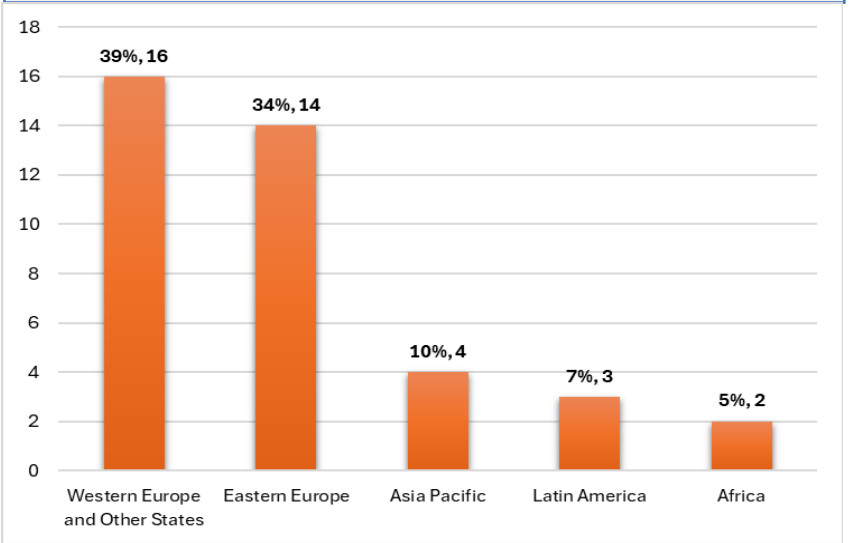
*Data last updated 02/25

Consultation process: Regions

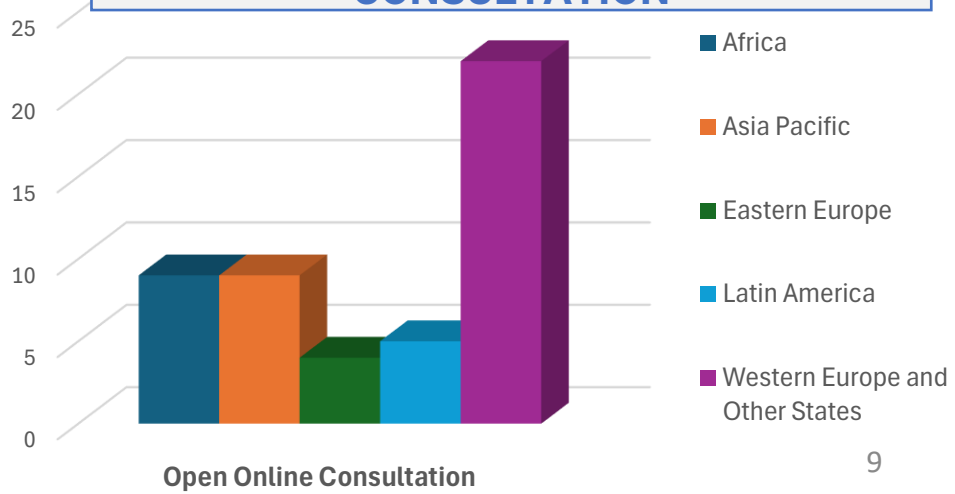
REGIONAL BALANCE IN ALL CONSULTATIONS



FOCUS ON REGIONAL CONSULTATIONS



FOCUS ON OPEN ONLINE CONSULTATION



Our partners in the consultation process

UN-HABITAT

EURO CITIES

2024 UNITED NATIONS CIVIL SOCIETY CONFERENCE

ESCAP Economic and Social Commission for Asia and the Pacific

Edinburgh Napier UNIVERSITY

UNIDO

Group of Friends of the Smart Cities (Member States)

UCLG United Cities and Local Governments

GLOBAL CITIES HUB GENEVA

UNDP

OPEN NORTH NORD OUVERT

GSMA

ODC open data charter

SMARTCITY EXPO WORLD CONGRESS

WeGO SMART SUSTAINABLE CITIES FOR ALL

OECD

European Commission

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

HAMBURG UNITAC

unesco

European vestment Bank

UNITED NATIONS

UNITED NATIONS HUMAN RIGHTS OFFICE OF THE HIGH COMMISSIONER

ITU

United Nations Office of the Secretary-General's Envoy on Technology

ECA

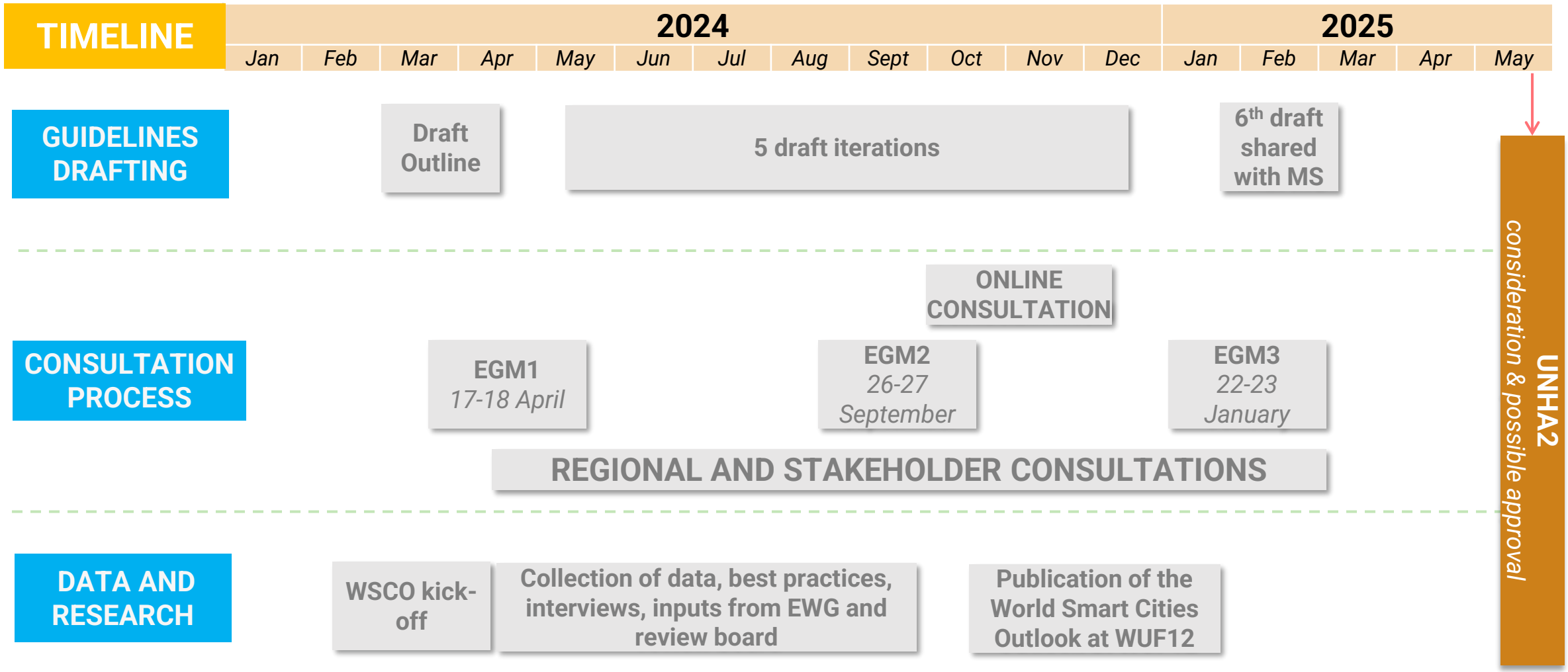
CAF DEVELOPMENT BANK OF LATIN AMERICA AND THE CARIBBEAN

ESCWA

The advisory body – the Expert Working Group

- **31 Global Experts appointed by Member States to** advise UN-Habitat, representing **25 countries**
- **Ambassadors of the guidelines** in their networks and **primary advisory body**
- Sharing their best practices and providing normative and practical guidance in areas such as urban development, smart cities, technology, digital governance, community participation, human rights, sustainability, recovery and reconstruction.

Timeline of the guidelines



Update on the intergovernmental process

Feb

- **17th Feb**: In-person review & feedback at PBA (63rd ad-hoc WG)
- **24th Feb**: In-person review & feedback at PBA (64th ad-hoc WG)

*Consultation on the **draft guidelines***

March

- **5th March:** In-person review & feedback at PBA (65th ad-hoc WG)
- **12th March**: In-person review & feedback at PBA (66th ad-hoc WG)
- **17th March**: guidelines submitted to UNON for translation
- **25-27 March**: Update at the EB on the Res 2/1 implementation

Consultations led to **two iterations** of the document, with a final one aiming at balancing out the positions…

The draft is an *in-session document (English)*, meaning it will discussed by Member States till and during the Assembly.

Resolution and Guidelines: Towards UNHA2

Consultation on the draft guidelines and resolution

April

- **17th April:** Guidelines document translated in all UN official languages
- **April/May**: 3 OECPR informal consultations on the guidelines and on the draft resolution/draft decision

May

- **26-28 May**: OECPR review on a draft resolution/draft decision
- **29th May**: UNHA2 COW negotiation *(if needed)*
- **30th May:** UNHA2 adoption

June

- **18-19 June**: **EGM4 in Baku, Azerbaijan, on implementation** (TBC)

The Word Smart Cities Outlook

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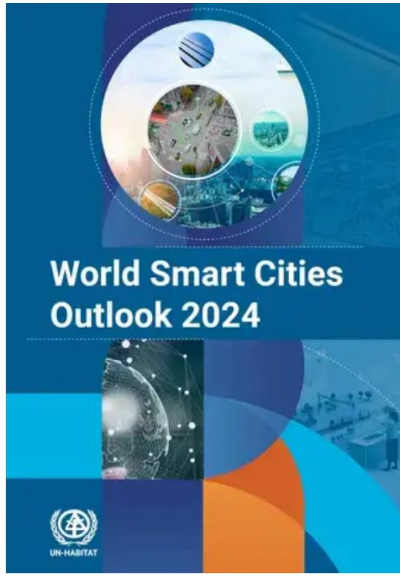

UN-Habitat collaborated with the Napier Edinburgh University to provide evidence to inform the guidelines. The report, launched at WUF12, offers robust **empirical findings** and **global knowledge** on smart city trends, challenges, and opportunities, including **regional variations.** The report:

1. assesses the **current state of people-centred smart city developments** across cities and countries globally **and insights for future developments**
2. evaluates the **impact of smart city technologies and strategies** on sustainability, resilience, equity, social inclusion, accessibility, security, and quality of life in urban area
3. offers **recommendations** to foster people-centred smart city development that enables global community building, standardization, and benchmarking.

How

1. **Primary and secondary data and over 50 case studies collected** of people-centred smart city implementation
2. Analysis of key drivers to anticipate expected **future trends**
3. Continuous **coordination** between the WSCO team and the IG-PCSC drafting process

Global findings of the report

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Persistent digital divide

38% of world population has no access to mobile internet

Worldwide the percentage of women using the Internet (65%) was 5% lower compared to the percentage of male (70%)

Regulatory issues

Smart city strategies often not aligned with other national/municipal strategies

30% municipalities with AI strategies

Data protection laws lacking in 58 countries globally

Only 5.6% of world nations adopted data governance policies

ethics and digital human rights missing in procurement processes

Digital skills gap

45% reporting digital literacy as a gap for citizen engagement

60% reporting digital skill gap in public administration

In the Global South access to educational resources is limited

Financial gaps

40% funding gap for smart city units

65% funding coming from municipal funds

private sector funding amounts to only 13%

Rigid procurement processes and unsustainable business models deter private sector participation, affecting 64% of respondents, especially in Africa and Latin America

Monitoring

37% municipalities with smart city monitoring process

30% of municipalities lack technical standards for data in smart city initiatives

Environmental impact of smart cities projects is less measured than social and economic impacts

Regional findings - Africa

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Persistent digital divide

Access disparities is more severe in low-income regions, as well as the digital gender gap, particularly in parts of Africa and Asia

In Africa:

3G only covers 84% of the population against 98% in other regions.

4G only covers 64% of the population.

5G networks cover only 6% only of the population, the lowest coverage globally.

Regulatory issues

African municipalities have the lowest adoption rates of smart city strategic plans (21%) and national-level smart city agendas (36%)

92% of municipalities in Africa agree that the lack of technical and data standard is a major barrier to smart city development.

Only few African municipalities include environmental objectives in their smart city plans

Digital skills gap

64% of respondents in Africa reported skills shortages as a major constraint to the development of smart cities always or most of the time

Multilevel governance

Local-national collaboration in smart city planning is less frequent in Asia (56%), North America (62%), and Latin America (62%), but more common in Africa (86%)

Financial gaps

Only 50% in Africa can leverage municipal budget for smart city development

Iin Africa only 36% of administration have a smart city or digital transformation unit in charge.

Monitoring

Environmental assessments are notably lower in Africa (50%), compared to other regions

Participation

E-participation of vulnerable groups had been adopted in higher rates in Asia (70%) and Africa (63%) compared to Europe (58%), the Americas (59 %) and Oceania (29%).

Regional findings - Europe

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Persistent digital divide

Accessibility and affordability disparities is generally less prominent in European countries, however there is a strong regional disbalance/

Europe has very high 4G and 5G coverage. The latter is eight times higher in Europe (68%) compared to Africa (6%)

Regulatory issues

Many European cities (66%) and countries (51%) have adopted smart city strategies and strategic plans.

Europe has been at the frontrun on policy development with an AI Act and a Data protection regulation in place since 2022 and 2014 respectively.

The region promotes the integration between digital and green policies

The highest concentration of open-source technologies and interoperable platforms is in Europe and the Americas.

Environmental sustainability

81 countries have implemented e-waste laws, with Europe leading efforts to reduce e-waste and promote sustainability

Europe is the region where smart city strategies are more likely to give high importance to environmental outcomes

Data centers in Europe consume up to 5% of energy in the Netherlands and 19% in Ireland

Financial gaps

Evidence from 157 European cities has confirmed that a positive correlation exists between business incubation and smart urban development

Monitoring

Environmental, social and economic assessments of the impact of smart city policies and technologies is conducted more frequently in Europe (87%)

Participation

E-participation of vulnerable groups is lower in Europe (58%), compared to Africa and Asia, but higher than the Americas

Regional findings – North and Latin America

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Persistent digital divide

Access disparities is more severe in some regions. In 5 countries, Latin America had reached a coverage of very high-capacity networks higher than 75%, while in 8 countries full-fiber broadband was available to less than 50 % of the households

North American cities are most inclined to offer subsidies for devices and broadband services, a measure otherwise adopted by only 26 % of cities

Regulatory issues

Nationwide smart city strategies were not reported by any of the respondents from North America, while in Asia this was 75%. E-government strategies have been adopted by 64 percent of North American countries

Lack of technical standards as an ongoing constraint to people-centred smart city development, with a higher incidence in Latin America (81 percent) and North America (92 percent).

Digital skills gap

Promotion of digital literacy, digital skills training, and IT workshops have been provided by 46% of LRGs. The proportion was higher in Latin America

Multilevel governance

Local-national collaboration in smart city planning is less frequent in Asia (56%), North America (62%), and Latin America (62%), but more common in Africa (86%)

Financial gaps

Municipal budget available more in North American (92%) and Latin American (77%) countries compared to only 50% in Africa

North and Latin American cities struggle to obtain financial support from federal governments

Participation

App contests are most popular in Latin American cities (36%) while public workshops are most used by North American cities (31%)

Monitoring

The participation of residents was more significant in North America (63%), while Latin America reported the highest level of engagement for civil society organizations

Environmental assessments conducted more frequently in Europe (87%), Latin America (84%), and Asia (79%), notably lower in Africa (50%) and North America (40%)

Regional findings – Asia Pacific

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Persistent digital divide

Access disparities is more severe in low-income regions, particularly in parts of Africa and Asia

The gender digital gap more pronounced in certain regions of Africa, Asia and Middle East, with an approximate 10% difference between men and women's internet use

Regulatory issues

54% of cities reported that their country has defined a nationwide policy to guide smart city initiatives, this was higher among Asian cities (75%)

Most African, Asian, and North American countries have approved a data protection law but have yet to establish an independent authority to oversee its implementation

Digital skills gap

Smart city units were in place in 56%of the cities, with a lower incidence in Africa and Asia

Multilevel governance

Local-national collaboration in smart city planning is less frequent in Asia (56%), North America (62%), and Latin America (62%), but more common in Africa (86%)

Financial gaps

Nationwide funding schemes for smart city development have been common in Asia

Infrastructural gaps

Asia and Africa infrastructural gaps is undermining the implementation of digital technologies

Monitoring

37% municipalities have smart city monitoring process. In African and Asian cities only 21% and 35%, respectively

Environmental assessments conducted more frequently in Europe (87%), Latin America (84%), and Asia (79%), notably lower in Africa (50%) and North America (40%)

Thematic findings (1/4)

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STRATEGIC AGENDAS

69%
of municipalities had either a vision statement or a strategic plan specific to smart city development

More than
30%
of cities have adopted their own strategy for the use of AI

54%
of all the countries have issued a nationwide smart city plans at the national level

Nationwide strategies on digital development
Adopted by 69% of the world's nations

e-government strategies
Adopted by 81% of the world's nations

only **37%** of cities have a monitoring process for smart city projects. This is due to the lack the human and technical resources to track and evaluate the performance of smart city projects

POLICIES AND REGULATIONS

CYBERSECURITY

71% of countries globally have adopted cybersecurity laws

23% of municipal governments face challenges enforcing these laws

Enforcement challenges are more prominent in **Africa** compared to **North America**

African (36%) and Latin American (45%) cities are least likely to include cybersecurity requirements in their procurement processes

DATA PROTECTION AND GOVERNANCE

58 countries lack any data protection laws

Only 5.6% of nations globally have established data governance policies

35% of municipalities report difficulties enforcing data protection within smart city initiatives

TECHNICAL AND DATA STANDARDS

73%
of municipalities identify a lack of technical standards as a significant barrier to smart city development

Challenges are highest in

Only **51 countries** globally have enacted open-source technology laws

ENVIRONMENTAL REGULATIONS

89%
of municipalities include environmental objectives in their smart city plans, with North America embedding them to a small extent (**23%** of cases).

Adoption rates are highest in North America (100%) and lowest in Africa (64%).

81 countries have implemented e-waste laws, with Europe leading efforts to reduce e-waste and promote sustainability.

DIGITAL HUMAN RIGHTS AND ETHICS

Only
25%
of municipalities find it easy to comply with digital human rights regulations

16% of municipalities report ease in enforcing ethical guidelines for technology

Thematic findings (2/4)

PUBLIC SECTOR CAPACITY AND LEADERSHIP

SMART CITY UNITS

56% municipalities with smart city unit, **36%** in African countries and **40%** in Asia

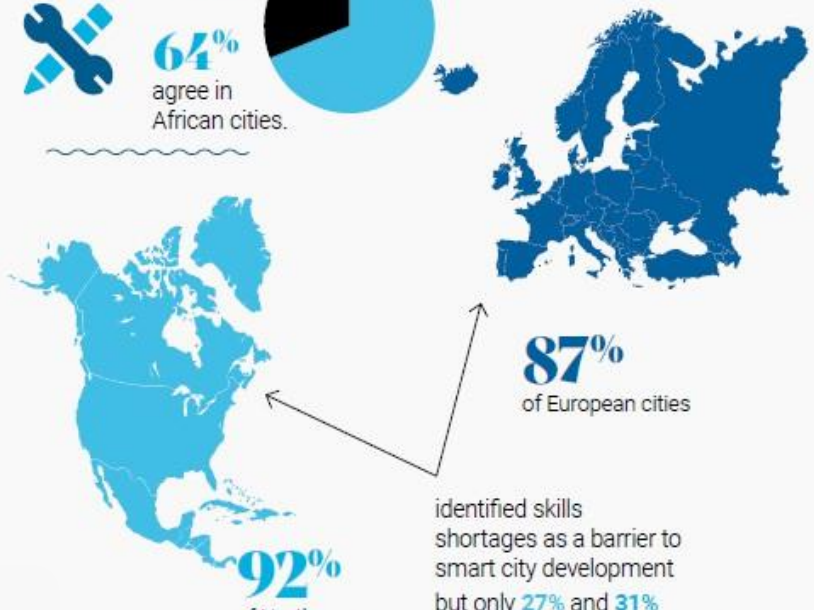
in **71%** of cases, the smart cities functions were attributed to pre-existing municipal departments

in **25%** of cases, the smart cities functions were attributed to pre-existing municipal departments

DIGITAL SKILLS GAP

skill gaps is a constraint to smart city development in their municipality (**88%**) .

64% agree in African cities.



87% of European cities

92% of North American cities

identified skills shortages as a barrier to smart city development but only **27%** and **31%** respectively, have dealt with such a challenge with a regular frequency

FUNDING GAP

40% believe that smart city units do not have sufficient financial resources

46% deemed their human resources as suboptimal.

INNOVATION CULTURE

Only **34%** describes their municipality as reluctant to change, although **52%** find it a constraint to smart city development but before only **27%** and **31%**.

Thematic findings (3/4)

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COLLABORATIVE ECOSYSTEMS

CITIZEN ENGAGEMENT

only **20%** find citizens as active or very active in smart city development

COMMUNITY PARTICIPATION

51% find difficult to engage local communities especially in North America (62%) and Asia (61%)

87% of cities globally finds citizens having low interest in participating in smart city projects

COLLABORATIONS

PRIVATE SECTOR

between 66% and 62% (local and non-local) of private companies are engaged in smart cities projects with higher participation in the implementation phase

public procurement processes are a major challenge to private sector engagement according to **58%** of cities globally.

85% and 72% agree in North America and Latin America respectively

UNIVERSITIES AND RESEARCH CENTERS

indicated as active or very active partners by **71%** of cities, but their participation is considerably lower (45%) in African and Asian countries

CSOs

Civil society organizations involvement in the planning and implementation of people-centred smart cities is higher in North American and European cities, while limited in Asian and African municipalities

URBAN DIGITAL INFRASTRUCTURES

URBAN DIGITAL INFRASTRUCTURES

Mobile network

3G mobile networks are available to **95%** of the global population. African countries are lagging behind (84% coverage).

4G networks availability is lower in Africa (64%) compared to the rest of the world (90%)

Fixed Broadband

19% of the world population has a fixed broadband subscription, while only **0.8%** in Africa

ENVIRONMENTAL IMPACT

Data centers use 1-1.5% of global electricity, with 1% of global emissions

In Europe, data centers consume up to 5% of energy in the Netherlands and 19% in Ireland

SENSOR NETWORKS

83 billion sensing devices estimated to be installed globally in 2024

Adoption Rates by Region:

- North America: 92%
- Europe: 82%
- Africa: 43%

SECURITY AND PRIVACY CONCERNS

- Risks of cyberattacks on critical infrastructures
- Privacy issues due to increased surveillance
- Need for policies to enforce data protection and human rights

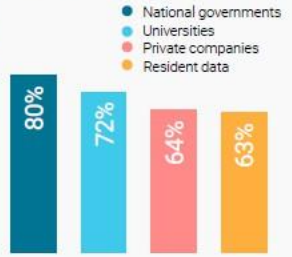
ENVIRONMENTAL AND OTHER CONCERNS

- Maintenance and sustainability concerns due to short lifecycles and high costs
- Sensor networks contribute to e-waste, with 5 billion kg generated in 2022

DATA PLATFORMS

80% of cities use data for decision-making (2022)

Main Data Sources:



Challenges:

- 84% of municipalities lack integrated dashboards
- Only 57% use open data platforms (Africa: 32%, Asia: 44%)
- Data silos, lack of standards, and limited data sharing hinder effectiveness

Open Data Portals:

81% of countries have an open data portal (2024)

Thematic findings (4/4)

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SMART CITY APPLICATIONS FOR PUBLIC SERVICES

SECTOR-SPECIFIC USE OF SMART CITY APPLICATIONS

Urban Planning: Growth in GIS tools and digital twins; high adoption in North America, Asia-Pacific, and Europe

Housing: 3D printing and digital twins reduce costs and environmental impact

Mobility: LEVs make up 18% of vehicle sales in 2023 (60% in China); shared mobility services projected to reach 7% of urban transport mix by 2030

Energy: 100+ cities generate 70% of electricity from renewables; Europe leads in solar and wind energy

Water Management: Smart meters reduce leakages; Water ATMs expand access in the Global South

Waste Management: Smart bins reduce pickups by 80%; urban mining and circular economy practices gaining traction

Disaster Management: AI for prediction and response; drones aid in damage assessment

Safety: along with CCTVs, crowdsourced maps and smartphone apps are being developed to tackle gender-based violence

Welfare: E-learning and e-health expanding; 38% e-learning adoption in China

Major challenges

- The environmental and social impacts of smart city applications remain unclear, requiring more in-depth assessment.
- Without careful design and implementation, these technologies risk amplifying existing inequalities.
- Municipalities and their partners struggle to develop sustainable and scalable business models for people-centred smart city applications.
- Fragmented pilots and experiments lead to duplications and hinder scalability.
- Siloed approaches across urban services and a lack of integration in digital governance knowledge hinder cohesive development.

Key priorities

- Develop robust frameworks to evaluate the social, environmental, and economic impacts of people-centred smart city services.
- Implement regulatory standards to guide the responsible planning and deployment of new technologies in cities.
- Nurture collaborative partnerships enabling cities to co-create adaptable urban solutions across different services.
- Reinforce global knowledge-sharing platforms by leveraging expertise and know-how gained through local pilots and experiments.

Report recommendations – informing the guidelines

Inclusion, Equity, and Human Rights	Develop inclusive policies for smart cities with input from all levels, focusing on digital human rights and ethical standards. Strengthen local monitoring and conduct regular ex-ante and ex-post human rights impact assessments.
Community Participation and Collaboration	Tailor citizen engagement to local contexts using diverse methods. Build partnerships with communities and keep them informed on smart city developments throughout projects/initiatives lifecycle
Digital Literacy	Track and address digital divides through partnerships. Upskill public employees and provide digital literacy programs for citizens to foster inclusive participation.
Shared Prosperity	Use data to drive economic growth, lower entry barriers for small businesses and bridge economic gaps through collaboration. Establish long-term funding for smart city initiatives.
Environmental Sustainability	Align environmental standards for sustainable technology use. Improve impact measurement methods and include product lifecycle assessments in planning.
Governance and Regulations	Harmonize local and national smart city agendas, support innovative talent recruitment, and promote a people-centered digital culture through change management.
Digital Infrastructure and Smart City Services	Enhance oversight of critical infrastructure, support local innovation, modernize procurement for digital services, and foster partnerships for scalable solutions.

The Guidelines characteristics

FOUR THEMATIC PILLARS
AND **FOUR ENABLING PILLARS**

1. **UNIVERSALLY APPLICABLE**: designed to be adaptable across different governance structures, countries development levels and urban contexts

2. **INTERTWINNED & COLLABORATIVE**: recognizing that digital transformation requires cross-sectoral and multi-stakeholder cooperation, they are interlinked.

3. **ACTIONABLE:** provide implementable yet adaptable to diverse needs recommendations to be translated into urban strategies and measurable outcomes.

4. **INCLUSIVE & EQUITABLE** – Placing people at the center of digital transformation by ensuring equal access, ethical technology use, and sustainability for all urban residents.

Content of the guidelines

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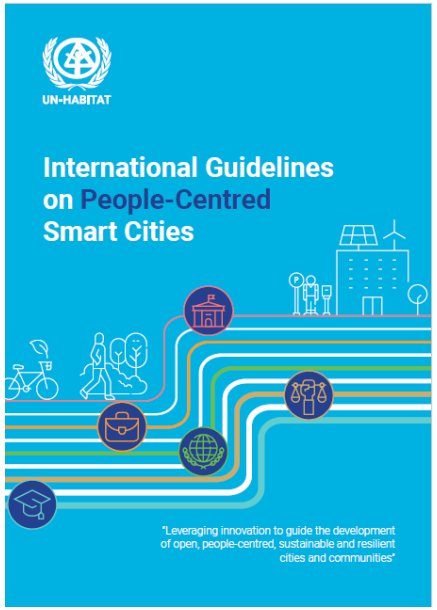
INTRODUCTION & OBJECTIVE

CORE BODY OF THE GUIDELINES

ANNEX

Opportunities for the international guidelines



1. **Build capacity** and enhanced knowledge and capabilities through learning and upskilling programmes for sector or country-specific challenges.
2. **Technical assistance** to governments and develop ad-hoc products and new collaborations.
3. **Diagnostics** to assess, monitor and evaluate cities and countries' readiness to adopt guidelines principles.
4. **Impact assessments** to review impacts of digital technology and related policies on projects.
5. **Partner network** to advance guidelines implementation and Global Digital Compact, promote scalability and replication.
6. **Global advocacy** through networks of cities, countries and partners, and at global events to scout opportunities.

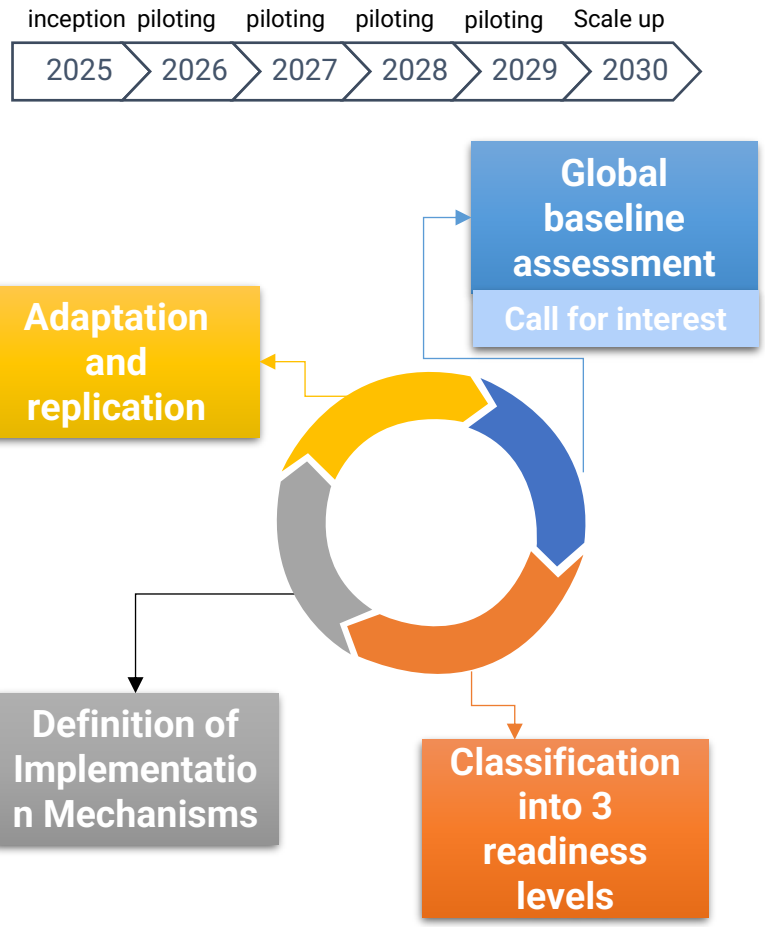
Sectors

- **Basic urban services**
- **Land use & management**
- **Housing affordability and accessibility**
- **Cross-cutting issues** *(Environmental sustainability & climate change, man-made and natural crises response, digital human rights, governance, digital financing)*

Why do we need an implementation approach

Feedback from the consultations		UN-Habitat proposal
Readiness levels	Both EWG and global consultation recommended that the guidelines are contextualized to local need for a step-by-step implementation based on local priorities and capacity (readiness levels)	A contextualized, **phased approach** ensures that the guidelines are both relevant and actionable for local governments and stakeholders
Monitoring the guidelines	Experts and stakeholders stressed the need for implementation mechanisms and tailored tools, including **monitoring and evaluation of the guidelines globally and locally**, to support their adoption	Implementation mechanisms including M&E for the guidelines globally and accompanying tools to establish **light metrics** locally to measure adoption and track progresses towards a people centred smart city
Recommendation from the World Smart Cities Outlook 2024		
Monitoring digital divide	Advises to **establish metrics and processes** to rigorously monitor the state of the digital divide in urban contexts. The guidelines as a global framework can provide guidance on how to practically do so.	Implementation mechanisms would include the development of monitoring guidance to be adapted and adopted locally
Building capacity	Stresses the needs to **build local capabilities** for the collection and analysis of granular, disaggregated data **to enhance the monitoring** of smart city projects	Implementation would ensure all countries and cities are equally capacitated
Digital human rights oversight	Suggests that international institutions harmonize and coordinate policies on the ethical use of digital technologies and digital human rights to provide local governments with consistent guidance.	Implementation would support **local enforcement and monitoring of digital human rights regulations** and capacity building for national regulatory authorities.

Implementation approach



1. **Global baseline assessment:** global survey to establish a baseline of cities' and countries' readiness levels for adopting the guidelines

The survey assesses key dimensions of people centred smart cities (infrastructure, digital ecosystems, financial and technical resources, governance frameworks, institutional capacities, citizen involvement, ethical and human rights principles etc.)

1.1 Call for interest: global call to cities and countries to express interest in piloting the guidelines

2. **Classification into Readiness Levels:** based on survey results, cities and countries are classified on 3 levels of readiness

- Level 1 (Emerging): Limited infrastructure, minimal governance frameworks, and nascent digital ecosystems.
- Level 2 (Developing): Moderate infrastructure and frameworks in place but requiring additional capacity-building and institutional strengthening.
- Level 3 (Advanced): Strong digital infrastructure and governance systems, ready to pilot comprehensive smart city initiatives.

3. **Definition of Implementation Mechanisms:** for each readiness level, tailored implementation mechanisms are designed,

- Level 1: foundational activities such as capacity-building workshops, knowledge sharing, and pilots for basic infrastructure building.
- Level 2: pilot projects targeting specific challenges (e.g., public digital services, data governance) and scaling up institutional capabilities
- Level 3: advanced pilots with a focus on innovation, multi-sector integration and monitoring mechanisms, serving as models for replication.

4. **Adaptation and replication:** based on pilot projects refine the implementation frameworks. Create scalable toolkits for cities and countries to adapt the guidelines to their contexts

Instruments supporting the implementation

UN-Habitat can support national and local governments in advancing people centricity in the digital urban development, by adopting and translating the guidelines principles into their institutional frameworks, processes, strategies etc.

Instrument	Support type	Description
Upskilling programme	Capacity building	Baseline assessment brings evidence on skills gap for each readiness level so to design specific targeted capacity building programmes
Toolkits	Normative & operational work	Production of toolkits for each readiness level to support the localization/adoption at local level of the international guidelines
Monitoring framework	Operational work	Support to design of local monitoring framework to track progresses vis-à-vis implementation of the guidelines
Challenge driven innovation	Technical assistance	For readiness levels 2 and 3, cities targeted are supported to fundraise innovative solutions through challenge driven innovation
Compendium of scalable models	Knowledge creation	Digital resource with replicable models and case studies for addressing specific digital-inclusion-climate challenges in cities. It serves as a reference tool for stakeholders to be inspire by use cases and access to solutions becoming Digital Public Goods
Smart Cities Hubs	Technical assistance	Dedicated Hubs located globally to support localized adoption of the guidelines, development of innovation solutions and serving as a global network for exchange and replication
Global network	Advocacy	Leveraging existing networks to share knowledge, best practices and learn from each other

What's next

UN-HABITAT

OUR OFFERING

CAPACITY BUILDING PROGRAMMES

- Knowledge, skills, and implementation capabilities through targeted learning and upskilling programmes

METHODOLOGIES AND APPROACHES

- Diagnostic tools to evaluate cities and countries' readiness to adopt the principles of the guidelines.
- Impact assessments to review the societal, environmental, and economic impacts of digital technologies and related policies.

SCALABILITY AND REPLICATION

- Partnerships to apply the principles and enablers of these guidelines also to promote scalability and replication.

GLOBAL ADVOCACY

- Global advocacy and mobilization through networks of cities, countries, and partners committed to advancing the guidelines.

SECTORS

BASIC SERVICES

- Internet connectivity, waste/water management, electricity, energy, mobility etc.

LAND

- land use and management, map available or underutilized land, land registration system
- People-Centred Smart Cities Impact assessments to review the societal, environmental, and economic impacts of digital technologies and related policies.

HOUSING

- Retrofitting, Net Zero Energy Buildings (NZEBs), smart houses, accessibility.

CROSS-CUTTING

- Environmental sustainability/climate change, crisis response, digital human rights, governance, financing

Way forward – advocacy opportunities

DISSEMINATION CAMPAIGN*

- **UN-Habitat Assembly,**
- 29-30 May
- Nairobi, Kenya

May 25

- **EGM4**
- 18-19 June
- Baku, Azerbaijan

June 205

- Roadmap for implementation
- Action plan

- **High Level Political Forum,**
- 14-23 July
- New York

- **World Smart City Expo 2025**
- 15-17 July
- Seoul, South Korea

- **World Summit on the Information Society**
- 7-11 July
- Geneva

- **Webinar launch event**
- TBD
- Online

July 25

- Launch of the **EoI for cities** and countries to pilot the guidelines

- **Call for financial and technical support** for partners

- **Africa Smart Cities Investment Summit**
- 3-5 Sept
- Addis Ababa, Ethiopia

- **Global Smart City Forum**
- 28-29 Sept
- Riyad, Saudi Arabia

- **OECD Roundtable on Smart Cities for Inclusive Growth (Q3/Q4 2025)** (TBC)

Sept 25

- **World Habitat Day**
- 6 October
- Nairobi, Kenya

- **World City Day**
- 31 October
- Bogota, Colombia

Oct 25

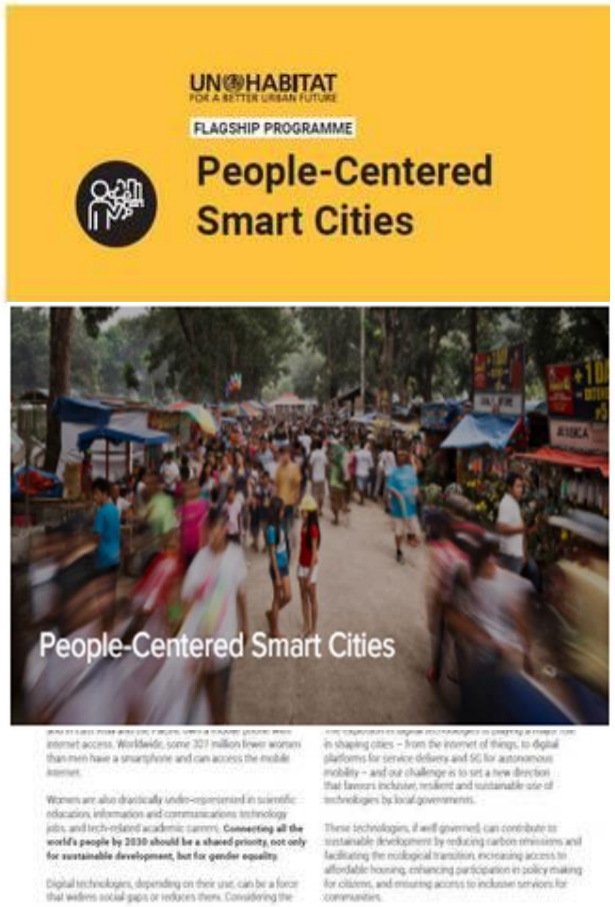
- **Smart City World Congress**
- 4-6 November
- Barcelona, Spain

Nov 25

Proposed milestones

** Events in this slide have a specific focus on the guidelines. However other events also offer alternative opportunities for promoting the guidelines.*

People-Centred Smart Cities Flagship Programme



The flagship programme, launched in 2020, promotes the deployment of technological innovations to realize sustainability, inclusivity, prosperity and human rights in urban development. The goal is to make urban digital transformation work for the benefit of all.

① Global Advocacy

Increased focus and mainstreaming of people-centered, sustainable and inclusive digital transition as a critical policy topic in high level political forums and dialogues.

② Capacity Building and Technical Assistance

Enhanced capacity of governments through capacity building and technical assistance at all levels to adopt a people-centred, privacy-enhancing, and rights preserving approach to digital urban transformation.

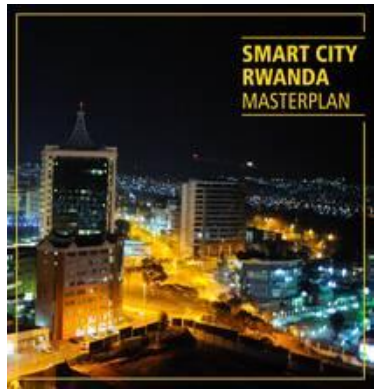
③ Financing Digital Urban Innovation

Increased investment and financing for people-centred smart cities to accelerate the achievement of the SDGs and NUA.

Digital urban innovation at UN-Habitat

UN-HABITAT

HAMBURG UNITAC

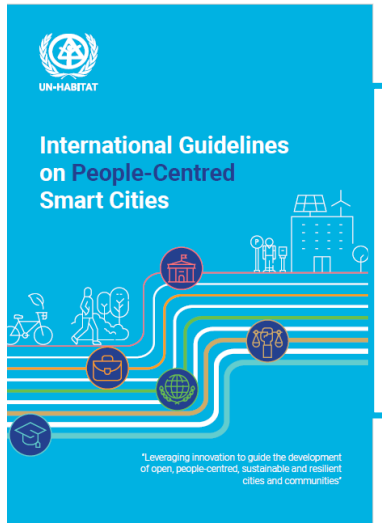


BLOCKCHAIN FOR URBAN DEVELOPMENT
Guidance for Urban Managers

AI for Sustainable Urban Development

Mila

Frontier Technologies for the Urban Poor (compendium of case studies)



The international guidelines on people centred smart cities

Inter-agency Working Group on Artificial Intelligence - AI for People-Centered Smart Cities

DIGITAL RIGHTS GOVERNANCE FRAMEWORK & HELPDESK

With Cities Coalition for Digital Rights

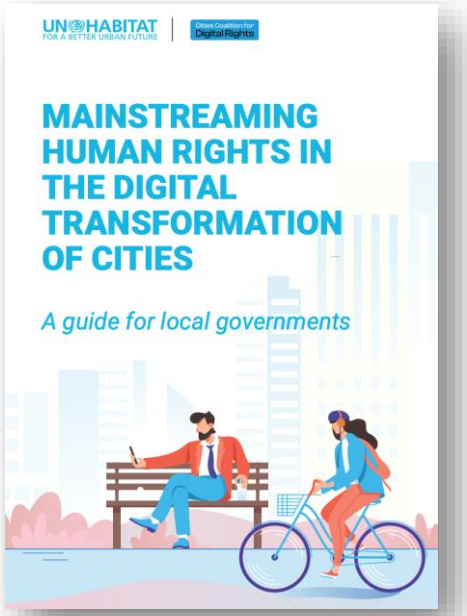
PROGRAMMATIC SUPPORT

National smart urban policies in Paraguay and Guinea Bissau

Smart SDG Cities Programme

Climate Smart Cities Challenge

Project example: digital human rights



Dublin

Develop digital rights learning module for public officials, youth and residents on privacy and ethical issues of emerging use of technologies

Brussels

Develop a Digital Rights Policy Document and connecting with the digital inclusion initiatives and digital divide assessment

Sofia

Expand capacities to develop human-centred services and implement an action plan based on the outcomes from the self-assessment tool

Tirana

Training for civil servants to raise capacities in areas such as data privacy, digital inclusion and draft a digital rights agenda

BANCO DE DESARROLLO DE AMÉRICA LATINA Y EL CARIBE

OPEN SOCIETY FOUNDATIONS

Cities Coalition for Digital Rights

EUROCITIES

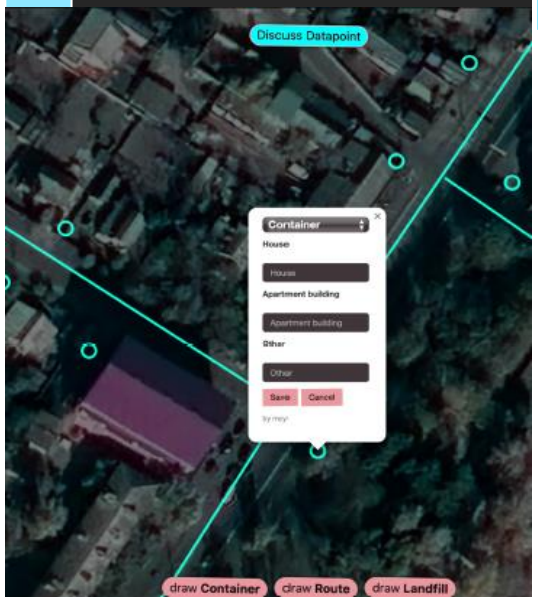
UCLG United Cities and Local Governments

Project example: Digital tools for cities

BEAM

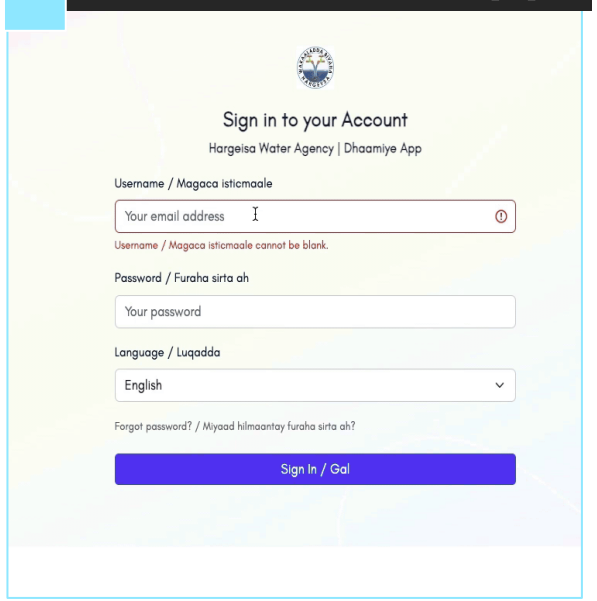
- Machine-learning based tool to map building in informal areas
- Adopted for urban mapping initiatives in eThikwini, 8 cities in Central America and Cape Town

Map Draw



- A web-based opensource application for collecting & visualizing geospatial data
- Allows real-time and multi-user collaboration
- Applied in Ukraine and in Central America

Water Access App



- A digital water platform, connecting users in disadvantaged settlements who do not have a piped water connection with certified vendors via mobile-based orders
- Currently built for Hargeisa

Project example: Digital tools for cities

UN-HABITAT

URBAN RECOVERY SYSTEM

- Urban recovery planning system with several modules of mapping, planning, assessments and visualization to support urban recovery in Ukraine.
- A prototype is being tested.
- Next steps: Integrating functionalities for damage assessments, map recovery projects, etc.

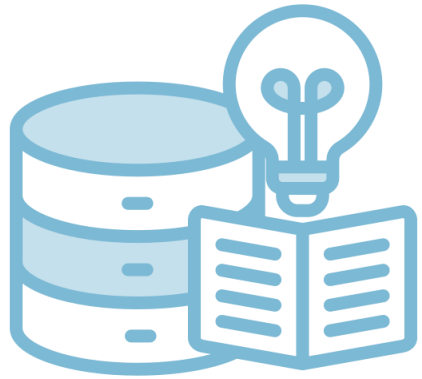
URBAN DATA PORTAL

- Currently developing open data platforms for harmonizing data tables, images, and GIS data, with interface to other systems for Namibia & Ukraine
- Facilitating data sharing, harmonization and use of data for evidence-based decision making.

HOUSING INFO SYSTEM

- Currently conceptualizing a National Housing Information System for Namibia, including a module on informal settlements.
- Key functionalities of the system will be decided with the stakeholders in Namibia.

CAPACITY BUILDING



- Digital transformation training for city leaders
- Develop toolkits & guidance on
  - *AI and geo-spatial mapping*
  - *Smart city strategy development*
  - *Urban innovation and technology accelerator*

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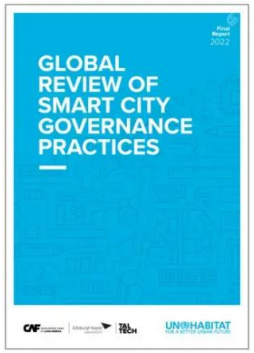
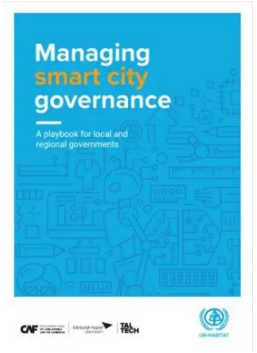
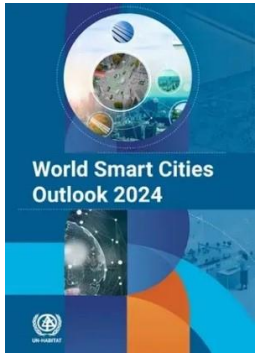
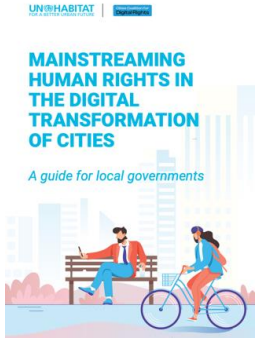
Knowledge products

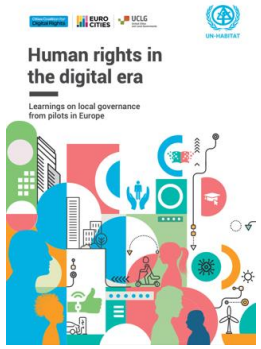




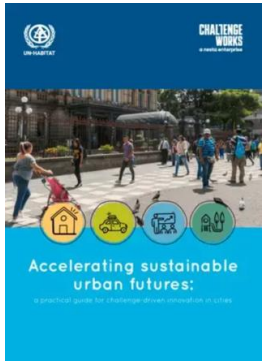


Smart city governance practices & frameworks (2022-2024)

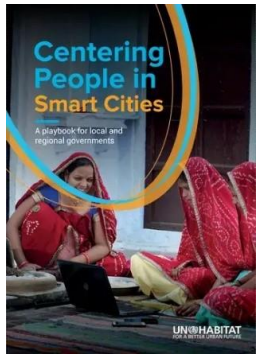


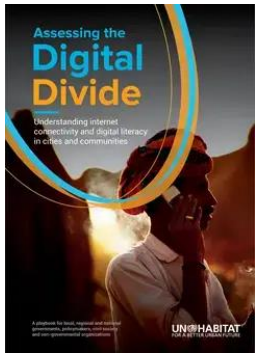


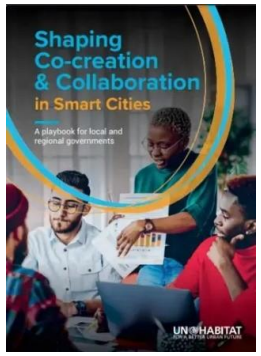
Human rights & digital technologies

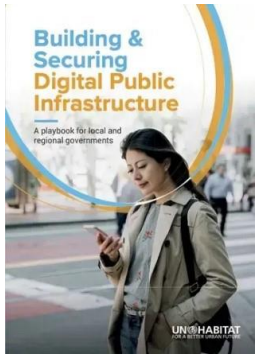


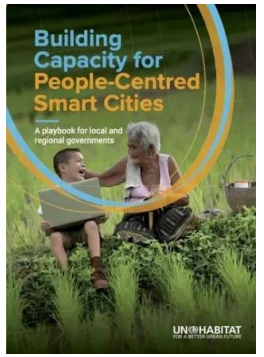
Challenge-driven innovation



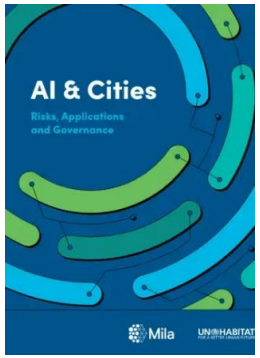


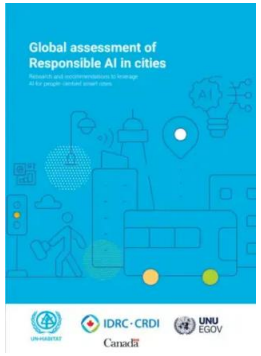


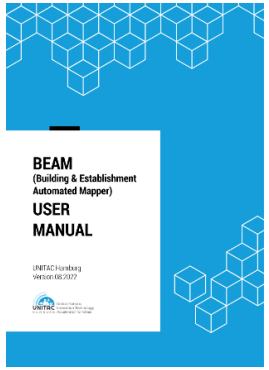




People-centred smart cities playbooks (2022-2023)







Artificial Intelligence & Cities