

Centering People in Smart Cities

UN Habitat
People-Centered
Smart Cities Flagship
Programme

Expert Group Meeting
Open Government and Digital Transformation for the New Urban Agenda in the Arab region

18 Nov 21 @ Cairo, Egypt

Session 2: Digital Transformation for Urban Development Agenda in the Arab region

UN HABITAT
FOR A BETTER URBAN FUTURE

UN-Habitat new focus on innovation, digital and smart cities



From the strategic plan:

82.

Frontier technologies are profoundly influencing the emergence of smart cities, the ways in which we build and manage our cities and other human settlements, and how urban managers take more informed decisions. Those currently include, among others, the Internet of things, sensor networks, machine-to-machine communication, robotics, artificial intelligence, virtual and augmented reality, 3D printing, geographic information systems (GIS), remote sensing, autonomous unmanned vehicles, drones, blockchain, cryptographic computing, and big data processing and visualization.

85.

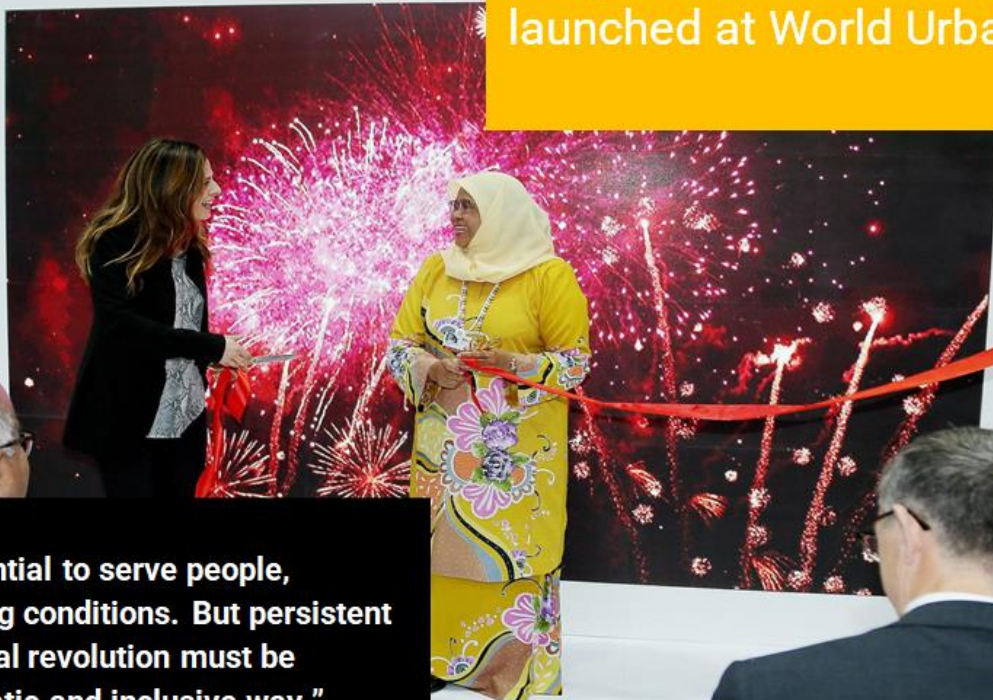
An increased emphasis on **capacity-building in local government** and across the built environment professions is crucial in order to turn smart city plans and the use of frontier technologies in urban planning, design and regeneration into **people-centred opportunities, rather than technology-led endeavours**.

86.

Ultimately, the deployment of frontier technologies and sustainable urban development needs to **pay particular attention to underserved populations** in order to address inequalities and bridge social and spatial divides.

UN-Habitat's Flagship Programme: People-centered Smart Cities launched at World Urban Forum

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“Digital technologies have the potential to serve people, improve public services and working conditions. But persistent digital divides remain, and the digital revolution must be directed and governed in a democratic and inclusive way.”

Maimunah Mohd Sharif, UN-Habitat Executive Director

Why People-Centered?

Why now?

- Privatization of public infrastructure can reduce public oversight and equitable use of technologies and services
- Cities have become testbeds for new, untested or unregulated technologies forcing a "catch-up" with today's industry
- Data created by smart city tech has sparked global dialog about privacy and digital rights
- IoT has created new opportunities but also introduced new risks
- A persistent digital divide prevents equitable and universal access to digital society

People-centered smart cities leverage data, technology and services for common good, delivering the inclusive and sustainable cities that are needed in the 21st century.

How did we get here?

Four key phases of smart cities

- **Researcher's smart city** 1960s-80s; leveraging big data to study urban patterns
- **Marketer's smart city** 1990s; private sector driven, infrastructure focus
- **Citizen's smart city** early 2000s; government led, social services focus
- **Consumer's smart city** 2010s; urban platforms for consumer services



What needs fixing?

Six lessons learned from decades of smart city development

- Lack of awareness of longstanding “smartness” in cities
- Over reliance on the optimization narrative
- Lack of evidence and key performance indicators (KPIs)
- Failure to engage residents meaningfully
- Privatization of public infrastructure & services
- Lack of transparent and structured data governance



Where do we go from here?

A people-centered smart city should...

- Empower people (**community**)
- Make access to technology equitable (**digital equity**)
- Responsibly manage data & digital infrastructure (**infrastructure**)



- Build trust by securing digital assets (**security**)
- Building multi-stakeholder capacity (**capacity**)

The People-Centered Smart City ecosystem

- Public sector and multi-level governance - **innovation and participation drivers**
- Social entrepreneurs, community advocacy groups and local communities - **self-organizers, advocates, participants and co-creators**
- Businesses and the private sector - **collaborators and subject matter experts**
- Civil society - **partners, coordinators and actors**
- Academia - **evaluators, analysts and collaborators**
- International community - **communicators, strategizers**

UN Habitat - Global Smart City Survey



Africa

- Antananarivo, Madagascar
- Nairobi, Kenya

Asia

- Chengdu, Sichuan China
- Jaipur, India
- Preah Sihanouk, Cambodia

Middle East

- Ma'an, Jordan
- Irbid, Jordan
- Saida, Lebanon
- Ramallah, Palestine

US & Canada

- Toronto, Canada
- Portland, Oregon

Europe

- Zaragoza, Spain
- Hamburg, Germany

Latin America

- Belo Horizonte, Brazil
- Porto Alegre, Brazil
- Maceio, Brazil
- Curitiba, Brazil

Five pillars of a People-Centered Smart City

UN Habitat has compiled best practices from government, the private sector and civil society into five pillars of People-Centered Smart Cities.



**Community
Pillar**



**Digital Equity
Pillar**



**Infrastructure
Pillar**



**Security
Pillar**



**Capacity
Pillar**

Five pillars of a People-Centered Smart City



The Community Pillar

This pillar addresses how local governments can work to place people and their needs at the center of smart city development.

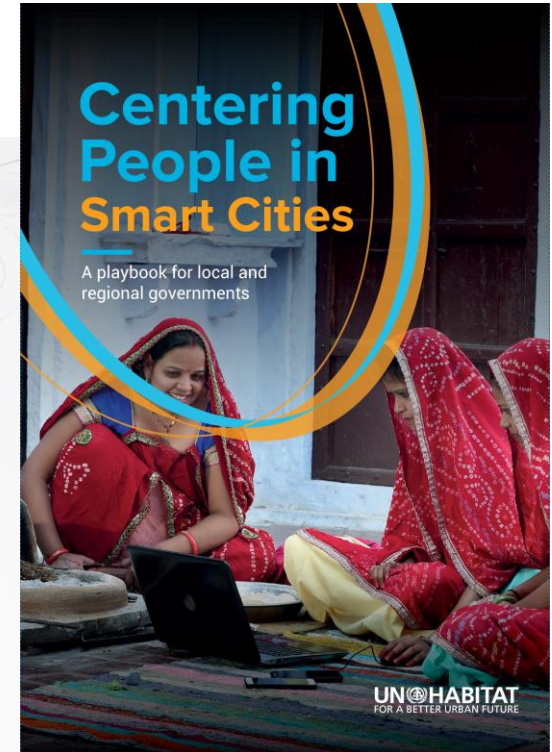
- **Activity 1:** Center smart city activities on people's needs.
- **Activity 2:** Ground smart city infrastructure and services in Digital Human Rights by maximizing community participation, representation, transparency and control.
- **Activity 3:** Provide digital public goods that are open, transparent, accessible, interoperable.



The Digital Equity Pillar

This pillar addresses how to build equitable access to ICTs with a focus on internet connectivity, digital skills, and digital devices.

- **Activity 4:** Build a foundation of universal access to affordable internet, digital skills and digital devices.





The Infrastructure Pillar

This pillar addresses how to drive inclusive digital transformation by developing systems, processes and policies for managing data and digital services.

- **Activity 5:** Improve the convenience and accessibility of services by digitizing them.
- **Activity 6:** Create a data governance framework that sets standards and responsibilities for effectiveness, accountability and inclusivity.



The Security Pillar

This pillar addresses how local governments and national governments can work in unison to achieve secure smart city assets including data and infrastructure in order to improve public trust.

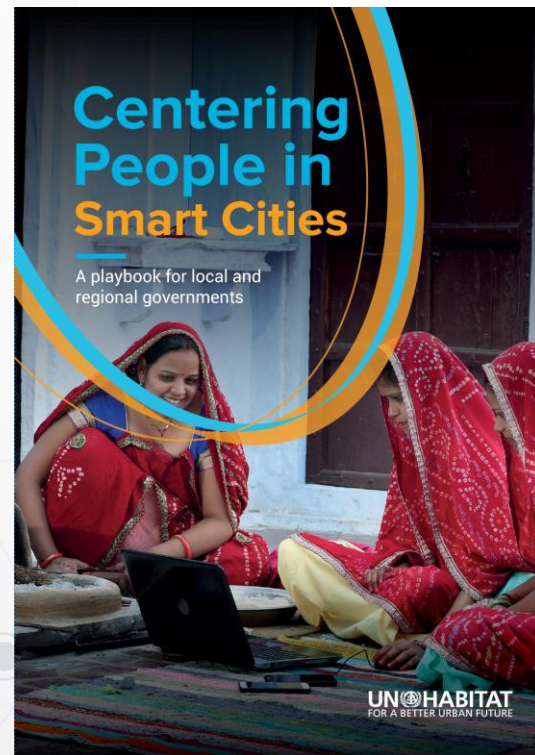
- **Activity 7:** Safeguard public trust by protecting smart city assets.



The Capacity Pillar

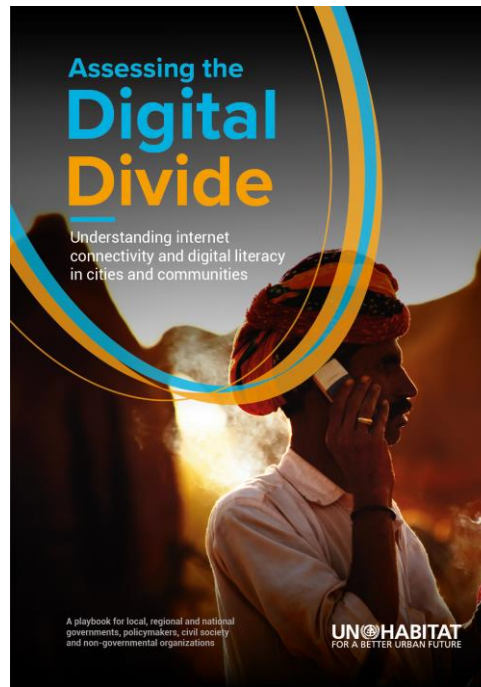
This pillar addresses how to develop multi-stakeholder partnerships and build organizational capacity that better facilitates people-centered smart cities.

- **Activity 8:** Collaborate with diverse stakeholders to build smart city projects, infrastructure and services.
- **Activity 9:** Expand the capacity of city staff for digital transformation.
- **Activity 10:** Evaluate the need for technology and address equity, environmental justice and social justice in smart city initiatives.



Digital Equity Pillar: Playbooks

- **Assessing the Digital Divide:** Understanding internet connectivity and digital literacy in cities
- **Addressing the Digital Divide:** Taking action towards digital inclusion.



Dimensions of the digital divide

1 Connectivity divide



2 Infrastructural divide



3 Socioeconomic divide



4 Demographic divide



5 Cultural divide



6 Literacy divide



DIGITAL DIVIDE ASSESSMENT: Survey Considerations Checklist

The primary objective of your survey should be to identify the symptoms of the digital divide (gap), where the problem is occurring (locus), and the suspected cause of the problem (root). Below are sample survey questions that address each. Your survey should design questions that address each of the items in the checklist.



Survey questions that identify gaps

Gaps are the symptoms of the digital divide. Authorities internationally recognize three manifestations of the digital divide where “gaps” are felt: connectivity (access to physical infrastructure), digital literacy, and devices (access to digital devices that use the Internet).

Connectivity

- Does the respondent have access to usable broadband Internet in the home?
- Does the respondent have a means by which to conveniently and reliably access the Internet?
- Does the respondent rely on a public service center such as a public library for Internet connectivity?
- Does the respondent travel to a location to connect to the Internet?
- What kind of activities can the respondent perform using the Internet connectivity speed they have access to?

2

Survey questions that identify locus

Locus refers to where residents are experiencing the effects of the digital divide. This includes where residents experience a lack of connectivity, where residents live that suffer from low rates of digital literacy, or where residents live who lack convenient access to digital devices.

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Survey questions that identify roots

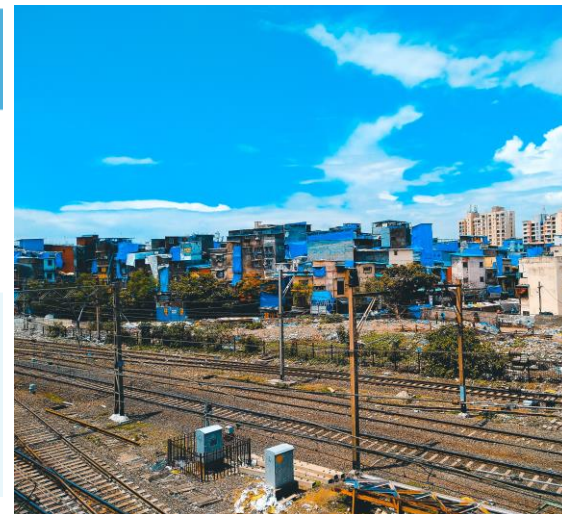
Roots are the root causes of the digital divide and address why some residents experience the effects of the digital divide.

Digital Literacy

- Does the respondent feel confident in their ability to use the Internet to accomplish their goals?
- Does the respondent feel confident in their ability to use a digital device to accomplish their goals?
- How frequently does the respondent use the Internet?
- Is the respondent familiar with privacy issues?
- Is the respondent familiar with cyber security issues, including password management or phishing attempts?
- Does the respondent feel confident in their ability to create and share content online?
- Does the respondent feel confident in their ability to use social media?
- Does the respondent feel confident in their ability to fill out online forms for employment?
- Does the respondent access or use online educational platforms?

Access to Devices

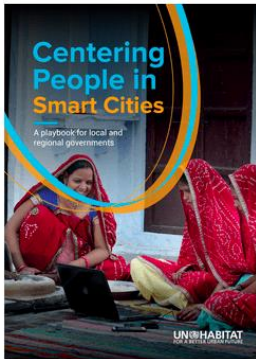
- What device does the resident use to access the Internet?
- How many Internet-enabled devices does the individual have access to?
- Is it a smart device?



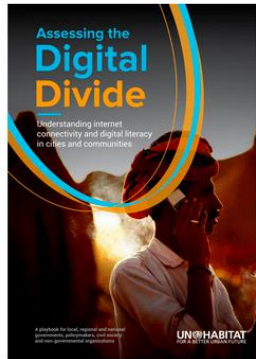
Moving forward

People-Centered Smart City Playbooks:
available on website:

<https://unhabitat.org/programme/people-centered-smart-cities>



PLAYBOOK
Centering People in
Smart Cities



PLAYBOOK
Assessing the Digital
Divide



PLAYBOOK
Addressing the Digital
Divide

Forthcoming:

Additional **playbooks** will be made
available over the coming months



Digital Rights Helpdesk