



Technical Note on Accessibility

# Fact Sheet 4:

Accessibility in the Urban Sector  
of Operations

3



WORLD BANK GROUP



HUMAN RIGHTS  
INCLUSION  
EMPOWERMENT

Inside front cover

# Technical Note on Accessibility

## Part 3: The Thematic Fact Sheets

### **Fact Sheet 4:**

Accessibility in the Urban Sector of Operations



**WORLD BANK GROUP**



**HUMAN RIGHTS  
INCLUSION  
EMPOWERMENT**



© 2022 International Bank for Reconstruction and Development / The World Bank  
1818 H Street NW  
Washington DC 20433  
Telephone: 202-473-1000  
Internet: [www.worldbank.org](http://www.worldbank.org)

This work is a product of the staff of The World Bank with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of The World Bank, its Board of Executive Directors, or the governments they represent.

The World Bank does not guarantee the accuracy, completeness, or currency of the data included in this work and does not assume responsibility for any errors, omissions, or discrepancies in the information, or liability with respect to the use of or failure to use the information, methods, processes, or conclusions set forth. The boundaries, colors, denominations, and other information shown on any map in this work do not imply any judgment on the part of The World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

## **Rights and Permissions**

The material in this work is subject to copyright. Because The World Bank encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes as long as full attribution to this work is given.

Any queries on rights and licenses, including subsidiary rights, should be addressed to World Bank Publications, The World Bank Group, 1818 H Street NW, Washington, DC 20433, USA; fax: 202-522-2625; e-mail: [pubrights@worldbank.org](mailto:pubrights@worldbank.org).

**Attribution** - Please cite the work as follows: "World Bank. 2022. Technical Note on Accessibility. Washington, DC: World Bank."

Cover photo: [© World Bank]

This guidance is one of **four sets of documents constituting the World Bank Technical Note on Accessibility**. It is primarily meant for the Bank’s task team leaders (TTLs), program implementing units (PIUs) and E&S specialists. The note can be also used by other development partners, including World Bank clients. It focuses on investment project financing (IPF).

The sections that comprise the **Technical Note on Accessibility** are: **The Narrative (Part 1); The Project Cycle Guidance (Part 2); The Five Thematic Fact Sheets (Part 3); and The Technical References (Part 4)**.

# Table of Contents

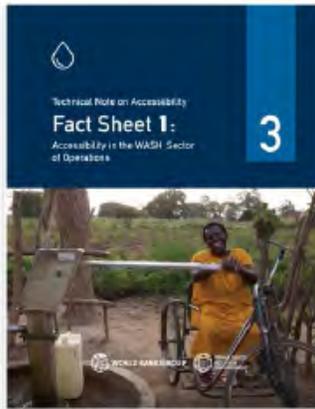
<b>1.</b>	<b>Overview of the Thematic Fact Sheets</b>	<b>8</b>
<b>2.</b>	<b>Urban Development and Accessibility</b>	<b>10</b>
<b>3.</b>	<b>Key Elements</b>	<b>14</b>
<b>4.</b>	<b>Data at Glance</b>	<b>18</b>
<b>5.</b>	<b>International Framework</b>	<b>20</b>
<b>6.</b>	<b>Examples of Key Challenges and Actions for Accessibility in Urban Development</b>	<b>24</b>
<b>7.</b>	<b>Accessible Urban Projects</b>	<b>28</b>
<b>8.</b>	<b>Practical Examples</b>	<b>34</b>
<b>9.</b>	<b>Annexes: Useful Insights</b>	<b>38</b>
	Annex 1: Overall Definitions	39
	Annex 2: What is an Inclusive City?	40
	Annex 3: Why Accessibility in Urban Development Matters - Advocacy Tips	41
	Annex 4: Harmonization and Minimization of Risks	45
	Annex 5: Indicators for Accessibility at the Urban Level	46
	Annex 6: Additional Resources	48

1

# Overview of the Thematic Fact Sheets



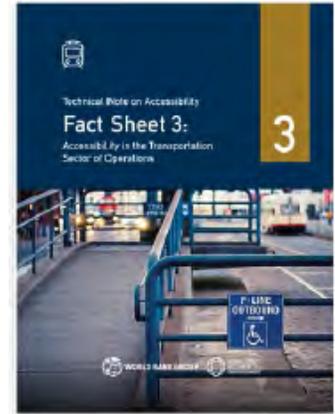
### Download Related Sections



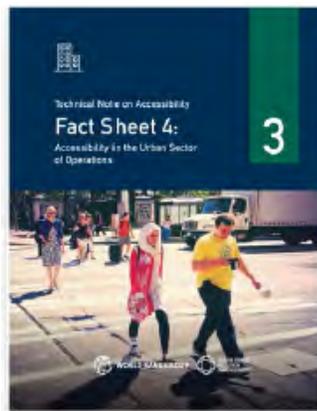
**Fact Sheet 1:**  
Accessibility in the  
WASH Sector of Operations



**Fact Sheet 2:**  
Accessibility in the  
ICT Sector of Operations



**Fact Sheet 3:**  
Accessibility in the  
Transportation Sector  
of Operations



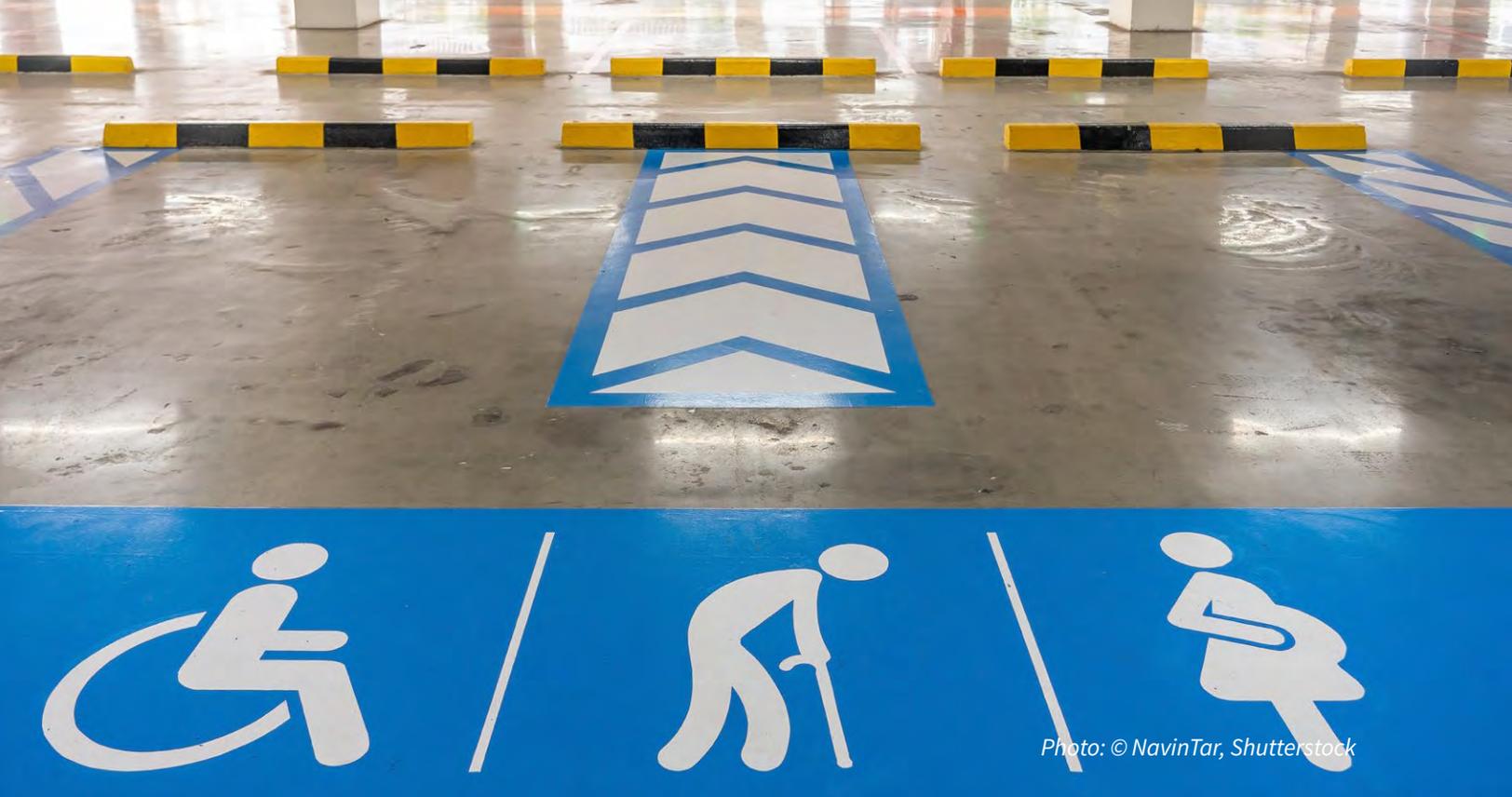
**Fact Sheet 4:**  
Accessibility in the  
Urban Sector of Operations



**Fact Sheet 5:**  
Accessibility in  
Infrastructure Operations

2

# Urban Development and Accessibility



**With increasing urban populations around the world<sup>1</sup>, 15 percent of which is persons with disabilities<sup>2</sup> and 22 percent older persons,<sup>3</sup> there is a great need for cities to be accessible for all people.** An accessible city integrates universal design principles into its layout and long-term plans, its sidewalks and roadways, its building design, public spaces, and solutions for mobility. This can take many forms: ramp accesses to buildings, tactile surfaces that indicate safe paths for persons with visual impairments, audio alerts at pedestrian crossings, or curbed sidewalks. When the needs of persons with disabilities are considered in urban planning through the implementation of universal design principles, persons with disabilities have greater independence and access to employment, transport, health care, and other necessary services. Cities also need to invest in universal design training so that municipal staff will be able to recognize and remove temporary barriers such as poorly placed planters, unauthorized market stalls, and improperly parked cars; and can mitigate the negative effects of such obstacles as well as those created by construction sites, road work, etc., on the mobility of persons with disabilities.

**Accessibility for cities, however, is not just about the built environment.** A city is accessible when it has policies and infrastructure that support inclusion by providing access to markets, services, education, and future development projects for every individual,

---

1 United Nations Department of Economic and Social Affairs (UNDESA). 2018. *News*. New York: UNDESA.

2 <https://www.who.int/health-topics/disability>

3 <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>



including persons with disabilities. In the context of emergency preparedness and resilience, it means that there are plans in place to support persons with disabilities and ensure protection of their basic rights. It also means that local governments and municipalities will make efforts to engage with persons with disabilities to implement the inclusion targets of the SDGs. This includes coordinating across sectors and scales, by aligning local, regional, national, and international efforts. The role of local and subnational governments should be recognized and leveraged effectively. **Overall, the accessibility of a city is determined by how well it integrates various components of access across its sectors and services to include persons with disabilities.**

As cities around the world look to become “smart cities,” the use of technology has the potential to unleash even greater inclusion for persons with disabilities *if they are considered at the outset of implementation*. A smart, accessible city ensures that the road map has considered and consulted with persons with disabilities to ensure that they are included in identifying key investment areas and creating effective solutions. It also means that these technologies, when implemented, are not only made accessible to persons with disabilities, but can be designed with them in mind. For example, sensors and monitoring of infrastructure can be implemented to see where pavement needs to be repaired: this will result in smoother, safer sidewalks for everyone, including those with special accessibility needs.

**Approaches to urban development that consider issues of accessibility extend their positive effects across many other sectors as well.** For example, they are crucial for improving access to education, health, culture, and employment; for realizing more inclusive transportation plans and Disaster Risk Reduction (DRR) strategies; to advancing digital accessibility related to urban wayfinding that can be used afterwards in other sectors as well, and so on. **Similarly, sector-specific accessibility interventions can greatly contribute to a more accessible urban environment.** For example, accessible ICT solutions can be applied to smart orientation systems, or urban equipment; inclusive mobility approaches can facilitate the implementation of accessible urban development plans; adoption of accessibility standards in public buildings can highlight the need to create overall policies and strategies for urban interventions, and so forth.



 **Lift Prioritas**  
Priority Elevator 



Informational posters on the left side of the glass entrance, including a sign with the text "01 00-00 00" and various icons.

Informational posters on the right side of the glass entrance, including a circular sign with a cartoon character and the text "Yakinia Insurisi Untuk memperlakukan penumpang prioritas".

# 3

## Key Elements



Photo: © kalyanby, Shutterstock

When planning accessible cities, an unbroken chain of movement must be ensured: that is, urban planning and inclusive mobility solutions need to ensure that persons with disabilities are able to **Reach** the infrastructure; the design of buildings needs to ensure that they are able to **Enter** the building; to **Circulate** around it; and to **Use**, freely and independently, all of the relevant spaces of the building (following the **R.E.C.U. steps**).

To summarize:

- > **The accessibility of a building** concerns the physical construction, internal furniture and equipment, wayfinding and signposting system, as well as safety and security measures.
- > **Inclusive urban development** is about accessible infrastructure; open public spaces; accessible natural areas; an accessible road system; pedestrian and cycle circulation that includes accessible road safety measures; urban wayfinding and signposting systems, including smart solutions for orientation; and access to relevant information, especially about temporary circulation disruptions, emergencies, mobility issues, etc.

Infrastructure construction can be an independent activity, or a subcomponent of larger urban development initiatives. **Either way, it should not be addressed as if infrastructure were an isolated element**, but should rather be integrated into inclusive urban planning



strategies and policies. *(For additional information, please refer to the Infrastructure and Transportation Fact Sheets.)*

**Urban development must comply with international and national regulations about accessibility**, concerning specific infrastructure but also the urban environment as a whole. International standards like the ones from the International Organization for Standardization (ISO) should be used for guidance when developing national standards. Most importantly, efforts should be made to introduce and strengthen accessibility principles in national regulations by defining what to implement; how to implement it; by whom (roles and responsibilities); to what extent; to what infrastructure (existing, new, both); with what deadlines; with what sanctions for noncompliance, and so on.

**Local and regional governments play a vital role** in the development, formulation, execution, monitoring, and evaluation of programs, policies, and services. The involvement and participation of persons with disabilities and their representing organizations must also be ensured in all phases of an urban development project, from needs assessment to design, follow-up of the initiatives, and testing or evaluation after completion, so as to make sure their needs are being properly taken into account, and to ensure the quality of the realization.

**An inclusive and accessible urban development project should “rethink the city” to address various overlapping issues** that are essential for all residents, ensuring that the needs of persons with disabilities are taken into due account, and that their meaningful participation is guaranteed. These issues include:

- Providing safe and affordable housing solutions, including accessible ones;
- Improving the accessibility of core public services and landmarks (institutional buildings, health and education services, cultural and religious spaces, leisure spaces, historic sites and monuments, etc.);
- Improving the accessibility of public green areas like urban parks, riverbanks, seashores, and so on. These should be approached as extended green “connection elements” between different areas of the city, and therefore should be designed keeping in mind the circulation and orientation of persons with disabilities.
- Ensuring accessible connection **to** essential buildings and areas from various parts of the city, as well as **between** the core buildings and areas, through accessible mobility solutions including public transportation infrastructure such as bus stops, terminals,



stations, airports, an accessible road system; and digital and information services related to mobility.

- Liaising with water and sanitation authorities to ensure coordinated and inclusive interventions, together with Disaster Risk Management stakeholders.

Please see [Annex 3](#) to this fact sheet as a reference.



4

# Data at Glance



Figure 1: Image Source: <https://sdgs.un.org/>

Share of Urban Population

## LIVING IN SLUMS

Rose to 24% in 2018



## ONLY HALF

The World's Urban Population has  
**Convenient Access** to Public Transport  
2019



500 - 1000 Meters  
Distance

## OVER 90%

OF COVID-19 CASES ARE IN  
URBAN AREAS



## 47% OF POPULATION

LIVE WITHIN 400 METRES WALKING DISTANCE TO OPEN  
PUBLIC SPACES

5

# International Framework



Photo: © HopeBy, Shutterstock

The **Convention on the Rights of Persons with Disabilities (CRPD)**, specifically Article 9, is clear about the need to apply accessibility on a large scale, since it requires states' parties to ensure persons with disabilities access to the physical environment, transportation, and information and communications, including ICT in both urban and rural areas, on an equal basis with others. According to the CRPD, these measures apply to buildings, roads, transportation, and other indoor and outdoor facilities; this indicates the extensiveness of the desired changes in human settlements.



**Agenda 2030 for Sustainable Development** dedicates a specific goal to making “cities and human settlements inclusive, safe, resilient and sustainable” (SDG 11<sup>4</sup>). This goal tackles many key aspects of the urban environment from the perspective of inclusion: housing, upgrading of slums, accessibility of basic services, transportation and road safety, participatory urban planning, the protection of cultural and natural heritage, the availability of green public spaces, and the reduction of pollution and creation of waste. An inclusive, accessible urban environment is also essential for meeting

---

4 <https://sdgs.un.org/goals/goal11>



other SDG goals, in particular SDG4 (Education); SDG8 (Decent Work and Economic Growth); SDG9 (Industry, Innovation, and Infrastructure); and SDG10 (Reduced Inequalities).

This inclusion (and accessibility) goal for cities is particularly crucial if we consider the estimation from **UN DESA** that by 2050, 68 percent of the world's population - around 6.6 billion people - will live in urban areas<sup>5</sup>. And the World Health Organization (WHO) estimates that there will be about 1 billion persons with disabilities living in urban areas by 2050.

Urban environments represent the intersection between various domains that are affected by accessibility: buildings and infrastructure, mobility and transportation, communication and new technologies. The UN's **New Urban Agenda**, which specifically concerns cities and urban settlements, is a tool that suggests practical actions that decision makers can use to enhance the overall quality of cities. In this Agenda, inclusion, accessibility, and disability are addressed in a cross-cutting way in more than 50 articles.

As a general rule, urban settings have to comply with national, local, or regional accessibility standards. International standards like the **ISO 21542:2021, Building Construction - Accessibility and Usability of the Built Environment** should be used to integrate existing mandatory standards, or used when these are not available, or if they are too permissive. Accessibility standards from other countries can also be referred to when they seem relevant. In general mobility infrastructure like train, bus, tram or metro stations, bus stops, urban sidewalks, and parking areas must consider the design of accessible ramps, stairs, elevators, walkways, reception and waiting areas, and information and wayfinding panels.

---

<sup>5</sup> United Nations Department of Economic and Social Affairs (UNDESA). 2019. **News**. New York, USA.



# 6

## Examples of Key Challenges and Actions for Accessibility in Urban Development



Photo: © Gena Melendrez, Shutterstock

Type of Difficulty	Challenges in Urban Development	Considerations for Reducing Barriers
<p><b>Physical</b> (mobility, dexterity, and physical strength)</p>	<ul style="list-style-type: none"> <li>➤ Accessing public buildings, transportation, or other places when there are not enough ramps and elevators;</li> <li>➤ Aged infrastructure that is damaged or uneven;</li> <li>➤ Accessibility laws for ramps, elevators, etc. are not enacted or enforced;</li> <li>➤ Spaces may be accessible, but they may be too distant from accessible toilets or elevators, creating difficulties for people with mobility impairments;</li> </ul>	<ul style="list-style-type: none"> <li>✓ Develop or use national standards or guidelines for ideal dimensions, materials, and specifications for public buildings and spaces;</li> <li>✓ Create plans and leverage funding to retrofit spaces for ramps, elevators, and other physical accessibility features;</li> <li>✓ Use slip-resistant surfaces.</li> </ul>



Type of Difficulty	Challenges in Urban Development	Considerations for Reducing Barriers
<b>Visual</b>	<ul style="list-style-type: none"><li>➤ Limited contrasting materials;</li><li>➤ Electric poles in the middle of pavements;</li><li>➤ Slippery or uneven materials for sidewalks;</li><li>➤ Limited auditory cues at roadway crossings;</li><li>➤ Difficult-to-navigate streets, particularly if there are low curbs or none at all;</li><li>➤ Urban maps only available in 2D or image format.</li></ul>	<ul style="list-style-type: none"><li>✓ Use high-contrast, slip-resistant materials;</li><li>✓ Install auditory signals at crosswalks;</li><li>✓ Improve curb and braille pavers across urban infrastructure and buildings;</li><li>✓ Create 3D or other accessible format maps for urban centers.</li></ul>
<b>Hearing</b>	<ul style="list-style-type: none"><li>➤ Communication only in oral forms;</li><li>➤ Difficulty accessing information through vocal media such as radio and TV programs without captions, community loudspeakers, etc.</li></ul>	<ul style="list-style-type: none"><li>✓ Provide alternative formats for alerts (for example, SMS texts);</li><li>✓ Include closed captioning or sign language interpretation in alerts, news, TV, community meetings, etc.</li></ul>
<b>Speech</b>	<ul style="list-style-type: none"><li>➤ Need to rely on others to express their views;</li><li>➤ Barriers in communicating with relevant stakeholders.</li></ul>	<ul style="list-style-type: none"><li>✓ Provide alternative ways of communicating and participating in community meetings and stakeholder forums; for example through texts or written forms.</li></ul>



Type of Difficulty	Challenges in Urban Development	Considerations for Reducing Barriers
<b>Psychosocial</b>	<ul style="list-style-type: none"> <li>➤ Noise and light pollution may enhance distress for some;</li> <li>➤ Difficulty communicating one's needs;</li> <li>➤ Relying on others for support or communication.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Provide alternative forms of communicating and participating in community meetings and stakeholder forums, such as through text or written forms.</li> </ul>
<b>Cognitive</b>	<ul style="list-style-type: none"> <li>➤ Complex traffic patterns and navigation;</li> <li>➤ Having to rely on others to express their views;</li> <li>➤ Assistive aids that are not navigable in crowded cities;</li> <li>➤ Needing information in a visual format.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Have plain-language or pictorial maps available for easy navigation;</li> <li>✓ Work with urban planners to extend the width of sidewalks, repair roads, and improve navigation;</li> <li>✓ Provide alternative formats for communicating and participating in community meetings and stakeholder forums, such as through text or written forms.</li> </ul>

For additional details on practical recommendations for this sector, please refer to **[PART 4 of this Technical Note: “Technical References.”](#)**

7

# Accessible Urban Projects



Photo: © Bill45, Shutterstock

**NOTE:** This section contextualizes the main sections of **Part 1 of this note (the Narrative)**, in which the desired conditions for accessibility in a country, together with possible activities, are described with an overarching perspective. Here, concrete examples are provided for the urban sector.

An accessible urban project aims to achieve some of the key conditions for accessibility in the sector, such as:

Condition	Description/ Examples
<b>Institutional Commitment</b>	Existence of public urban policies and strategies toward more and better inclusion of persons with disabilities.
<b>Operationalization</b>	Enforcement of implementation mechanisms to ensure that compliance with accessibility standards is being actively required, monitored, and evaluated.
<b>Empowerment</b>	Capacity development for accessibility in the urban sector for all relevant actors, and at all stages.



Condition	Description/ Examples
<b>Enactment</b>	Funding and support for projects that improve accessible urban development for all.

It should also implement the main activities that can contribute to the enhancement of accessibility in the sector, as shown below.

Identification	
Activity	Description/ Examples
<b>Assessments and Data Collection</b>	<p>Assesses the existence and quality of local urban policies, strategies, legislation, standards or guidelines (including accessibility and support for the development or improvement of the needed tools);</p> <p>Assesses the existence and quality of local implementation mechanisms concerning the accessibility of urban development, and support for the definition or improvement of the needed processes;</p> <p>Performs accessibility assessments at the urban level with the participation of experts, persons with disabilities, local authorities, and other relevant stakeholders, to identify typical existing barriers.</p>
<b>Advocacy / Awareness Raising</b>	<p>Raises awareness and sensitizes local authorities, municipal/city government officials, institutions, development actors, professionals, the general public, and all stakeholders on the importance of disability - inclusive urban planning.</p>
<b>Policies and Guidelines</b>	<p>Promotes the enforcement, creation, or revision of inclusive urban policies, national/city accessibility guidelines, standards, and enforcing mechanisms.</p>



Activity	Description/ Examples
<p><b>Meaningful Participation</b></p>	<p>Promotes the inclusive and participatory approaches of organizations of persons with disabilities at all stages of the urban development process (initial needs assessment, design and proposal review, monitoring and testing of works, evaluation of implemented activities);</p> <p>Works to empower Organizations of Persons with Disabilities (OPDs) as the main actors in the process;</p> <p>Takes into account the needs of persons with disabilities for the public, but also for members of the public urban sector staff.</p>
<p><b>Participation</b></p>	
Activity	Description/ Examples
<p><b>Budget and Human Resources</b></p>	<p>Ensures the allocation of appropriate funds for accessibility implementation in terms of activities and human resources, including capacity development for project staff and partners about accessibility.</p>
<p><b>Capacity Development</b></p>	<p>Ensures capacity development of PIUs, safeguarding experts, and other relevant project/support staff in the field, and includes accessibility experts in the team whenever needed;</p> <p>Supports the technical capacity development of local professionals, university students, development workers, etc.;</p> <p>Engages stakeholders in the sector and OPDs in thematic seminars, workshops, conferences, and other public events around accessible and inclusive urban planning and development;</p>



Activity	Description/ Examples
	<p>Encourages the development of communities of practice, and the creation and sharing of research, thematic publications, collections of good practices and lessons learned, and other capitalization tools.</p>
<b>Promotion and Use of Universal Design</b>	<p>Facilitates the inclusion of universal access (UA) in infrastructure design (through terms of reference for procuring engineering design consultants with experience in accessibility);</p> <p>Improves and strengthens broader urban planning policies and processes to introduce UA into the broader planning regulations and institutions.</p>
<b>Procurement</b>	<p>Promotes the adoption of procurement strategies that refer to accessibility standards for urban solutions, including the recruitment of expert human resources.</p>
<b>Involvement of Private Sector</b>	<p>Encourages incentives for research and innovation in the private sector regarding the development of more accessible urban solutions related to transportation means, orientation systems, urban furniture and equipment, illumination, road safety, etc.</p>
<b>Holistic Approach</b>	<p>Addresses all aspects of urban development: road and pavement systems, squares, parks, playgrounds and other open areas, the connections between urban landmarks, pedestrian and cycle lanes, access to natural areas (beaches, riverbanks, etc.), transportation and infrastructure, public buildings, etc.;</p>



Activity	Description/ Examples
	<p>Recognizes that an accessible and inclusive city can only be achieved by using a holistic approach, and harmonizing various and overlapping sectoral needs.</p> <p><i><b><u>Refer to Useful Insights in Annex 2</u></b></i></p>
Management	
Activity	Description/ Examples
<p><b>Follow Up of Accessibility</b></p>	<p>Ensures that accessibility indicators are monitored and achieved, that appropriate accessibility standards are complied with during the construction phases, and that all project documents and procedures take accessibility requirements into account (including the Terms of Reference for construction supervision consultants, and bidding documents for contractors).</p>

8

# Practical Examples



Photo: © Bill45, Shutterstock

Recommendation	Example
<p><b>Implementation of Accessibility Standards:</b> Ensure that the project’s interventions are compliant with relevant accessibility standards.</p>	<p>In Vietnam, persons with disabilities have been identified as specific beneficiaries in the <b><u>Scaling Up Urban Upgrading Project (P159397)</u></b>. This disability-inclusive project in several medium-sized cities implements technical standards for accessible infrastructure; universal design in urban environments, roads, schools, and public facilities; and transport accessibility.</p>
<p><b>Human Resources:</b> Ensure that each project includes the necessary technical expertise on accessibility during all relevant phases (assessment, design, implementation, evaluation).</p>	<p>During project preparation of the <b><u>Scaling Up Urban Upgrading Project (P159397)</u></b>, an architect who is an accessibility expert was hired to conduct a thorough audit. In implementation, the project hired a firm to:</p> <ul style="list-style-type: none"> <li>➤ Provide advisory services on detailed design for universally accessible infrastructure (recommendations for each subtype of infrastructure);</li> </ul>



Recommendation	Example
	<ul style="list-style-type: none"> <li>&gt; Prepare design guidelines to incorporate universally accessible infrastructure principles and design; and</li> <li>&gt; Provide training in universally accessible infrastructure principles and design.</li> </ul> <p>Supporting tasks included a rapid review of the Vietnamese legal and regulatory framework on universally accessible infrastructure design and development; an assessment of baseline needs in the cities; and sharing global experiences of universal accessibility.</p>
<p><b>Considering all (potential) users:</b> Address accessibility issues for all potential users, with special attention to persons with various types of disabilities.</p>	<p>The World Bank’s Rio Cidade Project was the first urban revitalization project in Brazil in the 1990s that applied the principles of universal design extensively in 14 urban districts. The project considered the needs of all users, regardless of their physical abilities, based on estimates that more than half of the population did not fit the standard stereotypical individual for which most infrastructure had been designed around the world. Universal solutions included ramps at crosswalks that serve pedestrians, as well as more specialized solutions such as texture-coded footways to guide road users with visual impairments. Street fixtures such as lampposts, signposts, litter baskets, and benches were repositioned and resized to meet the requirements of universal design. The project became a benchmark for universal design in Brazil.<sup>6</sup></p>
<p><b>Holistic Approach:</b> Address accessibility gaps</p>	<p>In Singapore the Building and Construction Authority carried out a 10-year project to develop and implement</p>

6 World Bank. 2018. [Disability Inclusion and Accountability Framework](#). Washington, DC: World Bank



Recommendation	Example
<p>in urban settlements, taking into account capacity development for local stakeholders, developing and adopting accessibility standards, etc.</p>	<p>an Accessibility Master Plan (2006) to promote the adoption of universal design in the built environment, targeting persons with disabilities and older persons in particular. The master plan activities have included removing existing barriers, raising minimum accessibility standards, promoting universal design through guidance and a certification scheme, and building capacity among industry and stakeholders.<sup>7</sup></p>
<p><b>Implementation:</b> Ensure that relevant public infrastructure becomes an example of good accessibility practices.</p>	<p>The Singapore Accessibility Master Plan (2006) has resulted in wide-ranging improvements in accessibility, and the application of universal design principles in new buildings as well as in existing buildings that are undergoing major alterations. For example, almost 100 percent of government buildings frequented by the public have now been made barrier-free.<sup>8</sup></p>

---

**7**      Ibid.

**8**      Ibid.

# 9

## Annexes: Useful Insights



# Annex 1:

## Overall Definitions

**Accessibility** refers to the degree to which persons with disability can have “access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas.” (CRPD, Article 9).

Accessibility is about applying the seven principles of **Universal Design** to new infrastructure, products, and services, as well as to existing ones, to the extent possible considering the context. Universal Design “means the design of products, environments, programs and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.” (CRPD, Article 2).

It is not always possible to apply the principles of Universal Design to the fullest, but it is always possible to identify and provide reasonable accommodation to a person who requires it. **Reasonable Accommodation** is the “necessary and appropriate modification and adjustments not imposing a disproportionate or undue burden, where needed in a particular case, to ensure to persons with disabilities the enjoyment or exercise on an equal basis with others of all human rights and fundamental freedoms.” (CRPD, Article 2).



# Annex 2:

## What is an Inclusive City?

An inclusive city creates a safe, livable environment with affordable and equitable access to urban services, social services, and livelihood opportunities for all of the city's residents and other city users in order to promote optimal development of its human capital and ensure the respect of human dignity and equality.

An inclusive city is built on (i) joint strategic visions of all stakeholders through a participatory planning and decision-making process that incorporates universal design, integrated urban planning, transparent accountability mechanisms, and the use of the city's inherent assets; (ii) knowledge and information sharing; (iii) public participation and contribution; (iv) mechanisms such as cross-subsidies, social protection, and gender balance, to ensure an adequate standard of living for the most economically disadvantaged and vulnerable population; (v) geographical and social mobility; (vi) a business environment and pro-poor financing services that attract capital investment and allow everybody the possibility to undertake economic activities; (vii) resilience to global environmental and socioeconomic shocks and threats; and (viii) mechanisms to ensure the sustainable use of its resources.

### Notes:

- Urban services include water supply, sanitation, solid waste management, housing, and transport facilities; social services are typically considered to be health, education, culture, and use of public space.
- Stakeholders are government, communities, civil society, and the private sector. Social protection includes systems for upholding the rights of children, youth, women, the elderly, and Indigenous peoples.<sup>9</sup>

---

<sup>9</sup> Asian Development Bank (ADB). 2017. [Enabling Inclusive Cities: Tool Kit for Inclusive Urban Development](#). Manila: ADB.



# Annex 3:

## Why Accessibility in Urban Development Matters - Advocacy Tips

**NOTE:** This section contextualizes [Chapter 3 and 5.B.3 of Part 1 of this note \(the Narrative\)](#), in which the main arguments in favor of accessibility are described with an overarching perspective. Here, concrete examples are provided for the urban sector.

### Social Benefits

- Accessibility of cities and urban settlements is not a voluntary choice or an act of goodwill; it is a right for persons with disabilities that is recognized by international treaties.
- Accessibility is a legal obligation for states, especially those that have ratified CRPD; and its implementation is monitored at the international level.
- Accessibility of urban environments is a condition for inclusion (together with nondiscrimination and participation).
- Accessibility of cities is beneficial for all members of society; it is a shared value not only for persons with disabilities but also for older people, children, pregnant women, persons with temporary injuries, etc.
- Accessibility of cities boosts dignity and self-esteem because it allows persons with disabilities to live their lives in a more independent way, become less reliant on other people's help, and more self-confident.
- More accessible urban environments put persons with disabilities in a position to fully reach their potential as human beings in the domain of their choice.
- Accessible wayfinding and digital urban services can play a role in the protection of persons with disabilities, victims of violence, or others in need of support.



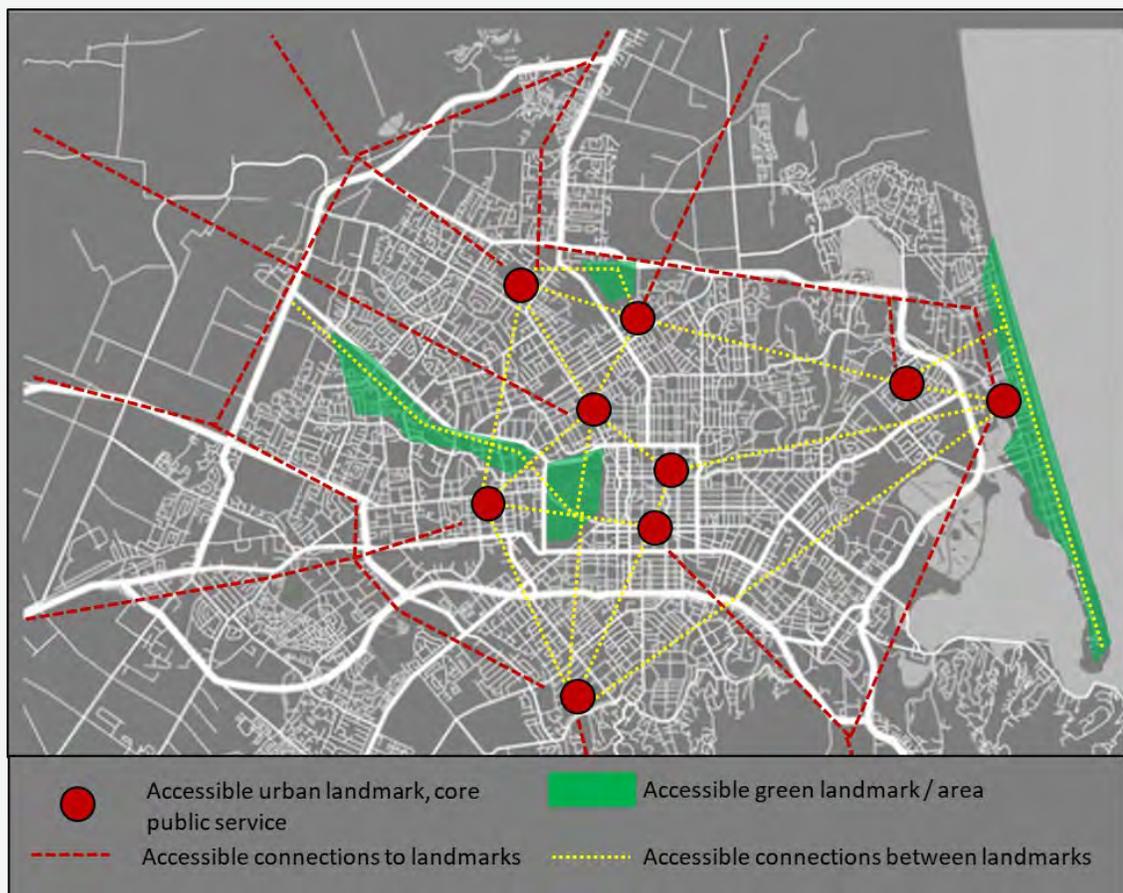
- > Accessibility of urban infrastructure can be a lifesaving requirement in emergency preparedness and response, to ensure that persons with disabilities are not left behind in case of natural disasters, conflicts, and so on. It is also paramount for persons with disabilities to have access to care and support in case of forced displacement (to refugee camps, temporary shelters, WASH infrastructure, collective centers, etc.), on an equal basis with others.
- > In global emergencies like the Covid-19 pandemic, the availability of healthy, safe, accessible, and green urban infrastructure is of great importance to ensure that persons with disabilities can use the urban environment safely, without putting themselves at risk of infection.

### **Other Benefits**

- > Accessibility of urban infrastructure and services allows more persons with disabilities to work, and therefore contribute to the development and increase of a country's GDP, so that they can:
  - ✓ Rely less on national allowances (and allow these funds to be used elsewhere);
  - ✓ Become consumers (and contribute to the economy of the country);
  - ✓ Become taxpayers (and contribute to developing the country).
- > Accessibility of cities allows persons with disabilities to be more independent, and caretakers and family members to spend more time working, producing, and consuming.
- > Accessibility improvements in the urban environment would allow more persons with disabilities to travel to cities (contributing to the development of tourism).
- > Urban accessibility is visible (and therefore can affect the way a country is perceived).
- > Accessibility is not very expensive (and is generally quite cost-effective).



**Figure 2: Elements to Increase Urban Accessibility**  
(Image created by the Author)





**Figure 3: An Integrated Approach to Urban Accessibility**  
*" synthesis proposed by the author"*



# Annex 4:

## Harmonization and Minimization of Risks

To ensure full accessibility of the built environment, particular attention must be paid to the interactions between elements that perform different functions and are often in the charge of different stakeholders. For example, measures taken to ensure road safety, as well as urban equipment and furniture, should be conceived bearing in mind that they should not become barriers or tripping hazards for persons with disabilities.

- Pedestrian underpass/elevated walkways should be provided with ramps, elevators, or elevating platforms.
- Long raised traffic separation islands between lanes should be regularly equipped with accessible curb ramps/passages to enable persons with disabilities to safely cross the street.
- Protective bollards on the sides of pedestrian lanes should ensure enough space for a person using a wheelchair to pass through.
- Streetlights, benches, fountains, and other urban furniture should not interfere with tactile paths.
- Pedestrian crossings should be equipped with accessible “zebras” or traffic lights.
- The sides of accessible sidewalks should be easy to identify from traffic or cycle lanes by persons who are blind, for example with a tactile alert.
- External areas occupied by outdoor services should not interfere with pedestrian circulation (restaurant terraces, vendors’ stalls, temporary displays, etc.).



# Annex 5: Indicators for Accessibility at the Urban Level

According to the United Nations [ESCAP Guide on Disability Indicators for the Incheon Strategy](#), there are two different ways of capturing the environment. The first is at the individual level, which reflects the actual interaction between a person and their immediate environment. The second is at the societal level of environment, which encompasses all of the various systems that provide goods and services for the whole society: education, health care, shelter, police and fire protection, food, entertainment and recreation. Capturing the environment at the societal level requires something akin to an environmental audit. To facilitate the operationalization of the Incheon Strategy, the ESCAP Guide suggests some indicators and monitoring mechanisms for reaching Goal 3 (Enhance access to the physical environment, public transportation, knowledge, information and communication.) Among the nine proposed indicators, the ones that seem most relevant for the urban environment are:

## **INDICATOR 3.1: Proportion of Accessible Government Buildings in the National Capital**

**Definition:** The proportion of government buildings in the national capital that are accessible to people with a diverse group of disabilities. These buildings include government offices and buildings where government services are provided. An accessible government building is one where a person with a disability has no barrier in entering it and using all the facilities therein. This covers the built environment - surfaces, steps and ramps, corridors, entryways, emergency exits, parking - as well as indoor and outdoor facilities including lighting, signage, alarm systems, and toilets.

**Data Collection and Methodology:** Identifying accessible buildings requires annual accessibility audits that determine if a building meets agreed upon standards. Once a building is deemed fully accessible, an annual audit is not necessary, but should be required for any proposed changes to the structure or systems contained therein. A full audit can then be done on a less frequent basis. Standards of accessibility should be as consistent



as possible with international standards, such as those of the ISO, considering the local context. Concerning the built environment, [\*\*ISO 21542:2021, Building Construction - Accessibility and Usability of the Built Environment\*\*](#), delineates a set of requirements and recommendations concerning construction, assembly, components, and fittings.

### **INDICATOR 3.2: Proportion of Accessible International Airports**

**Definition:** The proportion of international airports that are accessible to persons with diverse disabilities. An airport is accessible if a person with a disability has no barrier in entering it, using all the facilities, and boarding and disembarking from airplanes. This covers the built environment - surfaces, steps and ramps, corridors, entryways, emergency exits, parking - as well as indoor and outdoor facilities including lighting, signage, alarm systems and toilets.

**Data Collection and Methodology:** Determining if an airport is accessible requires annual accessibility audits that ascertain whether a building meets agreed upon standards. Once a building is deemed fully accessible, an annual audit is not necessary, but should be required for any proposed changes to the structure or systems contained therein. A full audit can then be done on a less frequent basis.

### **INDICATOR 3.6: Availability of a Government Access Audit Program that Requires the Participation of Experts with Disabilities**

**Definition:** The establishment and active implementation of a government access audit program that requires the participation of experts with disabilities. An access audit evaluates how well a particular building or environment can be used by the full range of persons with disabilities and recommends access improvements. This is done relative to a set of agreed upon national standards defining an acceptable level of accessibility.

**Data Collection and Methodology:** Standards should be as consistent as possible with international standards, such as those of the ISO, considering the local context. In regard to the built environment, [\*\*ISO 21542:2021, Building Construction - Accessibility and Usability of the Built Environment\*\*](#), delineates a set of requirements and recommendations concerning construction, assembly, components and fittings.



# Annex 6:

## Additional Resources

- CBM, and Cities4All. n.d. [\*\*How to Make Cities Accessible and Inclusive\*\*](#). Easy Read.
- Cities4All. 2019. [\*\*Inclusive and Accessible Cities. #Cities are Listening\*\*](#). Town Hall Track. Durban (Australia).
- DID4All. [\*\*Guidelines and Standards for Accessibility\*\*](#). DID4All Disability Inclusive Development Resource.
- European Commission. 2019. [\*\*Access City Award 2019: Examples of Best Practice in Making EU Cities More Accessible\*\*](#). Brussels: European Commission.
- Hamraie, A. 2018. [\*\*A Smart City Is an Accessible City\*\*](#). The Atlantic, November 6, 2018.
- Kaw, J.K, H. Lee, H., and S. Wahba. 2020. [\*\*The Hidden Wealth of Cities : Creating, Financing, and Managing Public Spaces\*\*](#). Washington, DC: World Bank.
- United Nations Department of Economic and Social Affairs (UNDESA). 2016. [\*\*Good Practices of Accessible Urban Development: Making Urban Environments Inclusive and Fully Accessible to All\*\*](#). UNDESA.
- UNICEF. [\*\*Accessible Components for the Built Environment: Technical Guidelines Embracing Universal Design\*\*](#). UNICEF.
- World Bank. 2015. [\*\*World-Inclusive Cities Approach Paper\*\*](#). Washington, DC.
- World Enabled, and CBM. n.d. [\*\*The Inclusion Imperative: Towards Disability-Inclusive and Accessible Urban Development\*\*](#).

Inside back cover

