

# Accessible Urban Mobility

Manfred Breithaupt, 2010

## iNUA #6: Accessible Urban Mobility

“We will promote access for all to safe, age- and gender-responsive, affordable, **accessible** and sustainable urban mobility and land and sea transport systems, enabling meaningful participation in social and economic activities in cities and human settlements, by integrating transport and mobility plans into overall urban and territorial plans and promoting a wide range of transport and mobility options, in particular through supporting:

(a) A significant increase in **accessible, safe, efficient, affordable and sustainable infrastructure** for public transport, as well as non-motorised options such as walking and cycling, prioritising them over private motorised transportation”

New Urban Agenda #114(a)

Accessible mobility is a core issue for future urban development. To keep everybody- in particular mobility or sensory impaired people- included in all aspects of societal life, an entirely accessible mobility is an imperative.

### 1. Why to make urban public transport accessible?

Worldwide, over 1 billion people live with a disability. Demographic change leads in some parts of the world to an ever-aging population while in other parts birth rates are still well above four children per women. Thus, many people face immense barriers to take part at social and economic activities.

Accessibility to public transport and the usability of public infrastructure is a necessary precondition for equal participation. The development of accessible infrastructure, mobility, communication and information is not only an advantage for people with disabilities or the elderly, but is for the benefit of all

– for persons using pushchairs, for those carrying heavy baggage, for cyclists etc.

Accessibility is sustainable and economic: Accessible transport can be used by everyone for all areas of life: to reach the working place, to go to the theater, to go shopping etc. A complete accessibility will strengthen the economy, because everyone will reach the place where s/he wants to go. The more people are able to use public transport in a comfortable way, the better it is for the environment. To plan accessible mobility from the beginning is sustainable and will save costs in the future.

175 countries have ratified the UN Convention on the Rights of Persons with Disabilities, an international agreement which includes the demand of accessibility in its principles, a definition of accessibility and the claim to take effective measures to ensure personal mobility with the greatest possible independence for persons with disabilities (§20). Most of the countries not only transferred the convention in national laws but also worked out action plans on different levels of legislation to implement accessibility also on the regional or cities level.

## How to identify the most effective measures for accessible urban mobility?

Identify target groups and define your concept:

### Categories of passengers

- Wheelchair Users
- Hearing impaired
- Sight impaired
- Mobility impaired (users with walking aid, frail old users, etc.)
- Encumbered (users with small children, heavy luggage or shopping, push chair and any other hindrance)
- Persons with cognitive difficulties
- Unencumbered (all other passengers)

### One Design for all

“Design for all” or “Universal Design” means the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. "Universal design" shall not exclude assistive devices for particular groups of persons with disabilities where this is needed (CRPD § 2).

Universal Design is a rapidly evolving design philosophy that has its roots in the barrier-free design movement of the 1980's and 1990's. Whereas the focus of barrier-free design was exclusively on providing appropriate facilities for persons with disabilities, Universal Design takes a much broader approach based upon accommodating the diversity of human characteristics within the population as a whole.



Universal Design takes also internet and communication systems into account: it is making sure that the presentation of content on the Internet and the design of internet technology is flexible enough to accommodate the needs of the broadest possible range of users, regardless of age, language, or disability. Universal

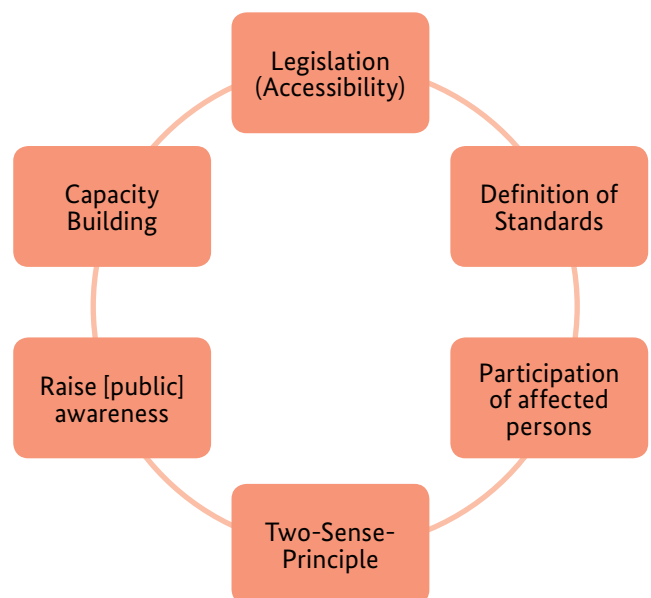
Design of Communication Systems ensures that communications are usable by everyone. This may mean that a variety of different communication systems are offered, systems that can provide information to people who are deaf, hard of hearing, people with developmental, speech, learning or cognitive disabilities. This is of great importance in connection to the accessibility of websites of public transport services.

Universal Design is one design that fits all, based on the assumption that:

- 10% of the population urgently rely on accessible infrastructure
- 40% of the population are in need of accessible infrastructure as necessary assistance
- 100% of the population appreciate accessibility as comfort improvement

## What can I do as mayor?

Six core principles to implement accessibility:



### 1. Legislation, Funding and Construction:

**Set legislative basics.** Accessibility is part of the UNCRPD and therefore a binding rule for all public measures and appoint a Commissioner for Matters relating to Persons with Disabilities. Integrate accessibility in your public transport laws. Accessibility should be a requirement for all construction projects and public tender processes. To implement the UNCRPD in your city it will be useful to create an action plan with concrete accessibility measures (get inspiration from the Cape Town Universal Access Policy [here](#)).

### 2. Definition of standards:

**Give clear instructions** for city-planners and architects by using “their language”. Support them by handing out handbooks how to build accessible infrastructure. Just if they know what is meant by accessibility they will fulfill the standards (get inspiration from Berlin City and the Design for all Handbooks [here](#)). Make clear that the usability of the infrastructure should take center stage.

### 3. Engagement of affected people:

**Engage the different target groups for accessibility.** From the first planning phases on you need the experiences and contribution of persons with different needs. Therefore, include organizations for persons with different forms of disabilities, DPOs, organizations for elderly people, for cyclists etc. Include also the responsible

planners: Just if customers with different needs, architects, city planners and responsible persons of administration and of the transport company will get to know each other and get sensitized for the different needs, they will accept compromises to reach a design for all/universal design.



#### 4. Two-sense-principle:

**Keep in mind the two-sense-principle:** barriers should be removed by providing information to two different senses. This two-sense principle makes orientation easier by allowing hearing, sight and touch to compensate for each other:

- instead of sight: hearing and touch/feel
- instead of hearing: sight and touch/vibration



#### 5. Raise (public) awareness

**Sensitize the public.** Using public budgets always need justification. The public should understand that they all will benefit of infrastructure where universal design was taken into account. Public relations work, exhibitions with models of the planned infrastructure or public discussions will strengthen the legitimization of accessible mobility. Try to build up education work continuously. **Initiate inclusive public assemblies**, that the public can comment on new measures of accessible transport.

#### 6. Capacity building

**Capacity building is the basic for a sustainable anchoring of accessibility.** Trainings in cooperation with the chambers of

architects, cooperation with universities which offer studies of architecture or urban planning or for staff working in the city councils is needed to build up the relevant knowledge. All the different stakeholders should be trained and educated in this field.

Who should be trained –and in what way?

- City planners and architects: How to design and build accessible infrastructure?
- Driving personnel: How to handle/support customers with reduced mobility?
- Service personnel: Which information is important for customers with reduced mobility?
- Customers: How can the customers use accessible public transport services? (incl. safety trainings)

### 3. How to implement universal accessible urban transport?

To implement universal accessible urban transport, you should take all aspects of the mobility chain into account. The following table will help you to get an overview about all relevant measures.

<b>1</b>	<b>ELEMENTS NEEDED AT THE STATION PLATFORM</b>
	Ramp or surface at platform level for station access
	Tactile floor guideways (routes)
	Tactile signs in raised letters (pictograms, text and/or Braille)
	Courtesy doors
	Support staff
	Call button
	Visual information
	Audible announcements
	Interior station lighting
<b>2</b>	<b>COMPLEMENTARY ELEMENTS NEEDED FOR PUBLIC ACCESS</b>
	Marked pedestrian crossings
	Ramp and/or sidewalk/curb surface at street level
	Audible pedestrian traffic light
	Pedestrian bridges or tunnel for station access (only in the absence of street-level accessibility)
	Elevator
	Lack of Physical barriers (obstacles to the accessible route)
	Public lighting
<b>3</b>	<b>OPERATIONAL SERVICE FEATURES</b>
	Level of service at stations in peak hours
	Level of service by BRT vehicles in peak hours
	Distance between the BRT vehicles and the platform
<b>4</b>	<b>INTERIOR DESIGN AND ADAPTATION OF BRT VEHICLES</b>
	Horizontal or vertical support bars for passengers travelling while standing
	Visual and audible information
	Adequate width of doors and aisles
	Preferential seating for persons with disabilities or limited mobility such as seniors, pregnant women, people with visual disabilities who use guide dogs, and persons using wheelchairs or strollers

<b>5</b>	<b>ACCESSIBILITY CONDITIONS FOR INTERMODAL TRANSPORT</b>
	Existence of infrastructure for direct connections with other forms of public transportation and/or BRT lines (accessible routes)
	Horizontal or vertical signage and illumination during night hours
	Access to both visual and audible information
	Lack of physical barriers

Challenges in accessible mobility planning

- 1. Accessibility is a cross-cutting issue.** For this reason, it should be coordinated from high function positions. Accessible mobility will be implemented by the construction and transport authorities and therefore should be staffed there and not (just) in the social/health department.
- 2. When you pursue an accessibility renovation of already existing infrastructure, begin with a small amount of entities. It's better to do less in good practice than to have many bad practice examples.**
- 3. Find creative ideas which fit to your city.** Not all solutions for a universal accessible city are compatible for your city. Be creative to reach a design for all.
- 4. Accessibility concerns the whole way.** One barrier on the way e.g. to the bus station makes the whole accessible bus system worthless.
- 5. Accessibility can create conflicts.** People with different needs will make different demands on the system. Sometimes the demands will be contradictory and you need to find creative solutions.
- 6. An often occurring obstacle for investing in accessible infrastructure are competing demands for public expenses and in this connection an unclear understanding of the economic benefits of improved accessibility.** Monitoring and Evaluation will help to get a clear overview on the investments and benefits of accessibility.

## 4. Where to learn from?

Lessons learned from various country and city contexts:

**Zero Project - Accessibility** <https://zeroproject.org/downloads/>  
English

**Assessing Mexico's BRT Systems in regard to Accessibility – A Review**  
<http://elpoderdelconsumidor.org/transporteeficiente/los-sistemas-de-transporte-publico-brt-no-cumplen-al-100-con-condiciones-para-facilitar-el-acceso-a-personas-con-discapacidad/>  
Spanish

**Access Exchange International (AEI) – Best Practices**  
<https://www.globalride-sf.org/>  
English, Spanish

**Improving Accessibility to Transport for People with Limited Mobility (PLM) – A Practical Guidance Note**  
<http://documents.worldbank.org/curated/en/575221468278939280/Improving-accessibility-to-transport-for-people-with-limited-mobility-PLM-a-practical-guidance-note>  
English



**GAATES: Bridging the Gap**  
<https://drive.google.com/file/d/0B2c3Xbwb7aY3R1BGOTdHNGZRQ1E/view>

**Berlin - Pursues entire accessibility until 2020, worked out the concept „Barrier-free City for All“:**  
<http://www.stadtentwicklung.berlin.de/bauen/barrierefreies-bauen/en/handbuch.shtml>

**Lyon - Winner of the European Access City Award 2018 for putting accessibility at the heart of its city life:**  
<http://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=9019&furtherNews=yes>

**Windhoek/Northern regions of Namibia (Ohangwena, Omusati, Oshana And Oshikoto) - Based on the positive experiences of the MoveWindhoek project a new project was elaborated “Transport4People” which concerns the inclusion of people with disabilities into the transport sector. A workshop organized in cooperation with the “Centre for Rural Development” (SLE HU Berlin) on the issue ‘Removing barriers in transportation for PwD’ included DPOs and organisations for affected people and identified barriers and possible solutions to overcome these. Workshops like this can bring the necessary information about the status of accessibility in your city and can give the opportunity to find creative solutions.**  
<http://www.movewindhoek.com.na/>

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