



ADVANCING
PUBLIC
TRANSPORT



> REPORT

SAFE AND ACCESSIBLE PUBLIC TRANSPORT FOR ALL

MAKING SDG 11.2 A REALITY

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INTRODUCTION

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs) provide a powerful framework for the period 2015 – 2030 to guide local communities, countries and the international community toward the achievement of disability-inclusive development. The 2030 Agenda pledges to leave no one behind, including persons with disabilities, and has recognised disability as a cross-cutting issue, to be considered in the implementation of all of its goals.

“Accelerated implementation of the New Urban Agenda towards achievement of the Sustainable Development Goals”

The Agenda also includes a specific goal that aims at making cities and communities inclusive and sustainable for persons with reduced mobility and with disabilities (SDG 11). Development of sustainable and accessible urban mobility and public transport networks leads to radical improvement of citizens’ quality of life. It improves access to markets and job opportunities, to education, to health care services, to leisure, to the all services citizens need in everyday life. This is embedded in SDG target 11.2 according to which **by 2030, to provide access to**

safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

The 2006 UN Convention on the Rights of Persons with Disabilities (CRPD) also includes various provisions (in particular in article 9 and 20) related to the issues covered by SDG 11, particularly on making cities and human settlements inclusive for persons with disabilities on an equal basis with others. The New Urban Agenda also commits to improve road safety, public transport and transport infrastructure for persons with disabilities.

Today 15% of the world population are persons with disabilities; an estimated 1 billion persons with disabilities will be living in towns and cities by 2050¹. Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments. They experience various and different barriers including in their access to the physical environment.

The lack of inclusive mobility system participates in denying persons in vulnerable situations, including persons with disabilities, the opportunity to get to school or university, have decent employment, reach health care services, and in general engage in public life. In most developing countries, 9 out of 10 children with disabilities do not go to school² and 80% of persons with disabilities of working age and willing to work are unemployed³.



1 WHO/World Bank, 2011; The Inclusion Imperative: Towards Disability-inclusive and Accessible Urban Development.

2 UNICEF, (2015) Global Initiative on Out-of-school children.

3 International Labour Organisation (2007) The Employment Situation of People with Disabilities: towards improved statistical information.

As a matter of fact, improving access to transport and mobility should not be understood as an end goal itself but rather as contributing to a broader goal that is the increased participation of persons with disabilities in their communities, and the building of more cohesive societies. The work around SDG 11 has the potential to promote implementation of a wider range of CRPD articles and SDGs, relating a example to decent employment, improved health or inclusive education (e.g. indeed, getting to the school building is often a prerequisite to get education).

We believe is thus a transformative part of urban development that, when effectively integrated in urban planning, has the potential to facilitate greater inclusion and full participation of all persons; including persons with disabilities.

EXPANDING ACCESSIBLE PUBLIC TRANSPORT (SDG 11.2)

Cities offer opportunities for creating accessible and affordable public transport systems. The challenge has never been more pressing in our growing and increasingly fast paced cities where access to public transport is a key factor for mobility and social inclusion. In this regard, the public transport sector has an important role to play, to ensure that 100% of citizens can move as smoothly as possible in their environment.

Accessibility has been one of the main concerns for operators and authorities of public transport. Some public transport networks are already fully accessible and many more are on the right path to provide fully accessible public transport. In various contexts the sector has made significant efforts to improve their measures by integrating the newest technologies to address this major issue, low-floor buses being perhaps the most visible example, and decision-makers have implemented improved regulations. Users have witnessed the results of these changes in stations, transport modes and services, but also in a various range of contextually adapted solutions to meet their needs.

Indeed, flexibility is crucial in meeting the accessibility challenge in cities, as context and needs are disparate. While in some areas, access to financial support for operators to modernise infrastructure might be difficult, lack of realistic regulations might be a constraint for others. These specificities did not prevent countries from around



the world from adopting legislations to help remove the barriers to accessibility, but these legal frameworks can reach their full potential only if all stakeholders, including national, regional and local governments and civil society are working hand-in-hand to implement the best solutions locally, and funds are made available to support public transport agencies.

While interpretations differ when it comes to “accessibility”, which can vary between broad or narrow definitions, Universal Design Principles stay as a common basis. The public transport sector is continuously striving to improve performance and offer a quality service to all passengers and is determined to ensure that ‘no one is left behind’. Active support from local, regional and federal governments and access to the necessary resources, including sustainable funding, is a critical factor in the successful implementation of long-term infrastructure works and fleet renewals. By doubling public transport’s mode share, it will have huge accessibility and environmental benefits through transit avoided carbon.



THE IMPORTANCE OF ADDRESSING BOTH SAFETY AND ACCESSIBILITY FOR AN INCLUSIVE URBAN MOBILITY⁴

1.35 million people die every year because of road crashes and 90% of these casualties happen in developing countries.⁵ SDG 11.2 specifically recognises the importance of having access to a safe and sustainable transport system based on a backbone of public transport, which in turn will help improve road safety. Road safety is also at the core of SDG target 3.6, which aims at halving the number of global deaths and injuries from road traffic accidents. Travelling by public transport is ten times safer per mile than travelling by car⁶; as such SDG 11.2 makes specific reference to “improving road safety, notably by expanding public transport”, which will make a significant contribution to SDG 3.6.

Any public transport company has a responsibility for and a vested interest in protecting its customers, staff and assets, as well as the reputation of the network – passengers who feel insecure may choose not to use the system. It is well known that public transport is increasingly important for urban areas to prosper while delivering multiple sustainability benefits⁷. Safety and security therefore play an important role in helping public transport to become the mode of choice for today’s citizens. While improving road safety and enabling accessibility alone will not break down all barriers, it is a central factor to realising the rights of persons with disabilities, on an equal basis with others.

In particular, safe and accessible public transport can contribute to gender equality and enable the participation in community life of women and girls, including those with disabilities: they are more likely to use public transportation than men and their mobility preferences are impacted by lack of security, discrimination and socio-economic inequality.

It is therefore crucial to link accessibility and safety: without road safety for all, cities cannot be completely inclusive and accessible. Through SDG Target 11.2, all countries committed to achieve this, notably for people in vulnerable situations, women, children, persons with disabilities and older persons.

Clearly, the resources needed to make urban environments safe and inclusive for everyone are relatively modest compared to the enormous cost in lost lives, road traffic injuries and their consequences, and to the cost of keeping vulnerable groups excluded from life opportunities.



⁴ The study “Making cities inclusive: safe mobility for persons with disabilities in developing countries”, published by Humanity & Inclusion, addresses and analysis the topic of safe and inclusive mobility and highlights the links between mobility and road safety, access to education, access to employment, and Disaster Risk Management.

⁵ WHO, “Global Status Report on Road Safety”, 2018.

⁶ <http://www.vtpi.org/safer.pdf>

⁷ <https://newclimateeconomy.report/>

CASE STUDIES

ACCESSIBLE PUBLIC TRANSPORT FOR EMPLOYMENT, SENEGAL

In Dakar, a Humanity & Inclusion's (HI) program running since 2014 has been working to increase access to employment for persons with disabilities, including by improving safe and accessible urban mobility that allows a greater number of workers with disabilities to travel from home to work. Thanks to successful engagement carried out by HI in collaboration with local Disabled Persons' Organisations, public bus transport has been gradually improved. With stronger political leadership, the national policy on accessible transport was improved. Dakar's largest bus operator agreed to increase the number of buses that have ramps and priority seats for persons with disabilities, and to train bus operator staff in the different needs of passengers with a range of disabilities. Noticeably, the bus company went further and hired 25 persons with disabilities to sell tickets. Other initiatives for safer and accessible transport in Dakar include the phasing out of the 'cars rapides' (rapid buses), the colourful but old and dangerous mini-buses from the 1960s and 70s and replace them with a safer and more accessible fleet of buses. This offers another opportunity to address the mobility needs to persons with disabilities such as access from bus stops onto buses, prioritised seats and audio and visual information on the route.

Source: HI



TRAINING AND ICT SOLUTIONS, KENYA

In Nairobi and other large cities in Kenya, it is very challenging for persons with disabilities to access the small matatus that are the main form of transport around the city. For example, the tricycles used by many children and other people with reduced mobility are too large to fit inside. A programme run by Humanity & Inclusion in collaboration with local Disabled Persons' Organisations has carried out advocacy and training for government and key stakeholders like matatu operators or owner associations to address the challenges faced by persons with disabilities. As a result, matatu drivers have become much more aware of the needs of passengers with disabilities. The programme also promoted the potential of ICT solutions to safety and mobility challenges, by for example allowing pupils who are disabled to send advance notification to bus drivers so that they can be picked up.

Source: HI

TUK-TUK DRIVERS CERTIFIED ON ACCESSIBILITY, LAOS

As part of a road safety programme carried out by Humanity & Inclusion in Laos from 2008 to 2016, different Disabled Persons' Organisations and the Laos Disabled People's Association (LDPA) have been supported in feeding in consultation processes related to developing urban infrastructure and other projects, such as setting up a Bus Rapid Transit system. The LDPA has also created several initiatives to help with universal mobility. For example, in Vientiane, tuk-tuk drivers have been trained on accessibility. After the training, they can proudly advertise their proficiency with a sticker on their vehicle, thus adding to their business opportunities. The programme produced a detailed guide on how to improve road safety and accessible public transport in cities in Laos. This was aimed at government departments and private sector planning and engineering consultancies.

Source: HI



DESIGNING BRT SYSTEMS FOR UNIVERSAL ACCESS, SOUTH AFRICA

The City of Johannesburg launched a six-month pilot project to provide free travel on the Rea Vaya bus rapid transport (BRT) system for pensioners and people with disabilities. Rea Vaya buses and stations incorporate a number of features to cater for people using wheelchairs, for commuters who are visually or hearing impaired, as well as for the elderly and pregnant women. Areas surrounding stations are evenly paved, and the stations are all fitted with access ramps of a width and gradient that conforms to universal guidelines. For persons with mobility impairments, the ramps have handrails on either side or a landing area halfway up for those who wish to rest. To guide commuters who are visually impaired, the ramps have lights on both sides, while for people who are hard of hearing, each station has an electronic variable message system in different languages. At the ticket booths, the window height has been adjusted so that they can be used by people using wheelchairs, while the booths themselves have enough space for people using wheelchairs to work in them. The station platforms and bus doors are level with each other, making boarding and exiting Rea Vaya buses a simple matter - multiple doors also speed up boarding and alighting - while the bus interiors come with a number of features designed for passengers with disabilities. Rea Vaya's "articulated" buses - double-section buses that run on its trunk routes, for boarding at stations - each cater for two wheelchairs. Its "complementary" buses - standard length buses with both station-side and lower kerb-side doors - each have at least one wheelchair position as well as grab rails and a kerbside lift. These are critical elements of Rea Vaya's mission to help improve the lives of people travelling on its buses.

Source: Rea Vaya

IMPROVING ACCESSIBILITY TO TRANSPORT, BRAZIL

The aim of the Line 4 project was to build a state of the art driverless metro system in Sao Paulo that links all lines together and therefore is a key line for facilitating interchanges. Accessible features were designed during the planning phase, with consideration of accessibility extending beyond the vehicles and stations to the surrounding areas. Accessibility features include tactile paving to alert people with visual impairments of hazards and provide directional assistance; clear signage (tactile in some locations); modern clear lighting; well trained staff who are able to provide assistance; escalators and lifts, doors between the trains and the platforms; a minimal gap between the train and the platform, priority seating for persons with reduced mobility; fare gates (not turnstiles), including wider ones for persons using wheelchair; and trains that are fully connected so that passengers can move around freely within them. The addition of extra accessibility features is thought to have only minimally raised the costs of the project, but it is felt that the benefits to persons with disabilities and the wider population are high.

Source: World Bank



MAKING PUBLIC TRANSPORT MORE INCLUSIVE WITH TECHNOLOGY, SINGAPORE

In January 2019, Singapore's Land Transport Authority (LTA) and the technology company INIT launched a trial on assistive technologies for persons with disabilities. The trial provides persons with disabilities enhanced information and communication abilities to allow them to better plan and manage their journey. When the project was started, extensive research was made to find out the problems that PRMs face while using public transport and the reasons for not using public transport. LTA met with the Singapore Association of the Visually Handicapped to find out what it would take for people who are visually impaired to use more public transport as well as with SG Enable (Agency dedicated to enabling persons with disabilities) to get a broader perspective of other kinds of disabilities. Based on the research it was decided to focus on three new features for the users: 1) external audio announcements at stops as well as internal announcements on-board; 2) announcements on-board via T-loop for persons with hearing aids; and 3) a mobile phone app providing personalised journey guidance and communication to the driver. This app has search functionality on stops and provide real time departure information on those stops, in-journey updates, notification of arrival at alighting stop, and request for assistance from the bus captain for boarding and alighting the vehicle.

Source: LTA

TAKING EFFORTS TO BE MORE INCLUSIVE, FRANCE

The city of Rennes has decided to collaborate with associations representing persons with disabilities to make its public transport network more accessible. Handicap 35, which gathers more than 50 disability associations, has been involved in the implementation of the public transport network. The groups gave their advice and suggestions for everything from the type of transport and retrofits (adding new technology to old systems) to information and signalling systems. As a result, the metro line A, launched in 2002, is fully accessible to people with all types of disabilities. The new metro line B, which is expected to open in 2019, will meet the same standards. All buses are also accessible for people in wheelchairs and each has two spaces reserved for people using wheelchairs and a screen with visual and vocal announcements of the stops. Bus stops are already accessible and stops are equipped with passenger information terminals which can read aloud the displayed information when prompted by a Bluetooth connected smartphone app or remote control. It is estimated that people using wheelchairs make an average of around 180 journeys a day on the buses and 250 on the metro. A dedicated public transport service for persons with reduced mobility has also been launched. It is a door-to-door service upon reservation. Both occasional and frequent trips can be booked from 8 days to 1 hour in advance. It is mainly dedicated to persons who are visually impaired and using wheelchairs, but other persons with reduced mobility may benefit from the service.

Source: Euractiv



A MODEL CITY FOR ACCESSIBILITY, BRAZIL

Curitiba, Brazil's seventh largest city with a population of 1.2 million, provides a perfect example of how it is anticipating its citizens' future needs. There, accessibility is being addressed at all points in the transport chain, from bus entrances to station access, to feeder systems. The city has the goal that 100% of all bus stops in Curitiba have raised platforms with ramps or lifts for wheelchair users. Passengers board at floor level via bridge plates that lower automatically as buses reach the stop, which not only helps persons using wheelchairs, but also those who might have difficulty stepping up to a higher bus floor. Curitiba also has a high percentage of accessible feeder services (the parts of the transport chain that link individuals' homes with the backbone of Curitiba's public transit, bus rapid transit). As a result of these efforts, persons with disabilities make some 21,000 trips daily using Curitiba's public transport, 1,000 of which are made by persons using wheelchairs.

Source: TheCityFix

PRIORITISING ACCESSIBILITY, CZECH REPUBLIC

Prague has for decades been investing to improve the accessibility of its public transport. In the mid-90s the Czech capital introduced a system that equipped all public transport vehicles with an electronic device that announces the number and destination of the approaching vehicles, so that people who are visually impaired waiting at the bus/tram stop are informed. The system also informs the driver when a person who is visually impaired wants to get on or off the vehicle. Accessible public transport for all categories of passengers, including passengers with mobility impairments or who are visually impaired, is constantly one of the priorities of Prague City Council. To make sure Prague's public transport is accessible for all people a municipal working group has been set up, consisting of members from the City of Prague, Prague Public Transit Company and from the association of the visually impaired. This working group was responsible for drafting a strategic document that outlined the concept of removing barriers in public transport for people with disabilities. Together with infrastructure improvements, such as removing barriers for wheelchairs at stations, Prague is a good example of a city that is significantly improving the travel conditions of people with reduced mobility.

Source: Eltis



GETTING ALL RESIDENTS AND VISITORS TO ENGAGE IN ALL ASPECTS OF CITY LIFE, LUXEMBOURG

Over the past decade, Luxembourg City has improved accessibility by implementing a plan based on the UN Convention on the Rights of Persons with Disabilities. It draws on the concept of 'specific needs', rather than focusing on an individual's disability. The city administration aims to enhance accessibility by ensuring that everyone living within the city walls has the ability to live and travel with ease. Two of the measures include the introduction of audible signals at crossings and the introduction of buses with low flooring to enhance access for persons using wheelchairs. There is also a minibus service that transports people from their homes into the city and offers a discounted fare for persons using wheelchairs. In addition to physical measures, Luxembourg City promotes accessibility by running awareness-raising weeks. Finally, Luxembourg City has released 'iBeacon', an app providing information on bus arrivals at bus stops for individuals with visual impairments, tourists and public transport users in general.

Source: Eltis

COMMUNICATIONS TRAINING IN RUSSIA

Moscow Metro's Passenger Mobility Centre has addressed universal mobility with communications training for personnel of the Moscow Metro. Starting 2017, 15 specialists completed training in interacting with people who have vision- and hearing impairments. They were taught how to sign essential phrases such as 'danger', 'do you need help?' and 'no entry'. Then under the lead of visually impaired instructors, they were trained in spatial orientation under darkened conditions. Following this, they re-enacted crisis situations to practice communicating more effectively with both groups. The training is part of a wider project – Lyudi IN – sponsored by Moscow's Department of Culture, the Integration cultural centre, and the Dialogue in the Dark organisation. Additionally, the Department of Transport in Moscow is currently looking at expanding this project. The overall aim is to better integrate all citizens in the daily life of the city.

Source: UITP



METRO ACCESS AUDITS, INDIA

Delhi Metro Rail Corporation (DMRC) covers 110 kilometres and 90 stations, and uses universal and inclusive design. DMRC commissioned access audits of a sample station and future station designs for the Delhi Metro. Accessibility features provided as a result included: designated parking, guiding paths and warning strips, bright-coloured interiors, accessible automatic fare collection, escalators, lifts, and designated space for wheelchairs inside the coach. Further suggestions to improve signage, lower ticket counter heights, install distinct sound beepers for orienting persons who are visually impaired, and establish transit ramps to bridge horizontal and vertical gaps between the coach and platform and toilets were accepted and are being followed up for new stations. The DMRC has become an example for the rest of India, with others now adopting the best practice learned in Delhi.

Source: Evidence on Demand

RECOMMENDATIONS FOR MORE ACCESSIBLE AND SAFER SUSTAINABLE TRANSPORT⁸

The following recommendations are addressed to national governments so that they can help finance and facilitate local level action.

STRENGTHEN POLICY FRAMEWORKS, BASED ON EVIDENCE AND THROUGH PARTICIPATIVE PROCESSES

- Promote an integrated approach to safe and inclusive mobility; notably by expanding public transport that considers safety and accessibility as mutually reinforcing elements and essential components of a broader strategy to ensure equal opportunities and achieve sustainable, inclusive development.
- Facilitate the participation of all groups represented in the city, including persons with disabilities and their representative organisations, in the design, implementation and monitoring of local and national policies and projects on urban mobility, in line with article 33 of the CRPD. Cooperating with Disabled Persons' Organisations can help to improve the user experience.
- Pay special attention to specific and diverse mobility needs, emphasising the importance of safe and accessible mobility towards equal participation of all to ensure that 'no one is left behind'.
- Strengthen disaggregated data collection methods and support research on barriers to and the cost/gains of accessibility, safety and inclusion. Also support research on the effects that mobility and transportation infrastructure have on the access of marginalised groups to services, and other opportunities, like employment.
- Effectively monitor and report on the impact of national and local policies relating to safe and accessible mobility. Utilise SDG target 11.2 and indicators set out in SDGs and in the New Urban Agenda, through the lens of the CRPD, to create synergies between the different reporting processes.
- Engage in multi-stakeholder dialogue and share knowledge and experiences on accessible urban mobility and public transport at all levels, and bring these issues further up on the global agenda, in different policy sectors, and as part of international cooperation strategies.

REMOVING THE BARRIERS TO ACCESSIBLE MOBILITY, VIA CONCRETE MEASURES

- Adopt a holistic approach to accessibility, i.e. promote a safe and accessible urban environment based on Universal Design Principles, providing accessible features for persons with a wide range of impairments, which represent cost-effective and efficient measures to enhance rapidly safety and inclusion.
- Ensure that public procurements include requirements on both safety and accessibility for projects relating to mobility infrastructure or technology, and ensure ex-ante and ex-post assessments of both safety and accessibility for these projects.
- Among the transportation mix in cities, promote and expand in priority affordable, safe, accessible and reliable public transport that meet the diverse range of needs required by persons with disabilities.
- Provide training for government staff, urban planners, engineers, public transport authorities and operators on universal design on how to cater for the needs of passengers with disabilities, including those with non-visible impairments.
- Encourage the development of ICT solutions to accessibility challenges, such as enabling passengers with disabilities to send pick-up requests to informal bus operators via SMS or an app, in particular in the context where there are no designated bus stops.
- Develop university curricula in urban planning and design that include training on accessibility and disability inclusion principles, especially Universal Design concepts.
- Enable the conduct of safety and accessibility audits to identify, and eventually eliminate, the situations that are not compliant with accessibility standards. Audits be based on a participatory approach with the aim of involving all stakeholders concerned and consider the mobility chain as a whole, from the private space to the public space.

⁸ These recommendations refer to the Humanity and Inclusion's study «Making cities inclusive: safe mobility for persons with disabilities in developing countries», published in 2018 and available online: <http://blog.handicap-international.org/influenceandethics/2018/07/21/alert-new-hi-study-making-cities-inclusive-safe-mobility-for-persons-with-disabilities-in-developing-countries/>

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This report was co-prepared by Humanity & Inclusion and the UITP Sustainable Development Committee helping to make public transport more sustainable and thereby the world.

