

## WORKSHOP on Innovation in Accessible Transport For All 14 January 2010

### World Bank Headquarters

1818 H Street, NW  
USA-Washington DC

#### 1. Context

- 1.1 This workshop, organised by the International Transport Forum and the World Bank, brought together almost 100 experts from across the world to examine how innovation can promote the development of effective and sustainable solutions to the diverse range of transport and mobility needs facing disabled and older people in both developed and developing countries. The Workshop considered the wide ranging and differing needs of people with disabilities including wheelchair users, those with walking difficulty, vision impairment, audio and cognitive disability.
- 1.2 Key topics discussed included policy and governance, finance, planning, research, and design and technology.
- 1.3 The discussions were held against a background of clear demographic trends:

According to the United Nations Department of Economic and Social Affairs 2009 Report on World Population Ageing<sup>1</sup>:

- 11% of the global population is over 60 years old;
- By 2050, this figure is expected to be 22%; rising from 700 million people in 2009 to 2 billion;
- The pace of population ageing is faster in developing than in developed countries.

Data from the UN Enable Programme<sup>2</sup> confirms that:

- 10% to 12% of the world's population has a disability;
- 80% of them are estimated to live in developing countries;
- There is a strong correlation between age and disability: in some countries as many as two thirds of disabled people are also elderly;
- Available empirical evidence indicates that disability increases the risk of poverty and vice versa.

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<sup>1</sup>. [http://www.un.org/esa/population/publications/WPA2009/WPA2009\\_WorkingPaper.pdf](http://www.un.org/esa/population/publications/WPA2009/WPA2009_WorkingPaper.pdf)

<sup>2</sup>. <http://www.un.org/esa/socdev/enable/diswpa04.htm>

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- 1.4 Given the fundamental importance of mobility to enabling disabled and older people to live independently, there is an urgent need to re-think the way in which transport systems and infrastructure are planned, organised and financed.
  - 1.5 Speakers and delegates contributing to the debate included representatives of governments, international funding agencies, transport operators, disability advocacy groups, academics, and researchers.
  - 1.6 The Key points to emerge from discussion are summarised in the following sections.

## **2. Policy and Governance**

### **2.1 *The culture of Innovation***

2.1.1 It became clear early in the discussion that innovation is a relative concept and perceptions of what is innovative differ from one country to another; the most marked distinction being between the developed and developing worlds. Innovation need not equate to high tech or high cost and there is as much scope – and in many cases greater need – for effective low cost concepts, approaches and designs to emerge from innovative thinking.

2.1.2 It was also noted that uptake of transport innovation has been slow in many areas. This is particularly true in the context of the institutional framework within which transport operates in terms of implementation, monitoring and enforcement of laws and standards. This may be due in part to the long timescales associated with the design of both transport infrastructure and vehicles.

2.1.3 It is easier to overcome physical barriers by introducing accessible vehicles than it is to overcome institutional barriers (organisational, structural and attitudinal) which prevent good access solutions being developed – for example through reluctance to ensure that accessible pedestrian facilities are kept clear or that bus stop parking is enforced to allow ramp or lift equipped buses to pull up close to kerbs.

### **2.2 *Positioning accessibility in the global agenda***

2.2.1 Accessibility should not be seen as a policy goal in isolation. It needs to be considered as part of the broader process of innovative thinking underway in many countries about sustainable development and the creation of liveable communities. This would strengthen the position of accessibility as a non-negotiable part of policy making, planning and funding at international, national and regional levels.

### **2.3 *United Nations Convention on the Rights of Persons with a Disability***

2.3.1 The UN Convention on the Rights of Persons with a Disability is seen as a catalyst for change in this context, particularly in developing countries. The Convention, which has now been signed by 144 countries and ratified by 76 (many from the developing world), places an

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obligation on signatories to provide access to the physical environment and to transport. There is a clear stated link between access to transport and the ability of disabled people to use basic services including health, education and employment. Some examples were cited of the UN Convention being successfully used to provide leverage to initiate or enforce access improvements at local level. At a broader level, the US, for example, builds the Convention into their memoranda of understanding in working with other countries on disability and accessibility issues. The World Bank also regards the Convention as an important tool in building partnerships.

2.3.2 The UN Convention refers to “progressive realisation” of the goal of accessibility, which implies that accessibility is a step by step process in which it is important to build up sufficient momentum among stakeholders, including disabled people, technical experts and policy makers to think innovatively and to implement change.

## **2.4 *Developing coherent structures and processes***

2.4.1 Transport could be more inclusive in many countries through better coordination and enforcement of legislation on accessibility.

2.4.2 Likewise, a better understanding and awareness about the need for accessibility could have a positive impact on the quality of implementation and monitoring and in the enforcement of laws, once passed.

2.4.3 One possible model to facilitate this process would be the creation of oversight boards at national or regional levels to represent the interests of stakeholders, including people with disabilities, and ensure correct and timely implementation and follow up.

2.4.4 Key to this process too is the engagement of disabled people from the drawing board through to realisation at every phase of the process. Establishing and formalising effective stakeholder engagement is fundamental to success. It is particularly important to ensure that stakeholder organisations are fully representative across the whole spectrum of disability issues and are well briefed on legal and other frameworks. The process by which they are established also needs to be robust so that there is continuity of input.

2.4.5 It was noted that progress in this field is often dependent on a small number of individuals with understanding and commitment. Successful though this can be in the short term, continuity over time can only be achieved through the establishment of processes and laws. A clear legal framework (both at the international level of the UN Convention and at more specific national and regional or local levels) is also essential, together with political commitment.

2.4.6 While it is evident that disability and therefore accessibility are cross-sectoral issues, there needs to be better communication and co-ordination between the different parties involved to optimise progress. Some good examples of joint working were cited. These included: the USA where Government Departments responsible for transport, housing and environmental protection are developing joint approaches to addressing need through establishing liveable

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communities; Norway which has brought all its relevant Government Departments together under the banner of Universal Design; and China which has formalised (in Shanghai for example) an annual process of consultation between city construction authorities and disabled and older people.

2.4.7 It was noted that there was a need for greater alignment of political objective and co-ordination of effort between governments and other agencies as a pre-requisite for effective and sustainable progress. Accessible transport is essential for the independence of people with disabilities and crucial for their full participation in society.

2.4.8 The need to speed up the pace of improvement and skill up those responsible for delivering it was also emphasised.

2.4.9 One proposal for promoting more effective and cost effective progress was to develop a detailed implementation strategy at national, regional and local levels, together with penalties for non compliance.

2.4.10 It was also suggested that “hearing” boards should be set up (again at national or regional levels) to address non-compliance by public and private transport providers and agencies. Local volunteer advisory boards of professionals and users to monitor progress were also proposed.

### **3. Economic and Financial Issues**

#### **3.1 *Economic repositioning of accessibility***

3.1.1 In financial terms, there is competition for national spending and accessibility is given a low priority by many cash strapped national, regional and local government agencies. The initial cost of achieving accessibility can be perceived as unaffordable, especially for developing countries.

3.1.2 There is therefore an urgent need to re-think the economic and fiscal basis for accessibility.

3.1.3 While it was noted that previous attempts, over a number of years, to argue the case for a coherent approach to funding accessibility, had largely been unsuccessful, it was very important to continue to pursue options for change.

3.1.4 It was proposed that a major step forward in making the case for routine investment in accessibility would be to re-position accessibility as a benefit rather than a cost. One means to address this problem could be to incorporate access to transport, in its fullest sense, within an official measure of economic progress. The Commission on the Measurement of Economic Performance and Social Progress chaired by Professor Joseph Stiglitz proposes replacing Gross Domestic Product with a number of other indicators; this might be a suitable vehicle for consideration.

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3.1.5 A number of economic studies have shown that there is a general willingness to pay for the benefits of providing accessibility, not only for family and friends, but also for others in our communities. However, there does not seem to be a ready economic or quantifiable way to capture this willingness. The question is therefore whether the use of taxation and legislation are justified to enforce this, and to generate an income stream to fund greater accessibility.

3.1.6 One example of a successful approach to funding accessibility comes from Berlin. Here the Berliner Verkehrsbetriebe (BVG - the city transport operator) adopted a policy in 1992 that Berlin must become a barrier free city. They took the view that making public transport better for everyone would justify the expenditure on accessibility over time. Now Berlin is regarded by many disabled people as Europe's most accessible city.

3.1.7 Strong governance and a clear legal base were agreed to be essential to successful funding of accessible transport and infrastructure. Understanding local culture, demonstrating improvement and introducing technical innovation were also cited.

3.1.8 Tourism and international sporting events (e.g. Olympics/Paralympics) are also important global economic drivers which should be harnessed.

## **3.2 Marketing**

3.2.1 The positioning of accessibility issues in the global consciousness was also discussed. A parallel was drawn with the international climate change debate which has focused on the risks of **not** taking action. There is currently little understanding in the population at large of the enormously detrimental impact that a lack of mobility can have on people's lives. There needs to be greater momentum built up at both the national and international level to raise awareness on accessibility within political and public agendas.

3.2.2 An illustration of the world's market for products associated with accessibility is the wheelchair supply market. Global market research sources indicate that over 90% of the world markets for wheelchairs are in countries with only 20% of the world's population. This could be taken to indicate that developed countries' norms of accessibility do not apply in countries of the developing world.

## **4. Planning**

### **4.1 Changing settlement patterns**

4.1.1 The world urban population is expected nearly to double by 2050, increasing from 3.3 billion in 2007 to 6.4 billion in 2050. Virtually all of the world's population growth will be absorbed by the urban areas of the less developed regions, whose population is projected to increase from 2.4 billion in 2007 to 5.3 billion in 2050<sup>3</sup>. Population growth may strain the fiscal capacity of urban areas, particularly in less developed countries, to respond to new infrastructure needs.

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<sup>3</sup> UN ESA World Urbanization Prospects The 2007 Revision.

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4.1.2 There is often a disconnect between the planning and political processes and the realities of daily living for those with mobility difficulties. In developed countries the growth of out of town retail and health facilities that can only be accessed by those with private cars is one such example.

4.1.3 One solution being explored in some countries is the concept of “ageing in place” which allows older people and those with disabilities to continue to live in their own communities by creating barrier free and accessible environments around them.

4.1.4 At the opposite end of the spectrum, rural poverty and isolation are still major factors and are disproportionately affecting older and disabled people. There are many countries and areas still without basic facilities such as paved roads and indeed without basic equipment such as wheelchairs. One example cited of a country lacking even the most basic infrastructure was Senegal. The need for mobility is as great but the solutions and approaches will be quite different. Community based schemes have an important role in some areas.

4.1.5 A World Bank transport initiative in the Liaoning Province of China is one example successfully incorporating accessibility features with help from local disability associations during the design and implementation stages of the project. Local disability associations were involved in identifying and prioritising access problems and identified solutions were then incorporated into the project design. A long term result has been greater sensitivity on the part of city leaders, government officials and contractors to the needs of disabled people. This in turn has resulted in higher quality workmanship and effective mainstreaming of accessibility issues.

## **4.2 Training**

4.2.1 One key factor in addressing needs in both urban and rural environments is for transport and planning professionals as well as architects to be routinely trained in accessibility issues as a part of their basic curriculum. There are some good examples, such as in Catalonia in Spain where university students must take credits in the Design for All concepts but these are still the exception rather than the rule in most countries. As a result, opportunities are lost and expensive mistakes are made in planning and developing infrastructure which are often impossible to put right and may leave a negative impact for many years.

## **5 Research and Knowledge Transfer**

5.1 A number of key gaps were identified both in basic knowledge -particularly knowledge that is relevant to developing countries - and more generally in the application of that knowledge and its availability to practitioners.

5.2 It was noted, for example, that we still lack consistent and meaningful indicators of accessibility. There is a tendency to measure progress in terms of numbers of, for example, accessible buses or bus stops. This kind of indicator does not give enough information about the impact on the day to day mobility of disabled and older people. It was noted that developed and developing economies would need different indicators.



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5.3 An international forum for the exchange of knowledge and research data would be valuable with an emphasis on helping developing countries to identify the right technology or approach for their particular situation. Such a forum could also have an important role in promoting and disseminating information on innovation in this field. TRANSED conferences provide a means to facilitate this process. It is hoped that low cost solutions to accessibility could be featured at a future conference.

5.4 There is also a need, at international or national levels, to develop effective ways to evaluate progress and to advise on next steps. There are some examples of innovation in this field. One such is the joint project funded by the United National Development Programme (UNDP) and the Government of Malaysia which is intended to support the development of a fully accessible transport system for Penang State, as a pilot for the rest of Malaysia. The project focuses on access audits of public transport facilities, capacity building and awareness raising activities.

5.5 It has also been noted that while there are clear guidelines on the correct technique for installing access improvements, often there is no explanation of why they need to be done in a particular way. This has an adverse impact on the quality of installation and maintenance in areas such as tactile paving. This can be a factor in both developed and developing countries. A good example of tackling this problem comes from Shanghai where there is one “access checker” per square kilometre of the city whose job it is to identify barriers to access.

5.6 Accessibility standards of developed countries may not be adequate or appropriate to meet the needs of people with disabilities who live in developing countries. There is a need for further work to identify the “low hanging fruit” that could give developing countries a clear and affordable basis for sustainable accessibility. One obvious starting point would be basic improvements to the local pedestrian environment to create access for disabled and older people. Another is to consider simple low cost improvements such as the use of contrasting colour on step edges that can assist people with low vision.

5.7 The need for stakeholder engagement in research was also stressed with the example of “Citizens’ Science” committees which engage local people in identifying problems and proposing solutions to them. This and other kinds of community engagement can be a valuable means of focusing on the topics of greatest relevance to disabled and older people.

## **6. Design and Technology**

6.1 A clear need was identified to distinguish between solutions appropriate for developed and developing countries. The low floor bus was one such example. This is now almost universal in developed countries with very positive benefits but may not be the best solution in some developing country situations without paved roads or other basic infrastructure. High floor vehicles and smaller vehicles may be better solutions at least on a transitional basis.

6.2 There was extensive discussion on the role and value of Universal Design which is based on the premise that products and environments should be usable by all people, to the

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greatest extent possible, without the need for adaptation or specialised design. It was noted that Universal Design can only be applied where a culture of inclusion and accessibility has been established. A number of examples of the benefits of Universal Design were cited including the Boston metro system in the USA where the wide gates installed to help wheelchair users are now the preferred exit for all passengers and the German supermarket chain which has generated a significant revenue increase through consulting with and responding to the needs of older customers in areas such as the design of shelving and trolleys/carts.

6.3 It was noted that although the concept of Universal Design has been in existence for over 20 years, its take-up is still mostly at local or regional levels.

6.4 The need for Universal Design to be truly universal in terms of including the needs of people with cognitive and sensory impairment in areas such as communication and information was also stressed very strongly.

6.5 There is a particular need to find the means to support development of low cost products for developing countries. Accessible three wheeled scooters was one prime example which could not only provide low cost mobility for many but could also create employment through establishing manufacturing bases in developing countries. Although this market is too small in a single country to make an economic product, the combined market size of several countries could make it a commercially viable proposition.

## **7. Summary of key innovative approaches:**

On the basis of the presentations and discussion, the areas in which it was agreed that innovation is needed are:

### **For all countries**

- Greater alignment and collaboration between agencies working in the accessibility field to maximise funding opportunities and create a joined up approach to delivery;
- Re-positioning of the economic status of accessibility as a measure of social progress: identifying it as a benefit not a cost; and refining evaluation methodologies to better assess and quantify these benefits where possible.
- Consideration of whether taxation and legislation are needed to capture peoples' willingness to pay for accessibility for their communities;
- Promotion of wider international awareness of the need for accessibility, and the consequences of not fulfilling that need, using the experience of the global climate change debate;
- The development of meaningful indicators of accessibility that measure the difference that accessibility initiatives make to disabled and older people's lives;



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- A stronger emphasis on training of transport and other relevant professionals - from senior management to front line workers - to understand why accessibility is important and what needs to be done to get it right.

### **For developing countries in particular**

- Re-orientation of research effort towards practical application and implementation, with a particular emphasis on affordable low cost solutions;
- A focus on knowledge transfer that is appropriate rather than simply passing on standards and approaches from developed countries: setting up an international knowledge transfer database;
- The creation of a template for stronger stakeholder engagement to re-enforce and monitor implementations of the UN Convention on the Rights of Persons with a Disability.