

EMTA **survey**

EUROPEAN METROPOLITAN TRANSPORT AUTHORITIES

▶ What information for people with reduced mobility in the field of public transport?

SUMMARY

The issue of accessibility to all citizens of public transport systems is a major social objective. All citizens, regardless of disability or age, must have an opportunity for independent living, and accessible transport systems contribute in a determinant way to this goal. They increase educational, employment and recreational opportunities and can reduce social services and welfare costs to governments and communities. Moreover, it should be noted that all people benefit from accessible public transport.

Public transport authorities (PTAs) have a big responsibility in the improvement of the accessibility of public transport systems. PTAs are usually involved in the definition of the quantity and quality of services expected from operating companies, they are often responsible for co-ordinating the information on public transport services, and last but not least, PTAs are a major source of revenue of public transport companies, and these funds can be used as incentives to better take into account the needs of people with reduced mobility.

The association of European Metropolitan Transport Authorities (EMTA) brings together 28 public authorities in charge of organising the public transport systems of the European largest cities. EMTA has set up in 2002 a working group on the issue of accessibility of public transport systems to people with reduced mobility. Representatives of the public transport authorities of Barcelona (ATM), Berlin Brandenburg (VBB), Frankfurt-Rhein-Mail (RMV), Paris-Ile-de-France (STIF) and of the Swedish railway authority (Banverket) have taken part in the activities of the group, which has focused its work on the issues of information of people with reduced mobility, accessibility of heavy rail systems, and lastly the strategy of public authorities to improve the accessibility of public transport systems.

In this context, EMTA has ordered to the German organisation IbgM, one of the most skilled representative organisations of people with reduced mobility, a survey so as to determine what are the needs of the different categories of handicapped people in terms of information before and during the trips, and to highlight some examples of best practices.

Needs and requirements of people with mobility impairments on the provision of information in public transport

It is currently estimated that 12%⁽¹⁾ of the European population is disabled. The combined number of elderly and disabled people reaches 24% of the population, and figures taking into account people with a temporary impairment (people with luggage, prams, etc.) reach about 30%⁽²⁾ of the overall European population, that is to say more than 100 million persons in EU25. With the ageing population, this number is expected to increase significantly over the coming years.

It is extremely important that people with disabilities and with reduced mobility are not treated as a homogeneous group. The requirements of these people for barrier-free use of public transport are diverse. The basic condition for high-quality passenger information for people with reduced mobility is therefore awareness of the special needs of these passengers. The requirements related to rolling stock, infrastructure, operation and service in public transport and the requirements regarding the provision and accuracy of the respective information need to be distinguished.

The less accessible is the public transport system, the greater are the demands on the content and the reliability of passenger information. It is of course advantageous for the provision of information if the vehicles and the infrastructure within a transport system already meet the requirements of passengers with reduced mobility. On the other hand, a public transport system that is completely free of barriers would, in the ideal case, only have the duty to inform people about the disruptions of individual system components in good time.

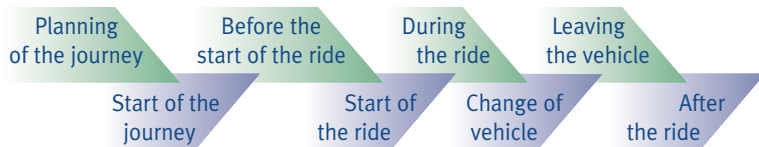
Information on accessibility and usability should not just refer to normal operation. Real-time information – if there is the corresponding data basis – represents a particularly reliable aid for people with mobility impairments. People with reduced mobility, in particular, need to be informed about disruptions in good time, for example, about lifts at stations, lifts or ramps on vehicles and about optical or acoustic information systems in vehicles, at stations or in service facilities which are out of order.

(1) Source: COST 335. (2) Source: ECMT.

Apart from customer-friendly facilities and vehicles, the customers' acceptance of public transport systems depends, essentially upon qualified and up-to-date passenger information. The latest developments to improve passenger information increasingly fulfil the information needs of the users of local public passenger transport. In addition to conventional static information as for example signs with target timetables, real time dynamic information that is rapidly updated and suited to the current traffic situation, is becoming more and more available. **The combination of static and dynamic passenger information guarantees a closed media chain that offers orientation and security.**

The whole passenger information system should comply with the highest possible information requirements of customers who do not know their way around and the information requirements of new customers who are not familiar with public transport in order to guarantee that all users, including potential customers, are provided with information.

There shall be static information available for all journey stages, from planning to travelling, and for some years, especially due to the introduction of telematics systems, there has also been an increase in the provision of dynamic real time information. To identify the needs of the passengers, it is helpful to separate the whole journey into various stages: planning of the journey, start of the journey, before the start of the ride, start of the ride, during the ride, changing of the vehicle, leaving the vehicle, and after the ride.



To plan the journey, a static media as for example a railway guide, a net arrangement drawing, a timetable on CD ROM, disk or in internet are consulted. There is also dynamic information media provided such as electronic information systems. Passenger information can be available, sometimes in different languages, by e.g. BTX, telephone, mail, personally in customer centres, mobile phone, WAP mobile phone or Internet. Additionally, there are electronic, interactive information systems with data fed online by a central passenger information computer.



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◀ Text telephones in New-York.

For the start of the journey, i.e. on the way to the transport vehicle, static information as signs and columns to the stop or station that are visible from far away as well as maps of



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▲ Real-time information at bus stops in Paris.

the environment with information about the connections of the local public passenger transport are recommended. Dynamic information can be provided on flexible, electronically controllable displays, showing for example information on updated departure times. Further orientation aids are available by mobile phone from information services or systems.

Directly before the start of the ride, stations and stops provide static information as columns or masts with the final destination, the route number as well as stop arrangement drawings, timetables with target departure times, maps of the environment, information on service facilities, travel possibilities for special user groups, breakdowns etc. Dynamic information is provided by electronically controllable displays and automatic announcements and informs about departure times, breakdowns and changing possibilities in real time. Additionally, electronic, interactive information systems are also available.



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Vocal information system for handicapped people in G  teborg. ▲

At the beginning of the ride, static information on the outside of the vehicles informs about entrances, special equipment, door operation and ticket selling in the vehicle. This information is completed by dynamic, electronically controllable displays showing the route number, final destination and intermediate stops.



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▲ Buttons to open doors and lifts to access to trains in Frankfurt.

Static information in vehicles includes general arrangement drawings, route maps with connection possibilities and network maps. There is also static information about ticket selling, seats reserved for certain groups of people, wheelchair spaces, door operation and emergency procedures. Flexible, electronically controllable display and announcement systems for location and special information about the name of the next station, the route with connection possibilities, if necessary, the exit side, breakdowns etc., serve as dynamic media.

When changing the vehicle, signs with the name of the stop or station, information on exits, elevators, toilets, service facilities etc. and a way guidance system to the points of departure as well as with information on connections, their

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▲ Name of station indicated in the vehicle in Paris buses.

route numbers and destinations serve as static information. Dynamic information, sometimes provided in different languages, is provided on electronically controllable displays and by automatic announcements about connection possibilities, connection times and special information. In special cases, the operator's staff makes additional announcements. Moreover, certain stops and stations offer the use of electronic, interactive information systems.

When leaving the vehicle, static signs provide information about the name of the stop or the station, exits, elevators, toilets, service facilities etc. Further information is provided on stop environment maps and station arrangement drawings. By dynamic information, especially by announcements that are sometimes also provided in different languages, the passenger is informed about stop and station names, services and breakdowns e.g. faulty escalators and elevators.

design

Universal design

The design of passenger information for people with reduced mobility should be seen from two points of view:

- Design in the sense of easiest use, i.e. the essential content can be acquired correctly and quickly;
- Design in the form of alternative formats to conventional ones.

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Design in the first sense demands above all use of a **consistent system of terms** (for example, wheelchair accessible or fully accessible) and symbols (for example, wheelchair user pictogram).

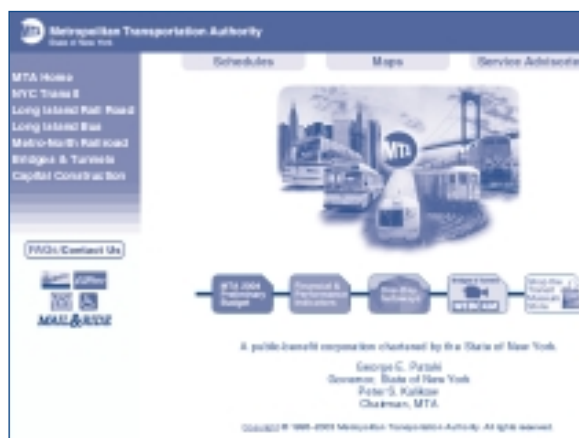
Design in the second sense refers to **guaranteeing accessibility of all relevant information by all user groups** – i.e. also all passengers with a wide range of disabilities – in the form of a complete chain of information.

◀ Talking kiosk in New-York.

Universal design, also known as “design for all”, means that:

- **information of all-kind should use the two-channel principle.** This means that all information at all places (vehicles, stops, customer centres, internet, service hotlines, etc.) should appeal at least to two of the three human senses

- among sight, hearing and touch. In this way, 90% of all customers are provided with accessible information.
- the reference to the existence of special information for disabled and mobility impaired passengers should be easy to find;



www.mta.nyc.ny.us

▲ Homepage of New-York Metropolitan Transportation Authority.

- there should be a reference to the different groups of people for which the special information is provided, and to the different media by which the information is provided;
- the different categories of accessibility and usability should be explained and presented;
- symbols should be widely used ;
- wholly or partly accessible stations/stops and vehicles should be marked.



www.bvg.de

▲ Map of public transport network in Berlin with symbols showing the level of accessibility of stations.

practices

Review of good practices

The survey has looked at the way information is provided in several cities, both before and during the trip, and the following lessons can be drawn from this review:

- **comprehensive information should be provided to help people with reduced mobility plan their trips.** It should



www.uestra.de

▲ Map of bus in Hannover, showing ramp and location of rolling chair.



www.rmv.de

▲ Map of station in Frankfurt showing stairs, lifts, etc.

include ground plans of vehicles and of stations/stops, information on out-of-service lifts at stations (real time), electronic journey planners, textphones, talking signs, presentations of typical situations in real transport flow with the help of media. A clear structure and consistency is decisive in the quality of passenger information, which shall be kept **regularly updated**;

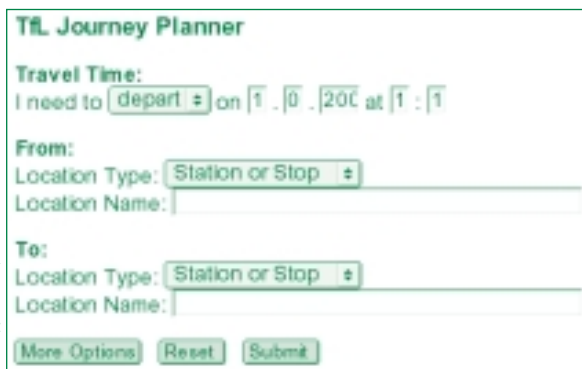
- the information for people with reduced mobility should be easily **accessible** (link from the homepage in the case of websites, table of content in the case of brochures), **available**, and its content should be **adapted to the specific needs** of the different categories of handicaps;



www.transportforlondon.gov.uk

▲ List of brochures for PRM on Transport for London's website.

- the Internet is a very convenient way of providing useful information to help people with reduced mobility prepare their trips. Websites should contain parts devised in accordance with the national and international guidelines for barrier-free design. **Text-only versions are recommended** for visually-impaired people (easier to read and can be adapted to specific devices);



journeyplanner.tfl.gov.uk

▲ Text-only journey planner on Transport for London's website.

- a categorisation and also graduation making clear for which group of people, and if necessary, with which

restrictions vehicles and stops, are accessible and usable is necessary (ex. "wheelchair accessible / fully accessible"). The use of symbols is recommended if they are clear and do always have the same content;



www.rmv.de

▲ List of symbols used for maps of stations in Frankfurt.

- the integration of existing data on the accessibility of vehicles and stops in journey planners is an interesting way to help people with reduced mobility;



journeyplanner.tfl.gov.uk

▲ Various options of handicaps in Transport for London's journey planner.

- two methods are used in practice to indicate the available transport and transfer possibilities: the first one uses standardisation of accessible and usable vehicles and stops with standard terms or pictograms. The second one uses the most detailed possible listing of single or also complex information on the design of vehicles, stops, etc. Both methods can of course be combined, thus enriching the level of information available;
- information technologies (Internet, cellular phones, SMS, PDA Services, Wap, GPS, etc.) bring new opportunities to provide people with reduced mobility with accessible, and sometimes real time information about public transport systems. In all cases, the decisive factors of quality are the content of the information provided and the method used to acquire it;



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▶ Innovative systems of information in London.

- transport authorities should carry out surveys of satisfaction of mobility impaired customers with the quality of information provided to them.