

Accessing Public Transport



A growing and ageing population will place increased demands on public transport, both in terms of carrying more people and making it more accessible to people with disabilities. This POSTnote looks at the current barriers to and future opportunities for improving the accessibility of the public transport system.

Background

Across the UK most people travel to work by car (35% in London, 76% outside London). To reduce congestion and greenhouse gas emissions, people are encouraged to use public transport instead. However, not all public transport is accessible for people with disabilities and some services are already overcrowded. The Department for Work and Pensions (DWP) estimates there are 11.5 million disabled people in the UK population of 62 million,¹ defined as those having a significant difficulty with day-to-day activities through coping with a longstanding illness, disability or infirmity. The main problems that make it difficult to cope with public transport are as follows.

- **Mobility** (affecting 57% of disabled people¹): for example, people in wheelchairs and many older people have difficulty getting over gaps between the pavement or platform and vehicle.
 - **Manual dexterity** (25%¹): for example, people with arthritis have difficulty handling money to use a ticket machine or pay on a bus.
 - **Memory or concentration** (21%¹): for example, people with dementia have problems planning and remembering routes.
 - **Communication** (18%¹): for example, people with hearing loss can miss destination and other announcements.
- The total exceeds 100% as some people have a combination of these problems.

Overview

- Demands on public transport will increase as the population grows and ages.
- There will also be more disabled passengers due to the strong correlation between age and disability. Not all public transport is yet accessible for many people with disabilities.
- Improving access for some can reduce access for others so trade-offs are made.
- Providing more information on the accessibility of different transport elements allows accessible routes to be created for people with differing needs.
- Integrated mapping, information and ticketing could make public transport more accessible.
- Better training is needed to make staff aware of the needs of disabled passengers.

Future Demand for Public Transport

The UK population is projected to increase to 73 million by 2035.² Assuming the average time that individuals spend travelling remains stable at about an hour per person per day (as it has for the last forty years),³ this increase in population will cause a rise in travel demand. If additional housing is built on greenbelt sites away from existing public transport, this may encourage more car use, but if brownfield sites in urban areas house the increase in population, there will be increased demand for public transport. Any improvement in public transport may also encourage more users and place yet more demands on the system.

As well as the population growing, it is ageing. By 2035, the proportion of the UK population over 60 will have risen from 22.9% to 28.6%,² with an increasing number working into older age (POSTnote 391). The likelihood of disability rises with age and the ability to use public transport declines. In addition, since many disabled people do not have access to a private car, they are disproportionately reliant on public transport.

Benefits of Improved Access

The benefits of good transport networks have typically been framed in economic terms using cost/benefit analysis. For instance, the Eddington review in 2006 argued that an efficient and effective transport system benefits the economy

through connecting labour markets and connecting suppliers with customers.⁴ However, there are also social costs and benefits of accessible public transport. For instance, the Department for Transport's (DfT) Social Exclusion Unit Report 'Making the Connections'⁵ outlined how making the transport system accessible can reduce social isolation and encourage healthy activities, which in turn produces cost savings for health and social services. This report influenced the Accessibility Planning element of the Local Transport Plans, although implementation across the country has been inconsistent.⁶

Responsibility for Public Transport

Responsibility for provision and monitoring of public transport is distributed across organisations, levels of government, and modes of transport (see Box 1). Part of DfT's role is giving strategic advice for best practice, such as Transport Solutions for Older People.⁷

Vehicles

All new vehicles must conform to strict accessibility standards. All vehicles constructed before 1999 (trains) and 2000 (buses and coaches) must be compliant with the same standards by 2017 and 2020, respectively.

DfT, Local Authorities (LAs) and the industry are working towards either converting older stock or withdrawing it from service. DfT encourages this via franchise agreements (for trains), the Green Bus Fund and taxes linked to emissions (older vehicles tend to be more polluting). Some LAs encourage bus operators to use newer vehicles by entering into partnership agreements with them whereby the LA provides better infrastructure and bus lanes and the company provides more accessible vehicles. London and other metropolitan areas – where demand is highest – are moving more rapidly in this direction than elsewhere.

Infrastructure

Through the Access-for-All programme, DfT funds projects to make principal train stations obstacle- and step-free by 2015. For other infrastructure, from 2014/15 funds will be distributed on a per-capita basis to new Local Transport Bodies which will be comprised of Local Transport Authorities, Local Enterprise Partnerships and others. Local disability groups have not been included in the list of suggested partners. This may mean changes needed to improve accessibility for disabled people are overlooked, raising the importance of monitoring and enforcement of accessibility laws (Box 1).

Improving Access

This section discusses key ways to improve access to public transport through:

- better design and maintenance of the physical environment
- clearer provision of information
- smarter ticketing
- better staff training.

Box 1. Monitoring

The Equality Act 2010 requires reasonable adjustments to be made to provide services for people with disabilities. To ensure vehicles comply with the regulations for accessibility, Traffic Commissioners and the Vehicle and Operator Services Agency monitor buses and coaches (Public Service Vehicles Accessibility Regulations⁸). The Office of Rail Regulation is the enforcing authority for compliance of rail vehicles (Rail Vehicle Accessibility Regulations⁹ for light rail and European PRM TSI for heavy rail¹⁰).

Current UK legislation does not include an explicit requirement for staff training. European Regulation (EU) 181/2011 *Concerning the Rights of Passengers in Bus & Coach Transport*¹¹ which comes into effect in March 2013 will impose some training obligations. TfL uses 'mystery travellers' to undertake journeys rating services according to a number of aspects including driving standards and how helpful staff were. These travellers are specially trained fieldworkers and include people with mobility, visual or hearing impairments. Passenger Focus has also used mystery travellers for specific research, such as into the Assisted Passenger Reservation System. Although many journeys are completed comfortably, these organisations show there is still a need for improved staff training and communication.

Passenger Focus provides a reporting function but has no power of enforcement. The A2BForAll campaign is calling for a regulator to set standards and monitor disability awareness training for staff who deal directly with the public and to keep a register of each company's track record in managing disabled passengers. This could be used in negotiations for service provision.

Design of the Physical Environment

Good design can improve the accessibility of public transport. Many operators have already made their vehicles compliant with the relevant regulations; for example all TfL and Lothian buses are now low-floor vehicles with ramps (see Box 2). Many have argued that by designing for people with disabilities there is a benefit for all. For example, a level surface from platform to vehicle allows wheelchair users independent access and makes it easier for others with mobility impairments and those with prams, pushchairs, or trolley-style luggage to board and alight vehicles. It also benefits others as passenger flow improves, reducing the time the doors need to be open and therefore the time the vehicle is at the platform. This can reduce journey times and improve network performance.

However, all potential users of a service must be considered and in providing transport, compromises are made between different groups. For example:

- Creating space for wheelchairs has made it easier for people to travel with prams or buggies. However, the Confederation of Passenger Transport-UK reported that this has created a conflict when bus users with buggies have refused to move out of the space to allow a wheelchair user to board. This conflict has resulted in a court case involving Arriva North East. With ten times more buggies travelling on buses, this may discriminate against wheelchair users. Passenger Focus raised the point that demand is likely to increase with people using mobility scooters wanting to access public transport.

Box 2. London Bus Ramps

Having a ramp installed is not a guarantee of improved access. For instance, the ramp mechanisms need to be maintained and staff trained in how to use them. When ramps were first installed in London, bus drivers sometimes could not remember how to deploy them or there was a fault with the mechanism. Since 2002, London's bus contracts have included the requirement that ramps be tested before the bus leaves the garage and London bus drivers have on-going training including ramp deployment and passenger assistance. Furthermore, for a bus to be accessible to a wheelchair user, there needs to be:

- a clear route to the bus door (no obstacles from street furniture such as bins, poles and guard railing)
- a kerb at a suitable height to minimise ramp gradient
- sufficient clear road space to allow the driver to stop parallel to the kerb (by enforcing parking restrictions).

Around 70% of London's bus stops meet these criteria. TfL has a programme of improvements for the rest to be completed by 2014.

- Creating more space for wheelchairs and buggies removes the number of available seats and grab poles, which is a problem for many people with mobility impairments. During peak periods there are often so many standing passengers that wheelchair users cannot access the dedicated wheelchair space.

Information

Route Planning

Uncertainty regarding the physical accessibility of a route can prevent people from starting a journey. With appropriate, accurate, reliable and up-to-date information it becomes possible for people to plan accessible routes. Traveline started operating in 2000 to provide impartial and comprehensive information about public transport, supported by regional partnerships of transport operators and local authorities. Initially a phone service, Traveline now provides information through the internet, SMS text messaging and mobile apps.

Disability Rights UK have argued that considering new routes can be a major challenge.¹² Travel Training, which is promoted by DfT, is an effective way to give disabled people confidence to travel but provision is variable across the country. While initiatives like Traveline make planning easier for many people, it only has access to incomplete information, and the information that passengers need is currently distributed across different sources (see Box 3).

Route planning systems can also be used to promote public transport options when booking appointments (see Box 4). However, many of the solutions to make the information available involve technology that some older and disabled people may have difficulty accessing (POSTnote 411). People who are less comfortable with technology can call their regional Traveline service, although Traveline, like most route planners, does not include travel preferences for different disabilities. One exception is TfL's Journey Planner.

Direction En Route

Improving route information does not necessarily require advanced technology. Clear, concise, unambiguous, and well-located signage can help individuals at interchanges and

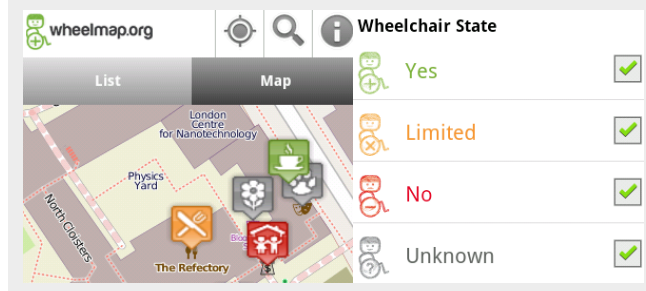
Box 3. Distributed information

Official Access Audits

Some LAs have created an inventory of items that could help (e.g. dropped kerbs with tactile paving) or obstruct (e.g. steps) movement about their streets. If Traveline incorporated this information in its route planning algorithms, it would help people with specific requirements create personalised door-to-door routes, including reaching public transport in the first place and getting from end of transport to final destination. This involves the LA carrying out detailed area surveys, keeping the information up to date, and collaborating with its regional Traveline. Some operators have carried out audits of their facilities and made this information available; for example, National Rail Enquiries publishes maps of all stations which include features that aid access.

Unofficial Access Information

Traveline does not include data that have not been officially verified, but developers have created map applications that encourage people to add accessibility information about their local area. One example of this is wheelmap.org where people score whether someone with a wheelchair can get into and around a building. This has a simple three point scoring system (yes/limited/no), which makes it easy for people to enter data. With many different people adding information, databases of accessibility features and obstacles can grow more quickly than with a smaller number of professional assessors. However, it does not enable scoring of the street around the building and the information does not appear on other route planning applications, making it difficult to verify the accessibility of an entire route.



stations. For visually impaired people, the size, positioning and contrast of signage is important. If each person has sufficient information and the confidence they are moving in the right direction, then crowd flow improves.

Redirection En Route

Even with a known route, uncertainty can arise from unexpected route or vehicle changes. Avoiding this uncertainty requires getting real-time information to passengers. Automatic Vehicle Location (AVL) tracks bus position, typically using GPS, sending this information to central control using wireless communication. For Real Time Information (RTI) systems, central computers predict how long it will take for the vehicle to reach stops, this information being transmitted wirelessly to bus stops. It can also be presented as audio-visual information on the bus.

Across the UK 64% of buses are fitted with AVL.¹³ However, few buses present next-stop information to passengers, with only 20% fitted with audio and 23% fitted with visual display systems. All TfL buses have audio and visual RTI.¹⁴ A number of organisations are campaigning for this technology to be used more widely.

Box 4. Developing Journey Planners

Making a journey planner easier to use can involve removing rather than adding features. This is evident in two examples being developed by Traveline Scotland.

Hospital Appointments

NHS staff in Glasgow use Traveline Scotland to prepare public transport journey plans when making patient appointments. This encourages patients to use public rather than hospital transport, and allows hospital staff to ensure that the proposed appointment time can be met, thus reducing the number of non-attendances. In a survey by Strathclyde Passenger Transport Authority, over half of the patients who had been sent travel plans had not previously been aware of that public transport route.

Speaking Bus Information Application

'Talking Traveline' allows blind and partially-sighted people to access Traveline Scotland's route-planning smartphone application. The accessible application uses the same mechanisms as the full version for bus stop and route identification, departure information, and location. However, interaction is through either voice activation and text-to-speech or a simplified large text menu. In addition to the route-planning facility, using a smartphone's GPS location will give people next-stop information as they travel on the bus, thereby giving them advanced warning of the stop they require.

Real-time audible and visual information on trains is a legal requirement. However, it only gives routine information, not including delays or other problems. Rather than building this infrastructure into the vehicle, individuals can carry the technology on a smartphone (Box 4).

Integrated Ticketing

Cashless payment makes it easier to change between operators and modes of transport. It can be paper-based where people print their own tickets, involve smart cards, or be embedded in smart phones. Smart cards have a microchip which contains the ticket information. DfT-supported ITSO smart cards are already extensively used across the country for concessionary bus travel and much of the infrastructure is already in place. An alternative smart-card technology, the Oystercard, has been successfully implemented across all modes of transport in London. This has made it easier for many passengers to use public transport in London and has generated useful data on travel patterns. Payment using smartphones is still in its infancy and is limited by the number of smartphones in current use. In the UK in 2012, 39% of adults, but only 2% of those aged 65 and over, owned a smart phone.¹⁵

Disability Awareness

Some of the difficulties disabled people encounter when travelling are through interactions with staff and other passengers. Consequently, transport staff need training in conflict management (such as resolving the issue of vacating the wheelchair space on the bus). It is often the attitude of the staff that leaves the impression of a good or bad service as much as the information given or physical infrastructure.

Notification

For wheelchair access onto trains, most operators ask for 24 hours notice that assistance is required (Assisted Passenger Reservation System, APRS), although they do their best to

help with less notice. In 2010, Passenger Focus used mystery travellers to test the APRS and found that when requested for boarding and/or alighting, ramps were provided on 92% of occasions when APRS was used and 76% when it was not. Consequently, wheelchair users have been left on trains unable to get off. The shortcomings of APRS were acknowledged by the industry and a replacement system, Passenger Assistance, was in place in time for the Olympic Games. Passenger Focus is due to survey that system with mystery travellers in 2013.

Awareness

Some operators and authorities (e.g. First and TfL) offer a travel support card which can be shown to staff indicating that the passenger may need extra help. This is particularly useful for less obvious impairments; for instance, people who are hard of hearing can show the card to staff indicating that they need the staff member to face them so they can lip-read. This can give some disabled people the confidence to use public transport, but only deals with some communication issues. The passenger needs to get to the bus driver to be able to show them the card which can be difficult, for example if the driver is replaced during the journey. This type of support information could be included in smart cards allowing more information to be passed discreetly to the ticket collector.

Door-to-Door Journeys

There are examples where aspects of a service indicate good accessibility for travellers. However, there are no examples where best practice extends across the entire door-to-door journey experience. In spite of this, TfL is widely regarded as an example of best practice, especially in terms of integration through its responsibility for so many aspects of transport across the city.

Most passengers are not interested in who is operating a particular transport service; they just want to get to their destination. A common benchmark is the private car: public transport needs to compete in terms of cost and ease of being able to complete the journey. This can be achieved through integrated ticketing, information and mapping tools that cover different modes of transport run by helpful, understanding staff.

Endnotes

- 1 DWP, Family Resources Survey, 2010/11; <http://goo.gl/6FIAf>
- 2 ONS, 2010-based national population projections; <http://goo.gl/VXuqW>
- 3 Metz, Demographic determinants of Daily Travel Demand, Transport Policy, 2012
- 4 Eddington Transport Study, 2006; <http://goo.gl/nREhA>
- 5 Social Exclusion Unit, Making the connections, 2003; <http://goo.gl/PSsPV>
- 6 Transport Studies Unit, Social Impacts and Social Equity Issues in Transport, 2011; <http://goo.gl/MnvPM>
- 7 DfT, Transport Solutions for Older People, 2012; <http://goo.gl/Mcceh>
- 8 PSVAR, 2000; <http://goo.gl/q6ZZE>
- 9 RVAR, 2010; <http://goo.gl/UhkpK>
- 10 European PRM TSI, Directive 2008/164/EC; <http://goo.gl/EhWPZ>
- 11 European Regulation (EU) 181/2011; <http://goo.gl/DsGAJ>
- 12 Radar, 'Doing Transport Differently'; <http://goo.gl/H25iD>
- 13 DfT Statistics Series Buses, 2011/12; <http://goo.gl/2lr9Y>
- 14 RTI, Public Transport Technology Survey, 2011; <http://goo.gl/BRtKL>
- 15 Ofcom, Communications Market Report UK, 2012; <http://goo.gl/VJicW>