IMPROVING ACCESS TO TAXIS: MEETING THE NEEDS OF DISABLED AND OLDER PEOPLE

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Background

There are currently some 50 million disabled people in Europe; the demographic trends indicate that this number will increase significantly in the coming years.

Taxis are an ideal form of local transport for many disabled and older people because they provide a door to door, on demand service. However, the design of vehicles most commonly used as taxis in Europe is difficult or impossible for many to use.

In the public transport domain, requirements for accessibility at European level applying to bus construction, rail and air services have been introduced and legislation on passenger rights is being developed. A number of countries are now introducing legislation to ensure that local public transport is accessible to disabled people.

Taxis are not generally recognised as local public transport but nonetheless form an integral part of the mobility chain. There are no equivalent laws or regulations applying to taxi design or operation other than at the most local levels in some countries.

Challenges

This presents a number of interesting challenges for policy makers – at national and local levels, for vehicle manufacturers and for taxi operators.

For legislators and policy makers the challenge is to find a way to increase the availability of suitably designed vehicles to meet the growing need for mobility among older and disabled people without destroying the viability of taxi services at a local level.

The challenge for vehicle manufacturers is to recognise the potential markets for their vehicles, and to produce vehicles that either accommodate the needs of a wide range of disabled people including wheelchair users, or enable their vehicles to be converted to meet this market demand.

The main interest of taxi operators is to have vehicles that are economically viable, and appropriate for their business. They need to be able to operate within a system which recognises and supports investment in more costly vehicles and which creates a climate within which they are able to provide a good level of service to disabled customers without financial penalty.

The Task Force

To tackle these issues, a joint Task Force was established in 2005 by the European Conference of Ministers of Transport (ECMT) and the International Road Transport Union (IRU). The purpose was to bring together vehicle manufacturers, taxi operators, policy makers and disabled consumers to review the ergonomic requirements for accessible taxis and to propose design parameters which can be met by a range of vehicle types. Other important issues including infrastructure and staff training were also examined.

The work took place over an eighteen month period, with the major emphasis being placed on engagement with vehicle manufacturers and converters.

The Task Force invited vehicle converters, mainstream vehicle manufacturers, and taxi makers to an initial workshop in Brussels in January 2006. The workshop explored the views of all the stakeholders. A series of bilateral meetings were also held with major manufacturers, and vehicle converters throughout Europe to engage with them on how best to meet the needs of disabled people, and to identify the key elements which limit progress in this area. Taxi operators were also consulted through the IRU.

Twenty countries in Europe responded to a request for information on the nature of taxi services, and vehicle types, and this represents a taxi parc of 480,000. Existing research findings were reviewed to inform discussions on the technical requirements to enable disabled people to use

taxis. The International Standards Organisation (ISO) is currently working on a draft standard for accessible vehicles and the taskforce also held meetings with representatives of this group to ensure their views were considered.

The final report of the Task Force was published in March 2007[1]

Key Findings

Taxis are generally based on mass market vehicles which are produced by multinational companies, and the proportion of these vehicles used as taxis is very small. Some countries have a tradition of purpose built vehicles which provide access for wheelchair users, or have made provision for special transport services for disabled people, but these are the minority. There is limited evidence of major manufacturers recognising the needs of disabled people and responding to these with improved vehicle design.

The results of a survey of countries participating in this work showed that the dominant vehicle type used as a taxi is the saloon car, the exceptions being the UK and the Netherlands. In some cases the number of taxis (vehicles which can be hailed on the street or from a taxi rank) had reduced, but this was balanced by an increase in numbers of private hire vehicles (vehicles which must be pre-booked, usually by telephone).

The greatest number of accessible taxis is in the UK which has a tradition of purpose built taxis, 52% of the national fleet of 85,000 is accessible to wheelchair users; Netherlands has 20% of its fleet accessible, Finland 15%, Norway and Sweden each have10%, Ireland just over 8% with all other countries in the survey having a very small proportion or none.

One of the first issues to emerge was that there was a lack of engagement by the base vehicle manufacturers with their potential customers. Although they recognise that their vehicles are being used for conversion into taxis, there was little understanding of what is needed to ensure that this task is made easier for the conversion company.

[1] "Improving Access to Taxis" (75 2007 02 1 P1), March 2007, ISBN 978-92-821-0103-2. Available from http://www.cemt.org/topics/handicaps/tphpub.htm

The major factors for disabled people are easy access to a seat, provision of easy to use doors with adequate dimensions, packaging design to accommodate a wheelchair user, low floor height, and features for sensory impaired passengers such as visual contrasts.

Vehicle conversion companies and specialist taxi manufacturers are much more aware of passenger needs, but are often constrained by the design of the base vehicle, or by economies of scale. The potential market in one country is not usually sufficient to warrant significant investment in radical designs. Although they are able to make significant alterations to vehicles, they believe their designs are limited by the cost implications and the acceptability of the converted vehicle to taxi drivers and passengers.

The ergonomic requirements of disabled passengers are well documented in a 2004 study for the UK Department for Transport[2]. This study suggests that in the case of steps, the maximum height varies depending on an individual's disability, but that a step which is 200mm high is acceptable to many people. Ramps should have a maximum gradient of 8˚, though shallower is better because of moving and handling issues, and the floor space needed to manoeuvre a wheelchair should be at least 1300mm wide by 1340mm long.

Accommodating the needs of wheelchair users is challenging because of the overall space requirement which must include room to manoeuvre a wheelchair into a vehicle and into the safe position for travel. A review of 1356 occupied wheelchairs carried out in the UK in 2006[3] provides information on the size and weight of occupied wheelchairs. This study compares information collected in 2005 with previous surveys in 1991 and 1999. Generally occupied wheelchairs are getting longer, taller, heavier and slightly narrower.

The Task Force also looked at the licensing and control of taxis, to identify ways that the number of accessible taxis could be increased. Some countries use a limit on the number of taxis to control entry into the market, others have age limits for vehicles and some have user side or supply side fiscal incentives. These findings confirm that there is a diverse approach to managing the taxi trade across Europe.

Key Issues

[2] Richardson, John & Yelding, David, 2004. "The determination of Accessible Taxi Requirements".

[3] Hitchcock, David, Hussey, Michael, Burchill, Stephen & Galley, Magdalen, 2006. A Survey of Occupied Wheelchairs and Scooters

Disabled people do not vary in their needs from one transport mode to another, but the challenge in the case of taxis is that the vehicle is much smaller than for other public transport modes. The vehicle is generally a unitary construction type rather than building a body onto a chassis which is the preferred method for larger vehicles. This means that it is technically challenging to convert a vehicle after it has been manufactured, and consequently this is an expensive process.

One of the recommendations of the Task Force is that a wheelchair user should have a doorway aperture at least 1250mm high, although 1400mm is preferable as this should accommodate 90% of wheelchair users. However some vehicle manufacturers suggested that a doorway height of only 1100mm was acceptable. That may well be the case in a vehicle which is used for an individual's private transport, but is clearly unacceptable for a public transport application where the majority of users are going to be significantly taller.

Similar comparisons can be made for floor height, where an additional step is recommended if the initial step into the vehicle is much in excess of 200mm. Floor heights also affect ramp gradient for wheelchair users. The Task Force recommendation is 16˚ maximum with a target of 11˚, although this is still significantly greater than the 8˚ limit recommended by research.

Conversion companies need to develop solutions to maximise door heights, and minimise ramp gradients, not only for the safety of wheelchair users, but also for the health and safety of the taxi drivers assisting them. The solutions available of cutting the floorpan or altering the roofline are costly, and kneeling suspension can only be used easily on rear wheels, so does not offer a great benefit in the case of side access vehicles. The converters task would be significantly easier if the base vehicle were to be offered as a lower floor and high door variant.

The operating environment for taxis is often a busy urban setting with competition for road space and space for pedestrians. It is essential that these facilities accommodate the needs of accessible taxis, by ensuring that there is sufficient space for the deployment of ramps.

Taxi operators are often owner drivers who are concerned about the effect that the provision of an accessible vehicle will have on their business. Rather than seeing it as a way of generating greater patronage, they often see it as a costly imposition which will erode profitability. There is a need for the licensing and contracting arrangements at local level to recognise the important role of the

taxi in this field and to create an operating environment in which business opportunities for accessible vehicles can be exploited, for example in the provision of home to school transport or social services contracts for disabled children and adults. Improved driver training would also go some way to dispelling taxi drivers' concerns about what they are being asked to do.

Conclusions

The Task Force recommendations deal with the provision of accessible taxis in a comprehensive manner, without being prescriptive. The Report makes clear recommendations for what needs to be done, and is realistic about the timeframe for achieving these changes. Existing infrastructure cannot be altered immediately, but often improvements can be made as part of a programme of maintenance and upgrading. Vehicle designs take a number of years from concept to production, and future vehicles which will be converted to taxis will take several years to reach the market.

Improvements in the provision of accessible taxis can only be achieved through partnership approach between regulators, vehicle manufacturers and vehicle converters. Each of these groups has to understand the needs of disabled people and their own role in the process. This understanding can only be developed through dialogue and commitment to a shared objective.

Taxi services are commercial enterprises. Unlike other forms of public transport in many countries, they are not in business to provide a public service and certainly not to operate at a loss to accommodate disabled people. However, if design differences and costs can be minimised, and if the market benefits of providing for disabled and older people's needs can be clearly identified, there is a real prospect that the design and quality of accessible taxis will improve in the coming years. This in turn will open up new opportunities for disabled people to choose the transport mode most appropriate to their journey needs and to benefit from the flexibility and convenience of taxi travel.