INTRODUCTION

The first question for many is what is COST and what is its purpose. COST, the acronym for COoperation in the field of Science and Technical research is the oldest and widest European intergovernmental network for cooperation in research. It was established by the Ministerial Conference in November 1971 to support co-operation in the area of science and technology among scientists and researchers across Europe. COST has 35 member countries and enables scientists to collaborate in a wide spectrum of activities in research and technology. Of the 57 COST Actions in the transport area, 50 have now been completed.

The COST 349 project started in 2001 to examine the accessibility of coaches and interurban buses for passengers with reduced mobility, and the main aim of the work was to give guidance to decision makers on the key factors which affect passengers’ ability to use these transport services. The target group of passengers is much broader than simply those passengers who have some form of disability such as a low vision, difficulty in walking, or those who are wheelchair users. Reduced mobility includes all those who have some constraint on their ability to access public transport, even if it is simply that they are encumbered by luggage, have more restricted movement as they get older, or that they are travelling with small children.

The project addressed the needs of passengers by looking at the different stages of a journey, and also considered manufacturing constraints and operator requirements. Working groups examined vehicle construction issues, the design of infrastructure, provision of information, staff training and economic factors. The working groups included representatives from vehicle and component manufacturers, operating industry, government policy makers, academics and groups representing the views of disabled people. There is some overlap between the different groups and some individual representatives were in more than one group to ensure good communication of ideas.

It is important to recognise that that there are significant social policy objectives and financial imperatives which are driving the agenda for improved access to transport in many countries. People throughout the developed world are living longer, and the birth rate is falling. This means that a smaller working population will have to support a larger ageing one. There is also a strong correlation between increasing age and disability, and the expectation - and indeed the economic necessity - of the population in the 21st century is to remain independently mobile for far longer than previous generations.
VEHICLES

The design of the bus or coach is the key to the objective of providing access for passengers with reduced mobility. Vehicle construction standards are gradually being harmonised through the European regulatory framework, by Directive 2001/85/EC and UNECE Regulation 107. Both of these specify minimum safety and construction standards for the bodywork aspects of vehicles with more than eight seated passengers, and both contain provisions to improve the accessibility of buses and coaches. COST 349 concentrates on vehicles with more than 22 passengers, and does not consider the requirements of urban buses, which was the subject of a previous action, COST 322, completed in 1994.

The items considered were entrances and exits, the interior design, the interior environment and additional requirements for vehicles used on scheduled services. None of the provisions are particularly radical, rather they reflect good inclusive practice, although it is recognised that they require careful design and attention to detail by manufacturers.

The greatest impediment to passengers gaining access to the vehicle is the design of the entrance. The report recommends that the maximum height of the first step should ideally be no more than 250mm with subsequent steps within the range of 120 to 225mm. The tread surface of each step should be at least 250 and preferably 300mm. The leading edge of steps should be clearly marked by a single band of colour 45 to 55mm wide extending across the full width, and which contrasts with the remainder of the step tread.

Good handrails should be provided on both sides of the entrance, again contrasting in colour with their immediate surroundings. Adequate lighting should be provided to illuminate any entrance and exit, and the immediate surrounding area, for all passengers, including wheelchair users.

All vehicles should provide access for at least one wheelchair user. Access to the coach may be provided by a ramp or a lift, although a ramp is not suitable for a vehicle with a floor height exceeding 300mm. During the course of this work several new wheelchair accessible designs emerged including an interurban bus with a wheelchair space adjacent to the driver and a high floor coach with a lift concealed in the entrance steps so that the wheelchair user boards at the same point as other passengers. A head and back restraint, reading light, entertainment console and items normally provided for other passengers should also be available for the wheelchair user.

Onboard toilet facilities cannot reasonably be provided for wheelchair users, and certainly not when a vehicle is moving, so changes to operating policies and procedures are needed to ensure that alternative provisions are available, such as ensuring accessible toilet facilities are available along the route.

At least four well designed priority seats should be provided in typical 12 metre long vehicles. These seats should have space sufficient for most disabled people with additional space in front of them for ease of access.

©Association for European Transport and contributors 2006
INFRASTRUCTURE

The most accessible vehicle design in the world cannot achieve its full potential unless it has access to suitable infrastructure. Passengers must be able to get to the bus or coach stop, wait for the vehicle in safety and reasonable comfort, and board the vehicle with a minimum of fuss. Generally this means careful attention to the detailed design of the stop such as the provision of seating, adequate lighting, protection from the weather, space for a wheelchair user to pass obstacles, and access to facilities such as information and a telephone or help point. The specific provisions need to reflect the number of passengers likely to use the stop.

Interchanges must have adequate parking or setting down points, access to other transport modes such as taxis or rail links, and walking distances should be minimised. If the interchange is on different levels it should be possible for passengers, including wheelchair users to get from one part to another easily. All passengers should be able to gain access to information services, purchase tickets and communicate with staff.

Operators need to work with infrastructure providers to ensure that the vehicles they intend to use are compatible with the infrastructure. One approach is to carry out an access audit which includes a survey of every stop along the route, in both directions. Very often small changes can greatly improve access, and more radical alterations can be incorporated in routine maintenance and upgrading of facilities.

TRAINING AND INFORMATION

The first stage in facilitating travel by passengers with reduced mobility is to ensure that they have adequate information about the journey they wish to undertake. If passengers are unsure about the accuracy of the information or level of service offered by the bus or coach operator, then they will not be able to travel. Information needs to be provided in accessible formats whether this is delivered via the internet, as printed material or by staff on a telephone helpline.

But the key element in the delivery of accessible transport for mobility impaired passengers is well trained professional staff. In many cases good staff will be able to overcome the inadequacies of existing infrastructure and vehicles which will inevitably exist for some time to come. Staff must have a good understanding of the passenger’s needs, and this requires effective training on a continuous and regular basis. This will enable staff to deal confidently with passengers who have a wide variety of needs and minimise the risk of embarrassment.

There should also be emergency procedures in place to deal with foreseeable incidents that inevitably occur in any transport operation such as rerouting, vehicle substitution, accidents or delays due to traffic.
ECONOMICS

Inclusive design is not only good for passengers it is good for business. Many disabled people wish to travel with their friends and family, so excluding one member of the group can exclude all of them. Many of the benefits provided by inclusive design are useful to all passengers, not just a minority. The space required by a wheelchair user may be equivalent to four passenger seats, but this will only have an adverse effect on revenue where vehicles would otherwise have been filled to capacity for the whole of the journey and that is seldom the case.

The additional capital cost of wheelchair accessible vehicles can be as little as 2% for ramp access and up to 10% for a high floor lift access solution, and this cost has to be covered in some way. Although this appears to be a significant amount, it is important to recognise that this is a small proportion of the overall costs of the transport operator, where the dominant factors are those for fuel and staff.

The economic impact needs to be recognised by policy makers and regulators so that the impact of improved accessibility does not become a disproportionate burden on industry. One possible solution suggested by the project, is permitting increased vehicle weights, which would allow longer vehicles, although this could result in more costly vehicles requiring a third axle. Such vehicles should not be further penalised without justification, for example by the imposition of higher road tolls on three axle vehicles than those with two.

Operators are often concerned about the potential delays that may be incurred in boarding and alighting passengers with reduced mobility, especially a wheelchair user. Although there is a time penalty, modern lift designs and securing systems for the wheelchair are quick and easy to operate.

Improved entrance design will also reduce the time taken by all passengers to enter and leave the vehicle. On-road delays due to traffic and weather conditions are of far greater significance than the time taken to assist passengers with reduced mobility.

CONCLUSIONS

Public transport will never be accessible to 100% of the population, and there will always be some severely disabled people for whom specialised or personal door to door transport is the only option. However it is clear from the findings of COST 349, that attention to detail in the design of the vehicle, the infrastructure in which it operates, and the training and provision of information both to staff and passengers, coach travel can be opened up to a very large number of people for whom it is currently not an option.

Transport providers have to understand their customer's needs and offer products and services that meet those needs. The start of this process has to
be a shared goal of making access the norm, not just for those who can cope with the existing facilities. We should not be under any illusions. Unless access to coach and bus services is expanded to include more people, the industry is ignoring a potentially lucrative and growing market.