

TRANSPORT FOR PEOPLE WITH MOBILITY HANDICAPS

POLICY AND ACHIEVEMENTS IN EUROPE

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FOREWORD

This publication brings together the results of ECMT's recent work on Transport for People with Mobility Handicaps.

Since 1985 ECMT has published several major reports on the practices in Member and Associated Countries and on the proceedings of Seminars on specialised topics. Four formal Resolutions on the topic have been adopted by the ECMT Council of Ministers.

The present report, prepared by the ECMT Working Group on Transport for People with Mobility Handicaps, is intended first, to inform a wide audience of the nature of the transport problems faced by people with disabilities. It also describes some of the progress that is being made in many countries and finally sets out future objectives and the means of attaining them.

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Who is Mobility-Handicapped and what does it mean?

In most countries of the world, between 10 and 14 per cent of the population have some form of mobility handicap: a physical, mental or sensory condition which affects a person's ability to use easily or safely all or some forms of transport which other people take for granted. Among the countries which belong to the European Conference of Ministers of Transport (ECMT) this means that about 50 million people are prevented or inhibited from travelling in the same way as the rest of society.

This ECMT publication has three main objectives. These are first, to bring the issues concerning accessible transport to the attention of a wide audience. Second, to describe the progress that is being made nationally and internationally to improve accessibility. Third, to set out principal challenges and problems that remain.

The problems experienced by mobility-handicapped people are as wide ranging in scale and nature as the nature of the disability or condition which produces the mobility handicap.

- People in wheelchairs have very obvious problems in moving and travelling about, especially in moving over uneven or icy surfaces and in mounting steps and kerbs. Specific, but well-defined, measures are needed to accommodate them. They only account for three or four per cent of the people who have difficulty in travelling, but measures to help them help everyone, mobility-handicapped or not.
- A greater number of people have sensory problems (deficiencies with seeing, hearing or speaking) which make it difficult or impossible for them to find their way, select an appropriate public transport service, buy a ticket, alight at their chosen destination or communicate with other people (including transport staff) on the way; people with intellectual impairments share many of the same problems. Better provision of information to help this group will also help able-bodied people.
- Arthritis, loss of limbs or impaired motor functions produce specific physical problems with one or more aspects of travelling: for example, climbing a kerb, boarding a vehicle, walking to a stop or station, standing waiting for the service to arrive. Again, measures to help this group will also help all other travellers, especially those with luggage or children, and frail elderly people.
- A large proportion of the mobility-handicapped population are frail elderly people or people with a weakening condition (such as heart disease) for whom many or all aspects of a typical journey, even in a local area, are impossibly tiring.
- People with allergies have specific problems in any new environment and, for example, in Sweden, they number about four per cent of the population -- even more than the number of people with severe visual impairment.

In many cases there is the added deterrent of uncertainty and loss of confidence, insecurity and lack of information. People worry as to how they will cope; they do not know what special help may be available or how to obtain it.

Furthermore, people with mobility handicaps are generally poorer than those without. They are less able to work (not least because of the problems of travelling to work) and they earn less on average when they do. Thus they have to rely on cheaper forms of transport and they may travel less often;

specifically, those who could drive often cannot afford to own or run a car, which might otherwise go a long way to solving their mobility problem.

The Effects of Transport on Social Costs/Benefits

People who are easily able to use transport of all kinds tend to take it for granted. It is only when things go wrong that most people take any notice. But for people to whom just one step presents an insurmountable barrier, inability to go out or travel outside the immediate local area presents an enormous number and range of problems.

People with mobility handicaps need to be able to reach their workplaces. This is an essential element of their professional and economic situation.

Without accessible local transport, apparently simple activities such as medical or dental appointments, or household shopping, may have to be planned well in advance and assisted by other people. Social life and recreational activities are frequently curtailed.

If means are provided to avoid the economic and social disadvantages caused by inadequate mobility, these also prevent the loss of dignity and individuality which some disabled people experience, and which can in turn lead to depression and a worsened medical condition. Research with people who have regained their mobility through some form of transport provision has shown that it is the independence and freedom which this grants them that is the most frequently quoted and most valued perceived benefit.

There is frequently also a significant cost to the community if people cannot travel: help has to be provided to bring essential goods and services to the mobility-handicapped person -- either by family and friends, or by some voluntary group or local or central government source.

Future Trends

Western Europe has an ageing population. Mobility handicap is to a large extent a function of age: in broad terms two-thirds of disabled people are elderly and one-third of elderly people are disabled. As the numbers and proportions of elderly people grow in each country, there will be more, and a higher proportion of, disabled people.

At the same time that medical science is allowing people to live longer and thus increasing the chance of them developing some form of mobility handicap, it is also saving a higher proportion of the lives of people who are severely disabled through injury or critical illness, and of babies born with disabling conditions.

The effects of these phenomena are demonstrated by the increasingly large proportions of disabled people found as surveys are carried out over a period of time. For example, the earlier quoted figure of 10 per cent of the population of Great Britain being disabled had to be revised to 12-14 per cent as a result of new surveys carried out in the late 1980s.

Just in terms of elderly people alone, the number of people in Western Europe over the age of 65 seems likely to grow by about 40 per cent between the years 1985 and 2020. And in some countries, such as Germany and Belgium, the total population is forecast to decrease. There will be fewer young people in most countries, either in absolute terms, or as a proportion of the population, to provide caring services, on a personal basis, or taxation income to fund state provisions of all kinds.

In addition, a higher proportion of future generations of elderly people will have driven cars for much of their lives and be used to a mobile lifestyle, but many will have stopped driving, on health grounds, by the age of 75. This may lead to social problems and impose costs on the rest of society.

Examples of the Effects of Disability and the Benefits of Transport

Disabled people are more likely to be older than non-disabled people ...

- 71 per cent of disabled adults in Great Britain are over 60 years of age, compared with only 26 per cent of the general adult population.

... and they are more likely to live alone.

- only 53 per cent of British disabled adults are married or cohabiting, compared with 64 per cent of the general adult population.

Disabled people are less likely to work ...

- the percentage of disabled people of working age who are employed is much lower than the percentage of the general population who are employed. For example, in Spain 49 per cent of the population of the population is employed while only 13 per cent of the disabled are.

... and when they do, they earn less...

- the average gross earnings of disabled men in full-time employment in Britain are only 81 per cent of the average for all male workers; for disabled women the proportion is 88 per cent.

... although their needs can be greater.

- 71 per cent of disabled adults surveyed in Britain thought they spent more on various items than other people, because of their disability; 24 per cent thought they should be spending more than they did -- especially on fuel, clothing/bedding and food -- but they could not afford to.

As a result, disabled people have fewer disposable resources.

- 71 per cent of British disabled adults have a disposable income below 75 per cent of the national average.

Disabled people do not travel as much as the general population.

- disabled adults surveyed in Britain had a much lower than average use of car, bus, train and taxi in the previous year... for a variety of reasons.

- from the same survey, it was found that, of adults who can go out of their home independently, 13 per cent are prevented from going out as much as they would like because of transport problems, and a further four per cent by access problems; of those who need help to go out, the respective figures are 27 per cent and 9 per cent. In each case, a further 6 per cent cannot afford to travel as much as they would like.

Disabled people are also inhibited from using public transport because of difficulties caused by their disability.

- of the British disabled adults surveyed who go out, 21 per cent do not use buses and 18 per cent do not use trains for reasons connected with their disability; for those who need help to go out the proportions rise to 63 per cent and 54 per cent respectively.

Providing accessible transport enables people with disabilities to remain in their own homes for longer before needing residential care, and improves their quality of life.

- studies in Sweden and Finland demonstrate the advantages of providing medical help at home rather than taking disabled people into care.
- studies of specially adapted public transport services in Sweden (Boras) concluded that people with mobility handicaps were enabled to travel more and with greater comfort; this led to a reduction in the isolation of many elderly people.

Providing more accessible transport need not be more costly ...

- a Dutch study has demonstrated that travel by disabled people can be increased three times at a cost only one and a half times the present one.
- it is generally accepted that building in accessibility-related features to new vehicles or systems adds only a very small percentage to the costs and can generate considerable extra fare revenue.

... and it can lead to savings in the costs of providing other services (special transport or help in the home).

- the adapted public buses of Boras produced a substantial saving in state and local funding -- about one million Swedish crowns (about FF 1M, £100,000 or DM 300,000) a year from the provision of five such bus routes.
- the provision of specially adapted buses in Norway (Oppland) so that they could be used by disabled people travelling to doctors or hospitals led to savings in state-funded taxi services which more than outweighed the costs of public transport adaptation.

Important Concepts in Transport Provision

It is widely accepted that making transport easier to use for people with mobility handicaps makes it easier for everyone else. Better handrails help all passengers to enter a bus and hold on more securely. Level surfaces and lower steps enable people carrying shopping and luggage, and those with shopping trolleys or prams and pushchairs, to get on and off public transport vehicles more conveniently and

easily. Clearer information and signposting allows strangers to a route or an area to travel more confidently.

Many of the simple improvements which help people with mobility handicaps can be built in to a new vehicle, station or system at virtually no cost, through minor design changes to layouts, handrails, bell pushes, decor and seats.

Some cost a little extra: additional seats at bus stops or on stations, additional audible or visual signs, induction loops at ticket offices to assist people with impaired hearing, and the like. Many operators recognise that the cost of these items can be reclaimed within a year or two of operation through the additional fare revenue generated from trips by mobility-handicapped people who would otherwise not have made them, or would have made them by other means.

Only in the case of providing for the independent access of people in wheelchairs to mainstream public transport is the cost at all significant: typically somewhere between four and 10 per cent of the cost of a new vehicle or system. And in this case, the cost needs to be offset against the much greater costs of providing special transport services for people who are only prevented from using mainstream public transport by one or two steps.

Clearly it is more economical and cost-effective to build these improvements in to a new system than to add them afterwards, thus manufacturers need to be encouraged to produce accessible vehicles and operators to buy them.

At the same time, the whole "transport chain" needs to be considered. An accessible bus is not of great use if people with mobility handicaps cannot reach the bus stop; accessible buildings cannot be used if people cannot get to them. Door-to-door access requires pavements, road crossings, street furniture and transport terminals (and all their various facilities) to be designed with the needs in mind of the different types of disabled people who will use them.

Catering for mobility-handicapped people in pedestrian areas has been one focus of the ECMT's consideration and simple guidelines have been prepared for urban and transport planners, traffic and highway engineers.

There will always be some people to whom using mainstream public transport will appear impossibly difficult for a wide variety of reasons. There will thus always be a need for some form of transport which provides a more secure and caring environment. Demand-responsive services of different kinds have had a long history in many European countries, and ways are being found of making them more cost-effective. "Intermediate" forms of public transport, which carry anyone but which are specially tailored to the needs of mobility-handicapped people, have proved successful in several towns, notably in Scandinavia, and have potential for further application.

However, improvements to mainstream public transport to make it more accessible for a greater number and diversity of mobility-handicapped people can lessen the need for most costly special services, as well as enabling disabled people to travel more widely and in an integrated environment.

By itself improving one public transport mode is not sufficient. A study in France on the effect of the new tramway in Grenoble on the mobility of disabled people showed that the new service did not permit a reduction in the use of specialised services. This is explained by the non-accessibility of the means of getting to the tramway and by the fact that people of reduced mobility appear to use the new tramway only for occasional and not for regular trips.

As well as these savings in the total amount spent on transport, there are well-demonstrated cross-sector benefits from providing transport to enable mobility-handicapped people to travel independently. There are obviously savings in the time and effort of family members and friends who would otherwise have to accompany or undertake activities on behalf of the disabled person. More significantly, from

governments' points of view, there are considerable savings from reductions in the need for state-funded domiciliary care services: doctors and para-medical staff having to visit people in their homes, paid help for shopping and other personal errands. These savings are considerable.

It is also apparent that providing mobility for people with disabilities allows a psychological and practical means of avoiding or postponing the need for costly institutionalised residential care.

Trends and Developments in Europe

The last decade has seen enormous progress throughout Western Europe in the provision of transport services and facilities of all types to enable people with mobility handicaps to travel more easily and conveniently in an independent way. Although much remains to be done, it is encouraging to see the results of the work to date in every field of transport operation.

Streets and pavements

Most countries have had regulations for many years which require the needs of mobility-handicapped people, especially those in wheelchairs, to be recognised in the design of new public buildings and many extend this to existing public buildings or to private buildings of various kinds. Specially-designated parking places for disabled motorists are almost uniformly provided at public buildings and shopping centres where parking is available.

Street design is less well regulated, although guidelines have been published in some countries (for example, by the Institution of Highways and Transport in the UK and the Deutscher Normenausschuss in Germany). The need for ramped kerbs to enable people in wheelchairs to cross the road is well-recognised but they are by no means universally installed.

Textured guide strips for people with visual impairment, to enable them to follow a route or to find a safe road crossing point, are becoming more common (the Netherlands and the UK pioneered this approach with, respectively, demonstration projects and research into the best form of texture). The need to have a crossing point which visually-impaired people can recognise is particularly important when kerbs are ramped. Audible crossings, indicating when to cross at light-controlled signals, are also becoming more common. Experiments are being carried out with devices to enable pedestrians to extend the signalled crossing phase.

Ways of keeping pedestrian areas free of hazardous obstructions are being promoted especially in the Netherlands.

Conventional buses and coaches

Bus design has gradually been modified through a combination of operators' requests, manufacturers' innovations and external guidelines and regulations. Lower steps and textured, colour-contrasted, handrails are two major improvements. Sweden and the UK in particular have design standards affecting several aspects of the vehicle including steps, handrails, seating, "bus stopping" signs. These have been found not only to make bus use easier for everyone but also to speed up boarding and alighting times.

Access to buses for people in wheelchairs has presented a problem, with the options being expensive, slow and sometimes unreliable on-board lifts or "kneeling" mechanisms, or cumbersome and space-consuming ramps. Experiments in Norway and Sweden with different designs of raised platforms at bus stops and small "bridges" on the buses have proved successful but take up roadside space.

Low-floored buses, which can be entered directly from the kerb by people in wheelchairs, are an innovation pioneered in Germany which is proving highly successful. The new technology offers considerable hope that wheelchair-accessible buses can be produced and operated cost-effectively.

In France in February 1989, the Minister for Transport and the Secretary of State for Handicapped People, made an agreement with nine European manufacturers of buses, coaches and tramways, that within five years, all their products sold on the French market would be fully accessible.

Long-distance coaches used on scheduled and tourist services have proved more difficult to adapt, up to now, because they are high off the ground with underfloor baggage space. Some work has been done in the UK and Canada on equipping them with lifts but more research is needed.

Special services

Demand-responsive services are now provided for any passenger who needs special care in most cities and towns, and some rural areas, throughout Europe. Typically a vehicle, which is accessible to people in wheelchairs by a lift or ramp, is booked by telephone and provides a door-to-door service. The systems are operated by local authorities, transport operators or voluntary groups with various sizes of vehicle. Fares are subsidised, often to the level of public transport fares, although in some places there is a restriction on the number of journeys which may be made.

These special services are usually restricted to a local area but the Swedish Special Transport Service allows severely disabled people to travel anywhere in the country by the most appropriate mode (commonly by taxi) for the cost of a second class rail fare. Norway has also pioneered a regional service in one rural area which can cater for any passenger including people on stretchers.

Often taxis are included in the network of pre-bookable services which is available for people with mobility handicaps, or they may be used in the conventional manner and the cost of their use be subsidised. In some cities all taxis have facilities to carry wheelchairs in the boot of the car and some taxis can carry passengers seated in their wheelchairs. All new London taxis are required to be accessible to people in wheelchairs, and in cities where London-type taxis are used the same provision will follow.

"Intermediate" public transport has been successfully pioneered in Sweden where "service routes" provide a network of scheduled fixed-route bus services with more accessible vehicles and routes which run close to homes and other common destinations. In London, lift-equipped buses operate weekly services to shopping centres.

Trams, light rail, metros and trains

Low-floored trams are being introduced in France, Germany and in the Netherlands. These allow easy access for ambulatory disabled people and also permit passengers in wheelchairs to enter.

The many new light rail systems of various types in Europe are generally accessible to passengers in wheelchairs: for example, the Lille VAL and the tramway in Grenoble, in France; Tyne and Wear Metro and Docklands Light Railway in England.

Metros, U-Bahn and underground railways are often older systems which are difficult to adapt for passengers in wheelchairs (although Munich and Stockholm have made considerable progress). Improvements are generally being made to assist passengers with other forms of disability, through better signing, station and train design and information services. New systems are designed to take account of the needs of disabled passengers.

Trains present access problems for everyone where the train is high off the platform, and especially for people in wheelchairs. In Ireland and the UK, where the height difference is less, access is improved by providing portable ramps; this has been accompanied by a programme of station improvements, especially in suburban Dublin in Ireland, and on a core network of main-line stations in the UK. These improvements have included facilities for all types of mobility-handicapped people, such as induction loops at ticket offices for people with hearing impairments, accessible lavatories, better signing, announcements on and off trains.

Elsewhere the problem of access to trains is still being resolved. Lifts to platforms and mobile lifts for train access are in use in many larger stations. Switzerland, for example, is equipping more than 100 "core" stations with platform based wheelchair lifts together with improvements for other types of disabled passenger. Great improvements are being made to new main-line trains in almost every country to facilitate the accommodation of disabled people and allow access by people in wheelchairs to on-train facilities.

Cars

For those who can afford them and who can drive or be driven, cars offer great independent mobility. Financial assistance with car purchase or operation is available to disabled people in some countries but not uniformly.

Modern technology has led to sophisticated adaptations which allow very severely disabled people to drive. Several countries have independent centres where individual people can be advised on the appropriate adaptations for them; Belgium pioneered this work.

Other aspects of transport use

The need to involve people with mobility handicaps in the planning and operation of transport services is well recognised and most countries have a statutory or voluntary process to this end.

Many countries have guidebooks to assist disabled people to use different transport services; these are published by operators, government agencies and organisations of disabled people. Other types of information and practical assistance service are being introduced in many places. In the United Kingdom, a telephone service advises disabled people wishing to travel anywhere in the country.

Training of public transport staff in disability awareness is also common, to enable them better to assist passengers with mobility handicaps, including those with problems in communication.

European Commitments

The ECMT has had strong Ministerial support from all participating Member countries. At meetings of Ministers in Lyons in 1985, Madrid in 1987, Edinburgh in 1989 and Paris in 1990, they gave clear endorsements of the findings of the Working Group's reports and of the accompanying Resolutions,

and have pledged the support of their governments for further work in the field. In this way the ECMT has been a focus for progress and development at local, national and international levels, in drawing attention to the nature and number of people with mobility problems, and to the many cost-effective ways of catering for their needs.

The content of the various recommendations which have been noted by Ministers and the Resolutions that they have adopted are summarised below. (The formal texts are given in the ECMT Reports cited in the Bibliography.) The conclusions and recommendations relate to individual transport practices, to policy frameworks and to international collaboration.

General aspects of transport provision

It has been accepted by Ministers that, to facilitate better use of public transport by mobility-handicapped people, each ECMT Member country should strive to meet the objective that all transport systems, and their support services (e.g. toilets, catering and telephones) be usable by mobility-handicapped people and that, as a matter of course, all new systems be planned to be usable by mobility-handicapped people.

It is recognised that it is generally much more expensive, and often less effective, to modify existing infrastructure and vehicles than to make new infrastructure and vehicles usable by mobility-handicapped people. Furthermore, it is often possible to introduce measures to improve transport systems for the majority of mobility-handicapped people but which are not sufficient for those who need lifts or ramps for access: providing lifts or ramps in existing systems may be physically impossible due to lack of space.

Ministers recognised, at an early stage in the work of the Group, the desirability of drawing up internationally-agreed guidelines on standards of provision for disabled people in vehicles and in transport facilities, taking account of appropriate standards of the International Standards Organisation. These guidelines would either specify minimum acceptable standards (e.g. of physical adaptation of vehicles and transport related buildings), or express levels of access as an objective, to be interpreted according to local needs and conditions.

The degree to which guidelines and standards already exist, and their nature, vary greatly between countries; generally they relate more commonly to physical aspects of buildings and vehicles than to transport service or to the need to provide transport access to other services (e.g. medical). It was recognised by Ministers that ECMT Member countries should keep other Member countries informed of measures taken and should strive for a common approach; also, those Member countries which do not currently have such guidelines and standards should consider drawing them up.

Local transport

Buses

Buses are among the most important forms of transport used by people to move around locally and carry out day-to-day tasks. The ECMT has paid special attention to bus transport, both in its regular deliberations and through a technical seminar in 1989.

It was accepted by Ministers in 1985 that local buses should be as easy as possible for mobility-handicapped people to use, although not necessarily for people in wheelchairs. They accepted, in 1990, the conclusions of the 1989 seminar that further improvements still need to be made.

Ministers also recommended in 1990 that international regulations be strengthened and widened in scope. In the short term, there are many low-cost improvements that can help large numbers of people

(and generate enough revenue to pay for themselves): these include more handrails and the use of contrasting colours. Operators should use buses with as low floors and as few steps as possible and should explore ways of achieving level access to the buses they operate.

In the longer term, new regulations should help to ensure that new buses are designed with low floors, level access and no internal steps. There is wide agreement that low-floored buses promise to be an easy and cost-effective way of carrying passengers in wheelchairs, although more research is needed on their safe carriage on buses. Manufacturers need to innovate in advance of legislation. Operators need to be aware of the full potential of the market. Consumers have an important role in working with operators, manufacturers and legislators to ensure that there is a proper understanding of their needs.

Accessible buses alone will not solve mobility problems: bus services also need to be improved. Buses are an important link in the chain of local transport which includes pavements, bus stops, information and communication systems and the built environment generally. Parallel actions need to be taken in all these areas.

Dial-a-ride services

It has been accepted by Ministers that where public transport is not accessible to people in wheelchairs, other local transport services should be made available, such as accessible taxis, demand-responsive services or other special transport services, at reasonable fares.

The conclusions of the ECMT's technical seminar on demand-responsive services in 1986 were submitted to Ministers. Such services are only a part of the solution to mobility problems; links with accessible public transport need to be improved. "Intermediate" systems (as used in Scandinavian countries) can be cost-effective. Financing is a problem, since special services are not profitable, and it is important that benefits from savings in the non-transport sector are taken into account in assessing the value of such services.

Metros and light rail systems

Ministers endorsed Resolutions that new trains and stations on light railway and Metro systems should be accessible to people with mobility handicaps; while it is less efficient to modify existing trains and stations, especially for wheelchair users, cost-effective improvements should be identified and made.

Long-distance transport

Ministers have made recommendations in line with the conclusions of the ECMT's technical seminars on long-distance coach and train travel that as an ultimate goal both these forms of transport should be made accessible to all people with mobility handicaps, including those in wheelchairs. The most practical solution for coaches seems to be to fit them with lifts, and common standards need to be defined; access to trains can be provided in a number of different ways.

With the support of Ministers, the ECMT has urged the EC and ECE to start to prepare legislation to ensure that future designs of coaches are fully accessible, and manufacturers to begin to develop suitable vehicles. Potential passengers need to be informed of the possibilities open to them. Further research is needed into the technical, operating and safety problems associated with accommodating and securing wheelchairs.

Railway networks and governments, similarly, have been urged to develop technologies and common standards for access provision, safety and operational features, and access to facilities within the train; a joint UIC-ECMT Working Group has been convened to progress this.

For both modes, there needs to be a broader strategy encompassing access to stops and terminals, as well as operating procedures, staff training and the provision of information.

Motoring

Ministers accepted that there were some fundamental aspects of motoring for disabled people (as both drivers and passengers) which need recognising and enhancing, including the desirability of providing assistance to disabled people for whom the purchase and operation of a car is essential for their work or to enable them to live in the community.

National regulations governing seat belt wearing vary greatly. Countries which do not yet offer exemption from seat belt wearing on grounds of physical disability, or recognise exemption given by other countries, should take steps to do so.

An emergency sign, to be displayed if help is required with a breakdown is a valuable aid. Standardizing such a sign could be envisaged.

At a seminar on disabled drivers and motoring in 1988, further recommendations were drawn up by the participants, in the light of the likely significant and sustained increase in the number of elderly and/or disabled car users towards the end of this century and beyond:

Driving licences for disabled people must always be based on the same principle as for everyone else, i.e. the ability to drive safely. The most important considerations in issuing a licence are: a thorough driving test and, where appropriate, repeat tests; and, if necessary, the indication on the licence that the driver is restricted to a "suitably adapted car" -- being too specific in this area should be avoided wherever possible.

Participants to the seminar felt that, where disabled people receive financial help with car purchase, adaptation and/or operation, this should be made available by governments regardless of whether or not the motorist uses the car for travel to/from work. Where funds are limited, priority should be given to people in greatest financial need.

Impartial and objective professional advice on vehicles and adaptations should be made available to disabled car users as widely as possible. Professional fitting, repair and maintenance of adaptations should follow a code of good practice and should be tested to the same standards as other vehicles.

There needs to be harmonization or mutual recognition between countries of technical standards in this area. Initially, it is hoped that an EC-directive will be issued and that, from this, one vehicle type approval system for all of Europe will develop.

In order to harmonize standards, research is needed into motor vehicles and standard and specialised control systems, for use by disabled people. Governments, manufacturers and research institutes were requested to coordinate their efforts and share results, both within and between Member countries.

International collaboration, coordination and harmonization

It is recognised that it is highly desirable to have coordination, standardization and reciprocal recognition of measures to help people with mobility handicaps to travel between Member countries, and to encourage coordination between different schemes within each country.

There is reciprocal recognition of parking concessions for disabled people, however Member countries need to publicise these concessions further to disabled people and law enforcement officers. This concept of reciprocal recognition could be extended to other areas, e.g. concessions on train fares.

There are also technical areas in which standardization would be beneficial. For example, standardization of wheelchair anchoring systems to make them easier to use would benefit disabled consumers, operators and other passengers, encourage greater use of the systems and be in the interests of safety.

Developments in all transport areas need to be monitored, to ensure that people with mobility handicaps are not disproportionately affected, for example, by tax changes, new fare collection systems, measures to combat vandalism, etc.

Efforts should be continued to coordinate research and exchange information on measures to assist with the problems of people with mobility handicaps, including international coordination on proposed areas of research, exchange visits and joint projects.

Although data on the number and nature of disabled and mobility-handicapped people are becoming more comprehensive, it is still difficult to make realistic comparisons between countries. Data should be collated with a view to drawing up definitions which are consistent between countries and within countries, so that comparisons can easily be made and duplication of data collection is avoided. Definitions should consider disability as it affects mobility, rather than its cause.

Information services

Information on all aspects of independent mobility needs to be made easily available to people with mobility handicaps, their relatives/friends, workers in the field of disability, and transport operators.

At a seminar on information and communications held by the ECMT in January 1991, it was concluded that the need for information is universal and that improvements to the provision of information will help everyone. Information to help people with mobility handicaps should be included in mainstream information services, but it is recognised that there is a particular problem in reaching out to anyone isolated in his/her home to inform them of new transport developments and possibilities.

Information needs to be available for a whole journey, however many links that may comprise. It needs to be in an appropriate form for travellers' needs, standardized as far as possible, simple, accurate and complete.

Operators should be made more aware that the provision of information is an essential marketing aid. Public authorities have a crucial role in coordinating information about all the transport services in their area. Manufacturers of new forms of information technology, such as telecommunications equipment in its variety of forms, should take account of the needs of disabled people when developing their systems. The importance of the human element should not be overlooked both in providing information for pre-journey planning and in catering for travellers' needs for information and reassurance during their journeys: staff training at all levels is crucial.

Tour operators and travel agents should also be involved in providing information about accessible transport and accommodation facilities, and should promote best practices in these areas.

Participants in the seminar also concluded that governments should coordinate experience on developments in this area and examine what financial, legislative and other measures may be necessary to enable operators or local authorities to introduce improvements to information provision.

Consultation with disabled people

There is a need to allow associations representing disabled people to play a part in the planning of major transport projects.

Experience has shown that it is easy to make errors of design or construction that unintentionally reduce the accessibility of new infrastructure developments or new vehicles. It is desirable to audit the accessibility of proposed designs, using an agreed checklist. It is also important to test the accessibility of developments or vehicles at the earliest opportunity by inviting people with different types of mobility handicap to visit the site or try the vehicle.

Cross sector benefits

Ministers have recognised that the adaptation of transport to assist people with mobility handicaps presents socio-economic benefits to government departments dealing both with transport and with other sectors and have agreed that appropriate measures should be taken to identify these benefits. Ministers have commended the work of the ECMT in this regard to those working in this area and urged them to recognise this concept in planning for and investment in transport services.

Future Priorities

The implementation of all the changes which have been recommended is no mean task. Many of these changes will necessarily take several years to complete, not least in waiting for old vehicles to be phased out of service and new, more accessible, ones to become the norm. In some cases, technical innovation can only follow intensive further research. During all this time, however, it is important that no opportunity be lost to make improvements throughout each transport system, especially when other modifications or improvements are being made, towards the goal of chains of wholly accessible transport for any type of journey.

The ECMT gave an impetus to the coordination and enhancement of technical research through the seminars in 1990 on specific aspects of the design of trains (main-line, suburban and light rail) and long-distance scheduled and tourist buses/coaches, especially in relation to their access and use by people in wheelchairs.

On a more general topic, it is clear that further work needs to be carried out in the field of information and communications both for and about the needs of people with mobility handicaps. It is clear from earlier research that there is little coherence of approach to this topic at present, and yet providing information goes a long way towards giving many disabled people the confidence which they currently lack to undertake a journey.

Work on transport chains needs further development on both theoretical and practical fronts. Ways need to be found of instilling into transport operators and planners a fuller realisation that the concept of planning and providing for the total journey -- all modes of transport and the links in between them -- is of fundamental importance.

Finally, the ECMT hopes to continue and strengthen its links with other international bodies working in the same field, especially with the European Communities, so that each may profit from the work of others and duplication of efforts is avoided.

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