

## **Local Transport Systems for the Elderly and Disabled**

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### **1. Introduction**

There are two major trends concerning policies for and growth of Local Transport Systems for the elderly and disabled. The first is that conditions that prevent social participation by the disabled have been deemed discriminatory in legal terms, and especially in such countries as the US, Canada, and Sweden, this trend has become pronounced. The second trend is that policies and technologies to promote social participation by the elderly and disabled in terms of transport have become much more concrete. This trend has two aspects, one of which is special measures. These include the operation of Special Transport Services (STS) for elderly and disabled people who cannot utilize conventional transport, and measures to support people who can get around by car. The other aspect has arisen from the viewpoint of Universal Design. It inclines toward design technologies (accessible design, usability, safety) that enable the elderly and disabled to utilize conventional transport, user and supply side subsidies, and social inclusion, to enable mobility on a par with that of able-bodied people, through information systems.

Additionally, at present, development is starting to incline toward filling the gap between measures for such STS and measures for public transport such as buses and trains. In specific terms, a search has begun for new policy directions through DRT (Demand Responsive Transport) systems, notably the Swedish service route and the European “flex” route.

The purpose of this research, which concerns five countries – the US, Canada, Sweden, the UK, and Japan – is firstly, after summarizing the characteristics of systems in each country, to clarify how human rights issues such as anti-discrimination legislation, which are deeply related to mobility problems among the elderly and disabled, have become linked to mobility issues. Secondly, its purpose is to clarify how such matters as related STS and ensuring access to public transport, which have become the impetus for development of Local Transport Systems, have developed. Specifically, such experiences in Europe and America will provide hints regarding future directions to be chosen in developing countries in Asia, South America, and Africa.

**2. Trends in accessible transport in five countries**

**2.1 US**

**(1) Policies**

US public transport policy originates from the Urban Mass Transportation Act (UMTA) of 1964. An amendment of the UMTA in 1970 declared that mobility of the disabled and elderly would be ensured. The subsequent Rehabilitation Act of 1973 (enacted in 1977) prohibited transport operators in receipt of federal subsidies from discriminating on the grounds of disability. This led to the establishment of the Americans with Disabilities Act (ADA) of 1990, which legislates a blanket prohibition on discrimination against the disabled in the context of transport, construction, information, or work.

Developments to date had focused on the protection of rights, but an important development at the U.S. Department of Transportation to make such rights concrete got under way in the 1990s, as the Flexible Fund. After the enactment of the ADA, the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, which imposed a six-year deadline for those points that needed attention, and the Transportation Equity Act for the 21<sup>st</sup> Century (TEA21) of 1998 brought responses from the departments responsible for public transport. In the budget for expediting development, a Flexible Fund that diverted some of the highway budget to the public transport budget was implemented. Specifically, over six years, 5% (\$3.5 billion) of the total financial resources (\$71.3 billion) in the

**Table 1: American Milestones in Accessible Transportation**

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1694:	Urban Mass Transportation Act
1970:	Urban Mass Transportation Act Amendment
1973:	Rehabilitation Act
1990:	America ns with Disabilities Act (ADA)
1994:	Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991
1998:	Transportation Equity Act for the 21 <sup>st</sup> Century (TEA21)

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Federal Highway Administration Authority budget was diverted to the Federal Transit Authority, for measures for the elderly and disabled. The Flexible Fund was operated on the basis of three principles: local initiatives, intermodal transport, and flexibility of funding.

## **(2) Local Transport**

### **1) Three options in development of public transport**

In the US, through the Surface Transportation Act enacted in 1982, operators became obliged to publish minimal service criteria for transport services for the disabled and elderly within 180 days. As a result, in 1983, three options (Transportation Options under Rehabilitation Act section 504) that could be chosen by local governments were indicated.

- a The 50% rule: At least 50% of regular buses must be made lift buses.
- b Paratransit supply: “Demand Responsive Transport” services using lift vans
- c Combination of Paratransit and regular buses

### **2) Six criteria for paratransit**

The six service criteria for paratransit specified at that time are as follows. Local governments within a cost cap of 3% of the transport authority’s average annual budget, can select the following minimum criteria.

- a Disabled people can receive the same services as those of regular buses
- b Disabled people can receive services on the same days, at the same times, as ordinary people
- c Fares are the same as for regular buses
- d Imposing restrictions on trip purpose and order of priority is prohibited
- e Waiting time is within reasonable limits
- f Use of waiting lists is prohibited, and there must be sufficient paratransit capacity

### **3) ADA Paratransit Plan**

In such ways, the creation of local transport proceeded through trial and error in the 1980s, but after the establishment of the ADA (1990), it was stipulated that public institutions operating regular buses and trains for ordinary people should provide supplementary paratransit for people who cannot use them. It was also stipulated that plans for implementing paratransit be proposed by January 26, 1992, and be completely implemented as soon as possible (within five years, by 1997). The Department of Transportation at the time issued a manual for operating paratransit (formulation of paratransit plans, implementation of plans, assessment of operation, etc.) Incidentally, specific qualifications are required for using paratransit.

#### 4) STS for medicine and health

Medicaid, as a federal government plan for medical transport services outside of emergencies for the elderly, disabled, and single-parent families, has been provided on the basis of the Social Security Act 1966. Medicaid is operated for the elderly in order to provide health care while restraining medical expenses. Noting the fact that it is cheaper to pay hospital visit costs than medical costs, in 1995, financial resources equivalent to 1% of medical expenses were used for 1.03 million trips by 3.40 million persons. Of that, 80% was used for urban pick-up and drop-off, and the annual expenditure was \$1.0-1.5 billion. Recently, Medicaid expenses have become slightly high compared with paratransit services. The fact that 20% of elderly people eligible for Medicaid use paratransit suggests that the two should be integrated.

**Table 2: American Paratransit**

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1982:	Surface Transportation Act
1983:	Three Options for Local Government
1983.September	Transportation Options under Rehabilitation Act section 504
1983:	
1992:	Implementation for Paratransit Planning

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## 2.2 Canada

### (1) Policies

#### 1) The establishment of human rights and the Transport Advisory Committee

The creation of accessible transport in Canada has developed substantially, through the Canada Human Rights Act, 1976, which stipulates that “disability” must not be made “grounds for discrimination.”

With this as the impetus, in 1979, the Ministry of Transport established the Advisory Committee on Transportation Needs of the Handicapped. In 1980, the Social Parliamentary Committee on the Disabled and Handicapped was established, and in its report, the Committee raised 130 actions (12 for transport) concerning the “obstacles” to the creation of accessible transport, with the federal government. As a result of these actions, in the Canadian Human Rights Act of 1982, a provision was added to prohibit discrimination against the disabled in terms of goods, services, facilities, accommodation, or employment.

**Table 3: Canadian Milestone in Accessible Transportation**

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1976:	The Canada Human Rights Act
1979:	Advisory Committee on Transportation Needs of the Handicapped
1980:	Social Parliamentary Committee on the Disabled and Handicapped
1986:	Transportation for Disabled Persons Program (TDPP)
1982:	Canadian Human Rights Act
1985:	Transportation for Disabled Persons Implementation Committee (TDPIC)
1988:	The National Transportation Act, 1987, was amended to give the National Transportation Agency (NTA) power to make regulations and to resolve complaints with respect to Canada's federally regulated transportation network.
1991:	Transport Canada released "Access for All" updating the 1983 policy on accessible transportation.
1996:	The new Canada Transportation Act, 1996, changed NTA to the Canadian Transportation Agency (CTA), which retained the existing powers to regulate the carriers and to resolve complaints.

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Equality was stipulated in Article 15 of the Canadian Charter of Rights and Freedoms: "Every individual is equal under the law and has the right to the equal protection and equal benefit of the law without discrimination based on... race, age or mental or physical disability." In addition, in 1991, "access for all" was declared.

## **2) Five-Year National Strategy**

Consequently, after the Transportation for Disabled Persons Implementation Committee (TDPIC) was established in 1985, this led to the Advisory Committee on Accessible Transportation (ACAT). In 1980, the Transportation for Disabled Persons Program (TDPP) was established, and it was decided to improve access to employment, housing, recreation, communication, and transport among disabled and elderly people through a five-year National Strategy for Integration of Persons with Disabilities, under the direct management of the federal government. As a result, with the aim of 1) equal access, 2) economic integration, and 3) integration of disabled people into the mainstream, as a concrete measure, \$24.6 billion was invested in transport for such initiatives as introduction of light aircraft and systems for making trains accessible, improved accessibility of road transport at airports (taxi, rental car, shuttle bus), and accessibility of inter-city buses.

### **3) Authority of transport court**

In 1987, the National Transportation Act was amended and the National Transportation Agency was granted the function of resolving lawsuits against transport institutions under the direct management of the federal government. Subsequently, the NTA became the CTA (Canadian Transportation Authority), which inherited the functions of specifying regulations for transport operators and acting as an administrative court for resolving suits by transport users.

#### **(2) Local transport**

In Canada, local transport, outside of big cities, consists of three types – conventional public transport (conventional), picking up and dropping off of disabled people (custom), and transport that is not especially restricted to disabled people (paratransit). These types are operated in combination, in accordance with local necessity.

In big cities, services on fixed routes and door-to-door services – for example, WheelTrans, the Toronto door-to-door service – and taxi services are classified into regular use, for commuting to work or school, and spot use, for shopping or visiting hospital. Operation of the “handy DART” service in Vancouver, which is restricted to disabled people, began in 1980, utilizing lift-equipped vehicles for wheelchair users and sedans for people with minor disabilities.

## **2.3 Sweden**

### **(1) Policies**

Sweden’s system for transport accessibility began from the Facilities for Disabled People on Transport Act of 1979. Since then, this law has not changed, and in 1998 the Responsibility for Public Transport Act was enacted, requiring transport enterprises to propose specific improvements for disabled people.

#### **1) Responsibility for Public Transport Act**

Since the Responsibility for Public Transport Act of 1998, transport enterprises have been required to propose specific improvements for disabled people. The details are as follows.

- a Public transport at the local and provincial levels is stipulated.
- b Public transport operators must improve public transport systems in line with the needs of disabled people.
- c Public transport operators must indicate specific improvement measures for the sake of disabled people in annual public transport plans.

- d Public transport operators, if commissioned to provide ST services by national and local governments, must also indicate vehicle configurations in plans.

**Table 4: Sweden’s Milestones in Accessible Transportation**

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1979:	Facilities for Disabled People on Public Transport Act
1980:	Committee on Transport: Public Transport Adaptability
1998:	Responsibility for Public Transport Act

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## **2) Nationwide accessibility center**

To accelerate the development of an “accessible society” in Sweden, a national advisory body was established to respond to accessibility issues. Through this means, accumulation of knowledge, advisory activities, and development are achieved. In addition, the advisory body has inherited the duties of the disabled people’s ombudsman’s office.

## **(2) Local transport: Special Transport Service (Fardtjänst)**

### **1) Initial STS**

Sweden’s STS began in the 1960s, and by the late 1970s they were operational in virtually all municipalities. Subsequently, under Article 10 of the Social Services Act enacted in 1980, communities became obliged to provide ST services. In 1987, there was an effort to alleviate the inconvenience of having the use of STS restricted to within administrative districts, and that year, STS across municipalities within one province were introduced on a trial basis. Subsequently, STS became supplied to 5% of the population. Consequently, because demand was high, approaches to reducing demand were considered. The method used was mainly replacement by other means of transport. One way was to encourage people to switch by making buses free of charge, and another was to encourage people to switch by operating “Service Routes” with accessible vehicles.

In such ways, Sweden has been able to keep costs as low as possible while sufficiently ensuring mobility among the disabled and elderly.

### **2) Service Routes and Flex Routes**

Because taxis and ST services are too expensive as means of transport for the disabled, in order to reduce demand for STS, in 1983 Sweden started to operate service routes for semi-ambulatory people. This has spread worldwide, and in Japan, too, community buses have been developed as one showpiece of local government policies since 1995.

**Table 5: Special Transport Service in Sweden**

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1950:	STS Started by Charitable Institutions
1963:	STS Started by 4 Municipalities
1975:	35% Subsidy of Total Cost by Provinces
1980:	STS Started by All Municipalities
1980:	Social Service Act
1984:	National STS Act
1987:	County-wide STS
1998:	Special Transport Service Act

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Subsequently, because fixed service routes did not necessarily meet the needs of users, there has been a shift to the development of flex routes, which are demand-driven transport without routes.

**Table 6: Service Route and Flex Route in Sweden**

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1983:	Service Routes in Boras
1995:	Flex Routes

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## **2.4 UK**

### **(1) Policies**

#### **1) Specific measures for the disabled**

UK transport policies for the disabled and elderly – as opposed to those in the US and Canada, which have been developed with a focus on human rights – have been pursued in a unique fashion, with the aim of directly helping the disabled and providing precisely the assistance needed. A typical example is the Mobility Allowance Act 1976, which provides immobile, severely disabled people with a subsidy for excess transport costs incurred due to disability. As of 1988, the amount was 23 pounds per week. In addition, in the Disabled Persons Act 1981, local governments were obliged to consider the needs of the disabled when developing pedestrian areas. Also, through the Transport Act 1985: 1) If local governments provide transport services, they have become obliged to consider disabled people. 2) Local governments have discretionary powers to give fare discounts to disabled people who meet



specific conditions. 3) When transport services are implemented in response to the needs of disabled people, it is possible for local governments to receive subsidies. 4) Operational procedures for the Disabled People’s Transport Advisory Committee (DPTAC) 1985 were specified, so that disabled people directly participate in various decision-making processes regarding measures for disabled people.

**2) Disability Discrimination Act (1995)**

This Act made it illegal to discriminate against disabled people regarding not just transport, but also employment, provision of goods and services, purchase of land and goods, and property rental, and at the same time, the Act established the National Disability Council to advise the government regarding discrimination. The UK, unlike the US, has the characteristic that it does not rely on regulation alone, but proceeds through coordination with the transport industry, and makes allowances for step-by-step response by transport operators.

**Table 7: UK's Milestones in Accessible Transportation**

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1976:	Mobility Allowance
1981:	Disabled Persons Act
1985:	Transport Act
1995:	Disability Discrimination Act

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**(2) Special Transport Service**

In the UK, ambulance services are operated by the National Health Service for the purpose of day-to-day hospital visits, and ST services are operated by local governments and volunteer groups for freely determined purposes.

**1) Ambulance services**

These primarily involve the use of ambulances for picking up and dropping off people at hospitals outside of emergencies. For example, family doctors (GPs) may reserve such a vehicle for upcoming clinic visits by people with limited mobility. In the case of a London hospital, patients are picked up in volunteers’ cars, and the hospital also endeavors to complete medical procedures as soon as possible.

**2) Community Transport**

The trend regarding UK disabled people in the 1970s was to hardly adopt public transport at

all, and instead to prioritize ST services. In particular, through the Minibus Act 1977, which provided support from the volunteer angle, in the 1970s, it was permitted for volunteer groups to receive fares to cover fuel and insurance costs. Then, in the 1980s, Dial-a-Ride began, with subsidies from the Department for Transport. Subsequently, volunteer groups have evolved into NPOs.

**3) Taxi cards and slope taxis**

In London, taxi cards, in operation since 1983, enable people to use taxis by subsidizing part of the fare. Also, since January 1, 2000, taxis, including existing vehicles, have been obliged to install slopes that enable them to be used by wheelchair users.

**4) Community Car Scheme (Social Car Scheme)**

Legislation to support volunteers, which arose and developed further in the 1970s, originated as the UK’s Social Car Scheme. This is a system that, primarily in remote areas, permits people to give rides, and charge for them, using their own car. Currently, it is called the Community Car Scheme.

**Table 8: Special Transport and Taxis in UK**

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Social Car Scheme
1977: Minibus Act
1980: London Dial-a-Ride
1983: Taxi Card
2000: Obligation to install slopes in London taxis

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**2.5 Japan**

**(1) Policies**

The first policies in Japan began just after World War II, with discount fares for disabled servicemen. For nearly 30 years, there were no developments in policy, but in 1981, persons disadvantaged in terms of transport were designated by the Council for Transport Policy. It is fair to say that Japan’s transport policies for the elderly and disabled have begun since then. This has led to the 1993 Guidelines, and the 2000 Transportation Accessibility Improvement Law and associated Guidelines (2001). Transportation Accessibility Improvement Law consists of the following three main aspects. 1) Municipalities and smaller administrative districts shall formulate Basic Concepts for accessible development of stations and

surrounding areas. 2) Buses and trains shall be made accessible. 3) Rail stations shall be made accessible. Currently, more than 100 Accessible Local Plans have been formulated under the Transportation Accessibility Improvement Law, and nationwide, accessible city centers are starting to appear, centered on large barrier-free stations.

**Table 9: Transport Measurements**

1952:	User Side Subsidy for Disabled
1981:	Council of Transport Policy in Ministry Transportation
1983:	Public Transport Terminal Guideline for Disabled
1993:	Public Transport Terminal Guideline for Elderly and Disabled
2000:	Transportation Accessibility Improvement Law
2001:	Guideline of Transportation Accessibility Improvement for Public Transport

**(2) Local transport**

Regarding STS in Japan, transportation of disabled persons to and from educational facilities, and pick-up and drop-off services by local governments and volunteer groups, began in the 1970s. Subsequently, legislation and national government trends remained virtually static for thirty years. As a result, regarding STS, Japan has been extremely lagging in accessible initiatives for trains, buses, remote areas, and so on. Japan is roughly at the stage where countries such as the UK were in the late 1970s to early 1980s. Nevertheless, during the first few years since 2000, new developments in ST services have begun through care insurance, and receipt of fares has been permitted by the MLIT for STS run by volunteer groups and NPOs. Additionally, deregulation of buses and taxis has begun. In such ways, the framework for local transport is starting to change substantially.

**Table 10: Local Transport**

1971:	Project of Day Service Transport Project for Disabled Children by Ministry of Welfare
1972:	Start of the Special Transport Service by Machida Local Government
1978:	Start of Special Transport Service by Volunteers
2002:	Bus deregulation
2003:	Taxi deregulation

### **3. Issues and Trends in 21<sup>st</sup> Century Transport**

A transport issue affecting the disabled and elderly is the need to develop transport access environments that enable the disabled and elderly to compete from the same starting point as the able-bodied.

#### **(1) Legislative process**

##### **a Human rights (Civil Rights)**

Important points in the legislative process in advanced Western countries are that: 1) everyone has been assigned equal rights, and 2) as a result, subsidy systems for making public transport accessible have become much more substantial. Regarding legislative developments, there is a huge difference between countries with laws that protect human rights, and countries that do not. Therefore, laws that guarantee mobility based on human rights are essential.

##### **1) Civil Rights**

Examples where equality in terms of transport is guaranteed on the basis of human rights include the US Rehabilitation Act and the Canada Human Rights Act. Consequently, fairly major results are being achieved regarding the accessibility of public transport in both countries.

##### **b Minimal guarantee of mobility**

One issue is how to implement a minimal guarantee of mobility for the disabled and elderly.

#### **(2) Development of public transport**

##### **a Expense of accessible public transport**

Although for accessible transport such as trains and buses, mobility measures for wheelchair users in vehicles and terminals are progressing, measures regarding sign systems and audio information for people with sensory disabilities (visual or auditory) remain to be implemented.

##### **b Special Transport Services (STS)**

Door-to-door services for the severely disabled are under development in all countries, but because they require large financial resources, efforts are being made to reduce expenses. Also, if transport measures are taken for disabled and elderly people with a certain level of

disability, there is a need to combine transport systems in efforts to achieve services with higher capacity and quality for the same money.

Shift to other means of transport: In order to reduce the burden of STS in particular, various trials have been conducted, including a shift to buses and to service routes. Moreover, recently, division of transport roles with DRT and so on has become a new topic.

Appropriate supply capacity of STS: No matter what existing means of public transport are developed, there will be disabled and elderly people who cannot use STS. In Sweden in the 1980s, such people accounted for 5% of the population. The figure varies by region, but experience shows that it is usually about 1-3%. The issue is how to secure systems for providing service to this group of people, and the necessary financial resources. Usually, 80-90% of the expense is borne by public funds, and 10% by users.

How to coordinate and divide roles between medical and “service” transport is an issue for consideration.

Positioning STS as local transport: Except for Japan, advanced nations clearly position STS as local transport.

## **(2) Combination of means of transport**

The development level of means of transport varies in accordance with various local conditions. In response, it is necessary to provide various means of transport.

- a Improve the continuity of conventional public transport, such as railways, LRT, and buses
- b Develop STS for people who cannot use existing public transport
- c Operate DRT as a way to fill the gap between buses and STS

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