

Mobility for People with Disabilities in a Competitive Environment: The New Zealand Experience

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Abstract

For the last ten years, New Zealand has been undergoing a process of structural reforms in the transport sector. The reforms of the passenger transport services in the land transport sector commenced in 1983 with the removal of protection for long distance services.

The next reform was the contracting out of the mainly rural school bus routes in 1987. The major reforms were the deregulation of taxi services in 1989 and the introduction of a competitive regime for urban scheduled passenger transport services, effective from mid 1991.

During this whole period, the Total Mobility scheme was initiated and expanded. It is a nationwide scheme that increases the mobility of people with disabilities through providing a subsidy on the use of taxi services.

This paper is in four sections. The first gives some background on New Zealand itself, the second details the New Zealand passenger transport regime, the third looks at the Total Mobility Scheme, and the last backgrounds the service route concept.

Part 1: Background on New Zealand

New Zealand has a relatively small population of 3.4 million at the 1991 Census spread throughout two main and a number of smaller islands with a combined length of nearly 2000 kilometers. The total area of New Zealand is 270,000 square kilometers similar to the size of Japan or Britain.

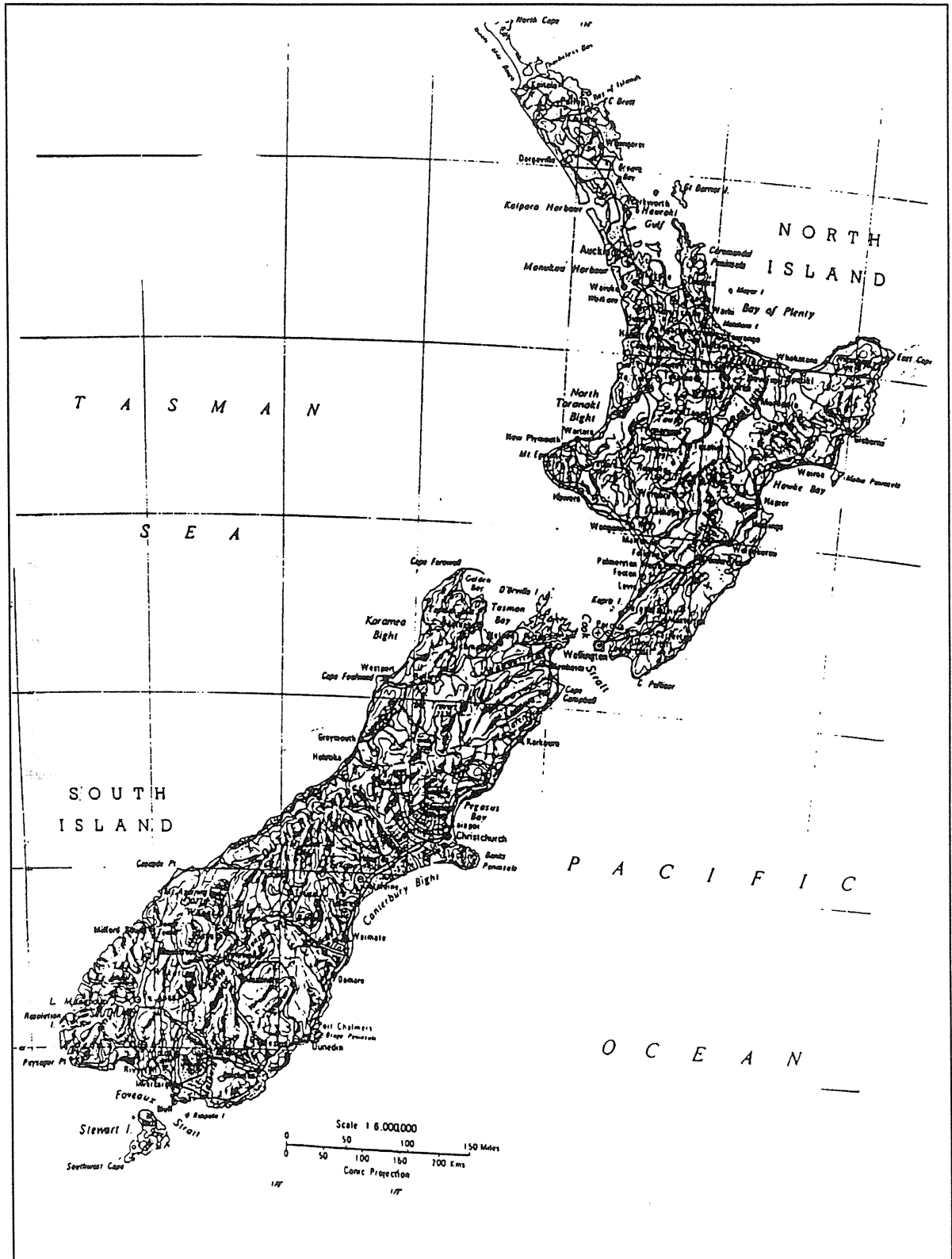
Despite a strong reliance on agricultural exports, the country is highly urbanized with the greatest proportion of people living in the north of the country. In the 1991 Census, 2.9 million people lived in urban areas and 0.5 million in rural areas. Half the population lives in five major cities.

Public passenger transport usage is low; according to results of the 1991 Census, less than five percent of the employed population travelled to work on Census day using public transport. Nearly 65 percent drove either a company owned or privately owned vehicle.

Ownership of private motor vehicles in New Zealand is high as Table 2 attests. The significant increases in annual new motor vehicle registrations in 1989 and 1990 have subsequently slowed down. The majority of new vehicle registrations was for imported second-hand vehicles from Japan.

New Zealand has a separate system of local government made up of 12 regional councils, 72 territorial local authorities, and four unitary authorities (which have both regional authoritorial council functions). Regional councils have responsibilities mainly for environmental and strategic issues, while territorial authorities essentially undertake urban planning and management. In the transport arena, regional councils have responsibility for passenger transport, while territorial local authorities in conjunction with TNZ have

Figure 1



responsibility for roads.

Table 1

Transport to Work: 1991 CENSUS				
	Employed in full-time labor force*			
Means of Transport	Males		Females	
	Number	%	Number	%
Public bus	16,485	2.4	23,586	6.2
Train	5,466	0.8	4,479	1.2
Drive private vehicle	310,362	45.8	217,881	57.5
Drive company vehicle	138,150	20.4	16,665	4.4
Passenger in car, truck or company bus	39,294	5.8	41,625	11.0
Bicycle	38,436	5.7	11,664	3.1
Motorcycle, powercycle	24,297	3.6	3,168	0.8
Walk #	46,635	6.9	30,342	8.0
Other	8,853	1.3	2,745	0.7
Work at home	50,052	7.4	26,739	7.1
Not specified	10,887	...	6,135	...
Total	688,920	100.0	385,023	100.0
* Population resident in New Zealand aged 15 years and over working 30 or more hours. Excludes those unemployed and seeking full-time work. #Includes jogging or running. source: NZ Official Yearbook 1993				

Part 2: The New Zealand Passenger Transport Regime

The deregulation of the taxi industry took effect on 1 November 1989. At this date, the quantitative controls under which the taxi industry operated were lifted, and a new qualitative licensing system was introduced. Since then, the most significant changes have occurred in the three main urban centers (Auckland, Wellington, and Christchurch). For all of New Zealand, the biggest change was the number of new taxi organizations — a 50 percent increase — while for the three main centers, it was a 500 percent increase. The number of operational licenses has increased by a quarter, while the number of cabs on the road has increased by a third. Over the years, the qualitative controls have substantially increased. 24-hour-a-day services are required by law unless the local regional council grants an exemption.

The scheduled urban passenger transport system is based around Regional Passenger Transport Plans. These identify services that the regional council believes should be provided in that region. Plans can be extensive or brief according to the regional council's desires. The regional council has the power to specify routes, capacity, frequency, and fare levels, as well as matters such as integration of networks, time tables, and ticketing or anything else it thinks fit.

Table 2

Licensed Motor Vehicles			
Type of Vehicle	1986	1989¹	1992
Cars	1,511,400	1,430,805	1,542,912
Rental cars	11,762	7,899	8,438
Private taxicabs	368	2762	3,572
Goods service vehicles	305,984	289,225	309,290
Omnibuses	3,392	8,373	7,328
Motor cycles	133,954	89,459	65,442
Power cycles (mopeds)	895	1,211	1,234
Trailers, including trailer-type caravans	385,916	341,280	369,048
Dealers' cars	5,235	5,010	4,588
Dealers' motor cycles	260	282	574
Vehicles exempted from annual license fees ²	62,827	7,904	22,755
Miscellaneous	11,030	33,049	16,687
Total, all vehicles	2,437,329	2,217,259	2,351,868
1. 1989 figures reflect the impact of a recession in the NZ economy 2. Figures reflect changes in policy and the computerization of the motor vehicle register. Source: New Zealand Official Year Book, 1993			

Operators (be they bus, train, harbor ferry, or taxi) register those services they wish to operate on a commercial basis. Such services may be additional to what the regional council has specified in its Regional Passenger Transport Plan. Specified services for which the regional council has not received any commercial registrations are then contracted out. Regional councils cannot contract any service that has not been specified in the Regional Passenger Transport Plan.

Contracted services are protected from competing services, and operators can withdraw or vary services after 21 days notice to the regional council. In practice, regional councils call for new commercial registrations for any particular service at the time of calling for tenders for that service or before actually awarding the tender. (This latter option gives the unsuccessful tenderers the opportunity of electing to operate that service on a commercial basis).

The New Zealand system is acknowledged to be similar to the United Kingdom system with significant differences. Modes are treated equally, be they small or large vehicles, light or heavy, road, rail, or ferry. Regional councils also may "contract over" commercial services that do not meet all the requirements of the regional Passenger Transport Plan (for example, in fare structure, capacity, or frequency).

Under the New Zealand legislation, any expenditure on passenger transport must be determined through a competitive pricing procedure approved by Transit New Zealand. In practice, no regional council has developed its own competitive pricing procedures, and so the manual developed by Transit New Zealand in consultation with the industry is used throughout New Zealand. Exemption from having

to use approved competitive pricing procedures is provided in the law for the urgent interests of public safety, immediate or temporary repair of damage caused by a sudden and unexpected event, or to provide up to two months assistance for registered services from which an operator has notified intent to withdraw.

Subsidy funds for urban passenger transport services is shared between central and local government via road users and ratepayers. At present for all but the five largest conurbations, Transit New Zealand pays 40 percent of the costs, while regional councils pay 60 percent. For the five conurbations, financial assistance of 30 percent of costs comes from central government, approximately 60 percent from ratepayers, and the remainder (about 10 percent) comes from a regional fuel tax of up to two cents per liter, which is a short-term measure (finishing in 1995) pending the development of longer term solutions.

School transport is fully subsidized by the Government for rural areas only (approximately \$90 million per year). In urban areas, school transport is managed and funded in the same process as urban scheduled services. The concession fare for students is generally 50 percent of the adult fare.

In many countries, the provision of public passenger transport is considered a community welfare issue and is a responsibility of central government. This is not the case in New Zealand. Central government does, however, fund and manage income support and other social welfare services including housing assistance.

Competitive Pricing Procedures

The requirements for competitive pricing procedures spelt out in the Transit New Zealand Act 1989 are the cornerstone for the tendering processes for all expenditure on road construction and maintenance and passenger transport. There are five principal considerations:

- 1) efficient application of the monies available for roads and passenger transport
- 2) the safety and other interests of the public
- 3) the desirability of encouraging competition in that sector
- 4) the undesirability of excluding from competition any party who might otherwise be willing and able to compete
- 5) the cost of administration associated with pricing procedure or any contract formed under it

The fact that all expenditure on passenger transport had to be subject to an approved competitive pricing procedure has complicated the issue of assisting the transport disadvantaged and the operation of the Total Mobility scheme, and specific competitive pricing procedures had to be developed. It should be noted that the Transit New Zealand Act also requires every regional council territorial local authority and Transit New Zealand to consider interalia the needs of persons who are transport disadvantaged.

The Transport Disadvantaged

The legislation is silent on who constitutes the transport disadvantaged. The regions have generally consulted with their constituents in an effort to define the social needs of the region. One group clearly acknowledged as transport disadvantaged is those with disabilities. Other groups could be school children, the elderly, those on low incomes, or Social Welfare beneficiaries (whether sickness, invalid, unemployment, or pension). The related issue, having identified the transport disadvantaged, is how to

meet their needs. This can include targeted assistance by way of concession fares or income support, or untargeted, such as ensuring services are available.

A discussion document prepared by a Working Group investigating these issues, (assisted by Professor Sandra Rosenbloom of the University of Arizona) is expected to raise some fundamental issues on the problems of transport disadvantaged. This is of particular concern in New Zealand with the number of elderly (and, therefore, potentially frail) predicted to increase by over 40 percent in the next twenty years.

Part 3: The Total Mobility Scheme

A key principle of the New Zealand Total Mobility Scheme is that access to transport is considered essential to independence. Another is the concept of equity for people with disabilities compared with the able bodied.

The Scheme is available to people with physical, sensory, and intellectual disabilities as well as some people with psychiatric illness and is available to individuals through membership of any of the participating disability agencies. The Scheme operates through the use of individual and agency vouchers, which are returned by the taxi companies to their regional council for reimbursement. The Scheme was established by the Disabled Persons Assembly (DPA), a national coordinating group for people with disabilities established following the 1981 International Year for the Disabled.

Passenger service programs aimed specifically for people with disabilities, and approved by Transit New Zealand to receive subsidies, are known as Paratransit programs. Those programs approved by Transit New Zealand at the beginning of each financial year receive a 40 percent subsidy from Transit New Zealand. The remaining 60 percent of costs are met by regional councils. This includes programs such as Dial-a-Ride schemes in Auckland and the Total Mobility Scheme. (Total Mobility is reported to make up 95 percent of the overall Paratransit subsidy). Any budget over-expenditure on Paratransit programs is met by the regional councils or disability agencies, although recent practice has been to curtail usage to limit expenditure to the budgeted amount.

Over time, regional councils have taken over the management of the Scheme in their region from the central disability agencies and the NZ Taxi Federation. This involves contracting disability agencies into the scheme, issuing them with the discount vouchers, and processing claims. The contract includes a clause which was originally a safety net for the originator of the scheme, DPA, and is a formal agreement that the agency will meet any funding shortfall. This means that if regional council funding runs out after (for example) ten months into the financial year, then the agency meets the subsidy cost for its clients for the remainder of the year. This has happened only once.

In many cases, a user of the Total Mobility Scheme will develop a rapport with a particular driver and will often request that driver each time. Furthermore, in many cases a driver will go out of his/her way to assist the user by taking the person to their door, turning on the light, carrying items inside for them, making sure they are settled, and sometimes driving by later to check on them. Such personal attention is so appreciated by the user that they usually request that driver again. In such cases the additional time spent by the driver is not normally compensated as it usually takes place after the fare has been paid.

Operation of the Voucher System

The Total Mobility Scheme is managed by the use of Yellow and Blue vouchers, which provide the holder with entitlement to a transport subsidy for taxi journeys.

Yellow Vouchers are issued by DPA-approved agencies to their clients who meet the criteria of being unable to use public transport solely because of their disability. The holder of Yellow Vouchers is then able to ride in taxis and is required to pay 50 percent of the metered fare at journey's end. The vast majority of vouchers used are yellow ones.

Blue Vouchers are also issued to DPA-approved agencies, but the agency is entitled to the 50 percent subsidy of the taxi's metered fare, not the individual. The individual is not required to make any payment to the taxi driver when using a Blue Voucher. The most common use of Blue Vouchers is for transporting people to and from programs run by a particular agency.

No restrictions are placed on the purpose of the journey. However, long distance travel across regional council boundaries is considered inappropriate use of the scheme.

The Total Mobility Scheme is provided in most geographical areas, but there are significant variations in use and availability to agencies.

The subsidy allowed for the Yellow or Blue voucher holder in most instances is 50 percent of the metered taxi fare. Of the 25 geographical areas that use Total Mobility, only one provides less than 50 percent subsidy, and only one does not subsidize taxi journeys of voucher holders from other areas.

Before 1988, an uneven rate of subsidy was provided by local councils participating in the Total Mobility Scheme. Most began with a 25 percent discount but subsequently increased this to 50 percent. The rationale for increasing the subsidy rate was to bring the net fare to the user closer to the cost of using public transport provided by local councils.

The Demand for Total Mobility

In 1992, the first (ever) study was undertaken to gain information about the use of Total Mobility Scheme and the purpose of trips. Prior to this, little quantitative information was collected about Total Mobility users. Two medium size cities were selected, Palmerston North (population approximately 72,000) and Dunedin (population approximately 117,000). The former is the location for a major disability resource center.

The study entailed a survey of all users of Total Mobility over a two week period with the taxi drivers in these two cities compiling the information through the use of the vouchers. A total of 2320 trips were taken by Total Mobility users in these two cities with 57 percent of the trips being in Dunedin and 43 percent in Palmerston North.

Approximately 45 percent of total trips was for trips home, and these were excluded from further analysis. Of the rest of the trips, the most common purpose was for work or for shopping. Table 3 shows the purpose of trips.

The majority of trips took place on weekdays with less than eight percent of trips being at weekends. The daily average number of trips was 214 for weekdays and 44 for weekend days. The bulk of trips were during daylight hours with only seven percent of trips being between 6pm and 6am. The average fare for Palmerston North was \$7.00 with fares ranging from \$2.40 to \$40.00. The average fare for Dunedin was \$9.50 with fares ranging from \$1.00 to \$44.50. (Dunedin is less compact than Palmerston North).

In September 1992, there were 430 registered Total Mobility Scheme agencies. There are approximately 2000 agencies estimated to be eligible to participate in the scheme. Despite active lobbying by the DPA

Table 3

Purpose of Total Mobility Trips (other than home)		
Purpose	Number	Percent
Work (voluntary or paid)	307	22.2
Shopping/Bank/Post Office	305	22.0
Medical (including Dentist)	285	20.6
Visiting friends/relatives	118	8.5
Club/Group meeting	84	6.1
*CCS activity	42	3.0
Education Institute	41	3.0
Training	40	2.9
Meals	29	2.1
Other (less than 2%)	134	9.6
TOTALS	1385	100.0
* CCS is the Crippled Children's Society which runs in-house activities for members. Source: Total Mobility Users' Survey		

for the Scheme, Total Mobility is not yet fully available throughout New Zealand to all people with disabilities.

There are also other factors influencing the demand for transport for people with disabilities, basically in the five categories of social, philosophical, economic, medical and demographic factors. These include:

- a greater awareness in the community of the needs of people with disabilities, new building regulations, and a mainstreaming philosophy in education,
- a greater number of people with disabilities completing educational programs, being in non-subsidized employment, or participating in social and public life,
- overall reduction in Government social service budgets. Many Government agencies, as part of overall cost containment measures, have reviewed their provision of subsidized transport,
- active encouragement for families with disabled family members to care for that member at home,
- a trend for providing care in similar community based residential homes for people with disabilities of all types,

- a greater number of "middle-aged" females are staying in, or entering, the workforce thus reducing the number of traditional family care-givers and shrinking the volunteer pool,
- economic pressures on volunteers, particularly the perceived relative increase in vehicle running costs, which has reduced the number of volunteers,
- biotechnological advances in the areas of life support, life expectancy, and mobility aids, which have led to a proportional increase in the number of people with disabilities living an active life in the community, and
- the current estimated six percent annual growth of our ageing population (aged 60 and above). Some 97 percent of those aged 60 and above continue to live in private dwellings.

A study commissioned by Transit New Zealand found that considerable new demand for the Scheme was being created through decisions made by external agencies. The study concentrated on Auckland, the largest conurbation in New Zealand with the following increased or new ridership demands being placed on Total Mobility:-

- An Auckland Area Health Board program accounting for five percent of regional Total Mobility and utilizing approximately 8,500 rides annually,
- A significant increase in the number of agencies and individuals registering for Total Mobility Scheme services to assist individuals to access health or vocational services,
- Likely increase in demand upon Total Mobility because of reduced Auckland City Council funding persons with disabilities,
- Increase in the costs and ridership of Total Mobility Scheme as more voluntary agencies try to meet the rehabilitation needs of their client group,
- Establishment of rehabilitation programs with attendance dependant upon individuals' use of Total Mobility Scheme,
- Unclear health/welfare interface with geographical and related boundary issues, and
- Voluntary and Government agencies currently (1992) providing services for people with disabilities being no longer of the opinion that transport is their responsibility.

Review of the Total Mobility Scheme

From June to August 1992, Transit New Zealand was privileged to have Professor Sandra Rosenbloom of the Roy P Drachman Institute of the University of Arizona as a Fulbright scholar for the New Zealand/United States Educational Foundation to work with Transit New Zealand on issues relating to the transport disadvantaged.

Professor Rosenbloom identified that, because the Total Mobility Scheme had grown so significantly since its conception, it was in danger of being overwhelmed almost by its very informality. Issues of serious concern were:-

- many eligible users were simply unaware of the scheme,

- the scheme was not promoted widely enough to meet the needs of all people with disabilities,
- budget constraints meant ridership limitations were imposed, often inequitably,
- monitoring was inadequate, and
- cheaper alternatives had not been assessed.

As a result, a comprehensive review of the scheme was undertaken in 1993.

As part of the review, five philosophical principles were defined along with two operational objectives. The philosophical principles are:

- The primary objective of the Total Mobility Scheme is to meet the transport needs of people with disabilities, providing them with individual freedom of movement within the accepted conditions of the Scheme.
- **Accessibility and Flexibility:** Subject to sufficient level of demand, services should be available in all regional and district centers, be available with minimal waiting time, and have maximum affordability within the limits set by regional funding provisions. As Total Mobility is a demand responsive service, Total Mobility suppliers and users must be prepared to take a flexible approach in meeting transport needs.
- **Participation:** Management systems for the Scheme should include avenues for input from Total Mobility users, and their views should have a significant influence on the provision and operation of Total Mobility services.
- **Dignity:** Services should be provided in a manner that does not compromise the social and cultural dignity of the user. Total Mobility services must present a positive image of people with disabilities and not suggest a charitable or dependent status.
- **Integration:** Total Mobility should enable users to participate in and contribute to the life of their community, breaking down transport barriers between those with disabilities and the wider community while promoting for the user a sense of independence and self esteem.

The operational objectives relate to the accountability of the scheme:

- a) There must be a set of explicit objectives by which all participants (users, agencies, regional councils, taxi companies) can assess the Scheme's effectiveness and level of performance.
- b) Total Mobility must be managed and operated in a manner consistent with its objectives and with processes which provide for clear accountability in the use of all funds. Monitoring systems should be incorporated into the day to day operation of the Scheme at all levels.

The conclusion of the review covered all aspects of the Scheme, and the recommendations are summarized thus:

- redrafted eligibility criteria;
- policies concerning the use and distribution of vouchers;

- compulsory training for all taxi drivers involved in the Scheme;
- new policies for the provision of wheel chair accessible vehicles including safety standards for hoists;
- proposals to improve the monitoring process including the establishment of Total Mobility committees in regions where they do not yet exist;
- measures to improve accountability for funding of Total Mobility;
- factors to be taken into account in setting Total Mobility regional allocations and methods of controlling Total Mobility budgets within regions;
- seeking increased central government funding to accommodate cost shifting from other government agencies in areas such as health and accident compensation; and
- identifying other ways by which the transport needs of some people with disabilities may be met.

It was clear that many of the principles that govern the Total Mobility Scheme as a voucher scheme can be transferred to any other voucher scheme, and that the experience New Zealand has gained can be built upon with good effect.

Part 4: Service Routes

Notwithstanding some of my previous comments, in New Zealand we are very proud of what we have achieved through Total mobility. But not all Total Mobility users really do need to travel in their own chauffeured car. Many of them could, and would, use scheduled services if the issue of accessibility was addressed.

I do not think the American solution of all buses having wheelchair hoists is cost effective or practical. Rather, I think the concept of service routes developed in Sweden needs worldwide consideration.

Service Routes are very clearly fixed route transport, they run along regular routes, use specific stops, have published timetables, and generally charge regular transport fares (or the same special fare charged to the elderly on traditional bus services).

Service routes are also non-traditional: they generally use special, smaller accessible vehicles, their timetables allow for a great deal of personal service by the driver, the stops are designed to minimize the traveller's walk to the ultimate destination, and the routes are designed to be responsive to the special origins and destinations of the elderly and disabled. Almost all of the existing systems were begun without any special funding. They supplement regular services in large cities (serving the same/comparable routes as traditional buses but with different vehicles and timetables), provide the only community transport in small urban or rural areas, or serve some parts of the community while traditional routes serve other parts of the community. While they are designed specifically for people with mobility problems (including parents with push-chairs), they are generally available to anyone who wants to use them.

A service route has four basic elements:

- a special vehicle: the vehicle is generally small (12-18 passengers) with low entry and a low

- floor throughout with kneeling features and a ramp to enable independent use or use with minimal assistance to the full range of people with disabilities, prams, or trundlers.
- specific routes: routes serve the major trip destinations such as shopping centers, banks, hospitals, etc. stopping at or near the door of major establishments.
 - generous scheduling: timetables allow sufficient time for all passengers to board and get off at their own speed and to seat themselves before the vehicle starts.
 - driver training: drivers provide any assistance the passenger requires from help in securing a wheelchair to route information.

Because of this combination of service attributes, many people who formerly required taxis or door-to-door service have switched, voluntarily, to the service routes. Many policy analysts were confounded by the willingness of clients with special needs to give up what appears to be "superior" door-to-door service in order to sit at a bus stop. But studies show that users like not having to order service in advance and the freedom, independence, and ability to travel with other people provided by service routes.

I am pleased to report that a trial service route is currently in operation in New Zealand. It will be interesting to compare results with the evaluations of the Swedish experience.

It is interesting to note how similar the situation that gave rise to service routes in Sweden is to the situation in New Zealand. It appears that several concurrent local and national institutional changes provided fertile ground for the growth of the service route concept: the regionalization of public transport services, compulsory competition in transport service provision, decreasing local transport subsidies, and the spiralling costs of special transport for the elderly and disabled. In other words, service routes were invented in a competitive environment which encouraged innovation.

The old expression "horses for courses" springs to mind, and that is exactly what passenger transport should be.

Note: Except where explicitly stated, the views expressed in the paper are my own, and do not represent those of any other person or organization.

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