

# MEETING OLDER PERSONS' MOBILITY AND ACCESS NEEDS – A RE-THINK ON PUBLIC TRANSPORT

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## INTRODUCTION

In recent years recognition of the important role transport plays in supporting a socially inclusive community has underpinned significant investments in public transport in Victoria. Most notably, the Victorian Government's 'Meeting Our Transport Challenges' (MOTC) strategy, released in May 2006, placed a strong emphasis on social outcomes. The MOTC included plans for wide-ranging investments across the next 10 years to improve public transport system's accessibility, availability, capacity, and affordability (State of Victoria, 2006).

To ensure that these investments really improve mobility and access for disadvantaged groups, there is much to be done at the planning and service delivery levels. Many mobility and access needs are often both user specific and local in nature. For example, the mobility and access needs of older persons may well be very different from those of younger persons; the needs of those in rural areas are likely to be different from those in the urban core. An important question is how much traditional public transport services can and should be altered to meet the needs of distinct sub-groups of the population.

The main advantage of traditional public transport services is that they serve the needs of many people at the same time; by promoting social homogeneity traditional public transport provides one type of social inclusion and does so relatively cost-effectively. However, not all disadvantaged groups can be served by traditional transit services; to the extent we offer these groups only one kind of service which does not adequately match their needs we may constrain their mobility. As a result we may actually increase their social exclusion, or create incentives to increased car ownership among these groups.

This paper evaluates one innovative type of public transport service – the Telebus system in suburban Melbourne - which offers a demand responsive feature within a traditional fixed route bus configuration. The paper compares this service with a traditional fixed route bus service and looks at the roles each plays in meeting the mobility needs of different user groups, especially older persons. This analysis allows us to question the extent to which traditional services, or modifications in those services, can bridge mobility gaps experienced by a range of disadvantaged travellers.

The paper suggests that re-configuring traditional transit services such as in the Telebus case can be responsive to the needs of older users—but sometimes at the cost of diminution of service to other users. The paper concludes by discussing the challenges posed to policy makers, planners and service operators by these findings and suggests the need to re-think how the mobility needs of the disadvantaged could be better met in the coming decades.

## **THE TELEBUS**

The Telebus is the only demand responsive bus service known to be in use in Melbourne. Operating in the outer east suburbs of Melbourne, it offers a combination of fixed route and demand responsive service which enables passengers to be picked up or dropped off anywhere in the Telebus zone for a small surcharge<sup>1</sup>. Users can also be picked up or set down at designated bus stops along the route at the normal bus fare.

Since they began operations in Lilydale in the 1970s, Telebus services have expanded to other nearby suburban communities in Victoria, including Mooroolbark, Croydon Hills, Chirnside Park and Rowville. These areas are often quite hilly and typified by narrow streets, many with cul-de-secs. The spatial configuration of these communities makes operation of normal sized buses quite difficult. Currently 12 Telebus low-floor vehicles with 33 seats are deployed across 7 designated Telebus zones, as well as one hybrid route with a demand responsive area in the middle of the route. For this paper Areas 1, 2, 3 and 4 are referred to as the Telebus Lilydale; the Areas 7, 8 and 9 in the suburb of Rowville are referred to as the Telebus Rowville. The route areas are shown in Appendix A.

Over some thirty years of Telebus operations, outer east Melbourne has grown to a mature low-density suburb. In 2006, the Department of Infrastructure, Victoria, commissioned a study, Telebus Mobility and Access Benefits (referred to as the Telebus study hereafter), to identify the mobility and access impacts that Telebus has had on individuals and the local community. Specifically the project aimed to answer the following questions:

- Whether Telebus users are distinctly different from users of conventional fixed route buses, if so, why.
- Whether the Telebus, due to its demand responsive feature, has made a wider impact on the general population's travel behaviour, such as reducing the level of lift-giving in the local community.
- Whether the Telebus has contributed to other social benefits such as a sense of personal safety, independence and security and/or a sense of being part of the community.

The study surveyed residents in local areas in the outer east Melbourne, as well as bus users of both the Telebus services and of a fixed route bus in the area, referred to as Route A hereafter.

The Telebus operates from 5am to 7pm on weekdays, running every 20-40 minutes in peak times and hourly in off-peak; the fixed Route A operates half hourly from 5.30am to 9.30pm on weekdays. Both the Telebus and Route A services have stops at the local train stations, local shopping precincts, primary schools and secondary schools along the routes, while Route A also connects to a university.

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<sup>1</sup> A surcharge is applied to pick up/drop-off request at 90 cents one way, and 60 cents for concession card holders.

## KEY FINDINGS

### Bus user profile

The Telebus was first reviewed in 1984 when it was operating in Lilydale only (MoT 1985). At that time, it was found that Telebus users were typically:

- Females;
- Young adults and over 55s;
- Students and retirees; and
- People without a driver's licence.

The recent Telebus study has found that whilst the dominant user profile remains unchanged over the last thirty some years, the Telebus now has a higher share of older users than before. Compared with Route A in the area, the Telebus users in proportion are also more likely to be older (55 years and older) and on a pension, than users of the fixed route bus (Table 1).

**Table 1: Bus user profiles: the Telebus vs a fixed route bus**

| Dominant Characteristics* | Telebus Users   | Fixed Route Bus Users  |
|---------------------------|---|--|
| Gender                    | Females (66%)   | Females (59%)  |
| Age*                      | 15-24 years (38%)<br>55 years and over (36%)                                | 15-24 years (57%)<br>55 years and over (18%)                               |
| Current Activity          | Students (27%)<br>Pensioners (24%)  | Students (41%)<br>Pensioners (6%)  |
| Do not hold licence       | 78%   | 74%  |
| Frequency of Bus Usage    | Daily users for work and school purposes (19%)                              | Daily users for work and school purposes (40%)                             |
| Bus Travel Purpose        | Shopping (31%)<br>School (21%)<br>Personal appointments (18%)<br>Work (18%) | School (36%)<br>Work (26%)<br>Shopping (19%)<br>Personal appointments (7%) |

\* Only people over 15 years and over were involved in the surveys.

Changes in the Telebus over time have also been observed in trip purposes. In the 1984 study, users were found to travel on the service primarily for work (35%), shopping (26%), school/education (31%), with 8% using the service for other reasons (MOT, 1985). In the latest study, only 18 % of trips are for work travel. For bus users over 15 years old, going to shops is the dominant reason for using the service, followed by education (21%), and personal appointment reasons (18%).

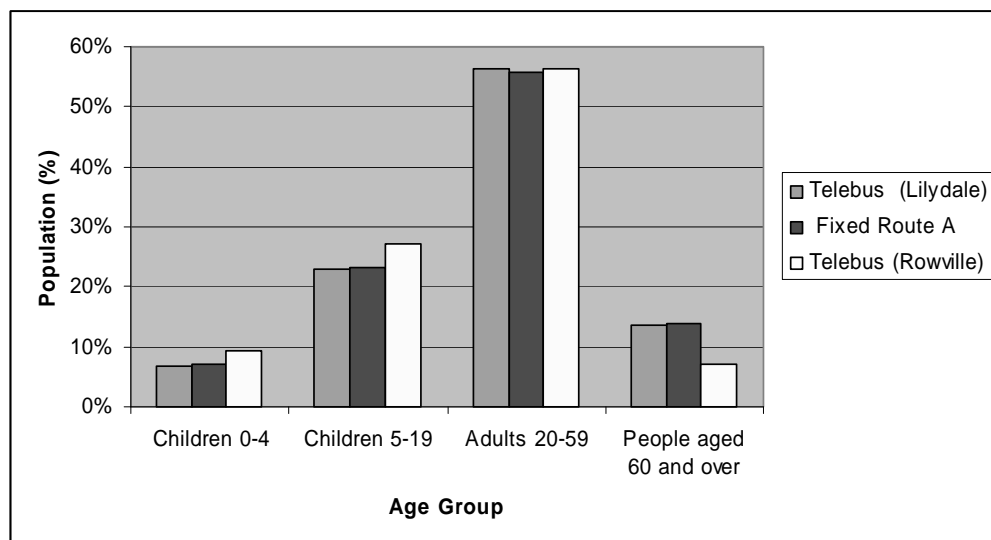
The latest study found that, compared with the Telebus service, the users of bus Route A are more likely to travel for education purposes (36%) followed by work (26%) and shopping (19%). There are also some marked differences in the proportion of travellers who use each

service daily. Daily bus users who travel for work and education purposes make up 40% of the fixed route bus users, but only 19% of the total Telebus users.

It is noteworthy that compared to the fixed route service, the Telebus is two and half times more likely to be used by people who travel to personal appointments - a phenomenon that is attributable to the demand responsive feature of the service, as will be discussed later.

In short, the Telebus service appears to have attracted older persons more than other user groups, and also to be used more for non-work related trips. Compared with the Telebus operation over 30 years ago, there have been increases in the proportion of older users which is also reflected in changes in trip purposes made on the Telebus.

To investigate whether the higher proportion of older users is attributed to the Telebus operation or to demographics of the individual areas it serves, the population profile of the Telebus areas is compared with that of the area within 400 meters of Route A (Figure 1) (ABS, 2001).



Source: Census 2001 (ABS)

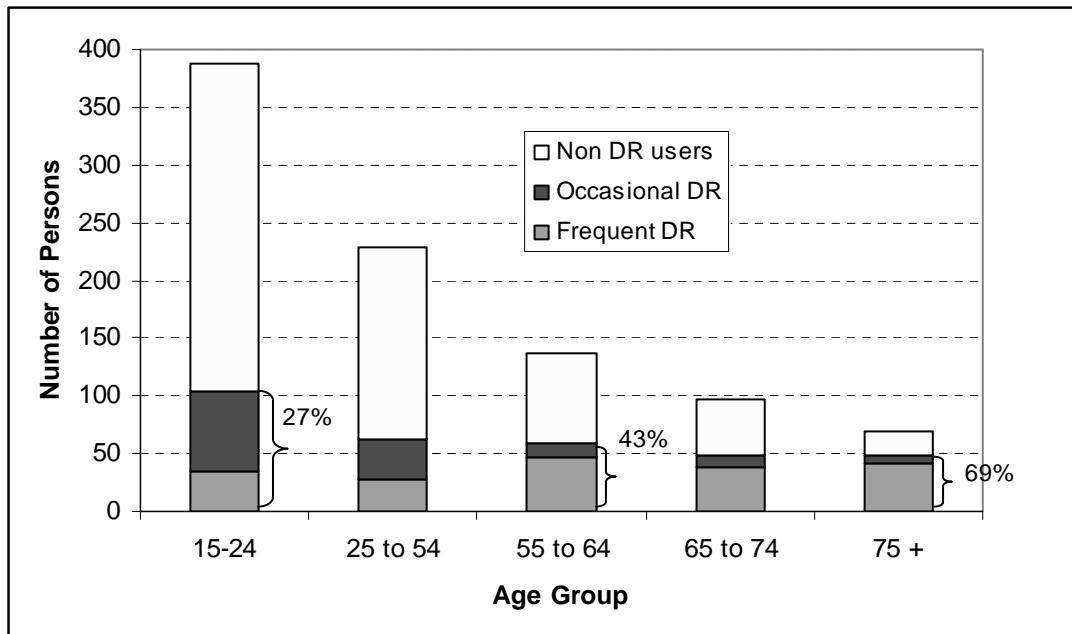
**Figure 1: Age profiles of the bus service catchment areas**

Figure 1 shows that the demographic profile of the population within the Telebus Lilydale area is almost identical to the population within the 400 metre catchment of the Route A service. The Telebus Rowville area appears to be younger in general than the other two areas. Whilst further research is needed, it is most likely that the Telebus's higher proportion of older users is attributed to its unique operation rather than to the differences in the demographics of the population.

### **Users of the demand responsive feature**

The Telebus study found that around 45% of all Telebus users have used the demand responsive (DR) feature at some time; this includes frequent users (26%) who take advantage of the DR feature almost every time they travel on the bus service and occasional users (19%) who use it at some occasions.

As expected, use of the DR feature increases with age, ranging from 27% for the younger (age between 15 and 54), to 43% for people aged 55 to 64 years old to 69% for people aged 75 years and over, as shown in Figure 2.



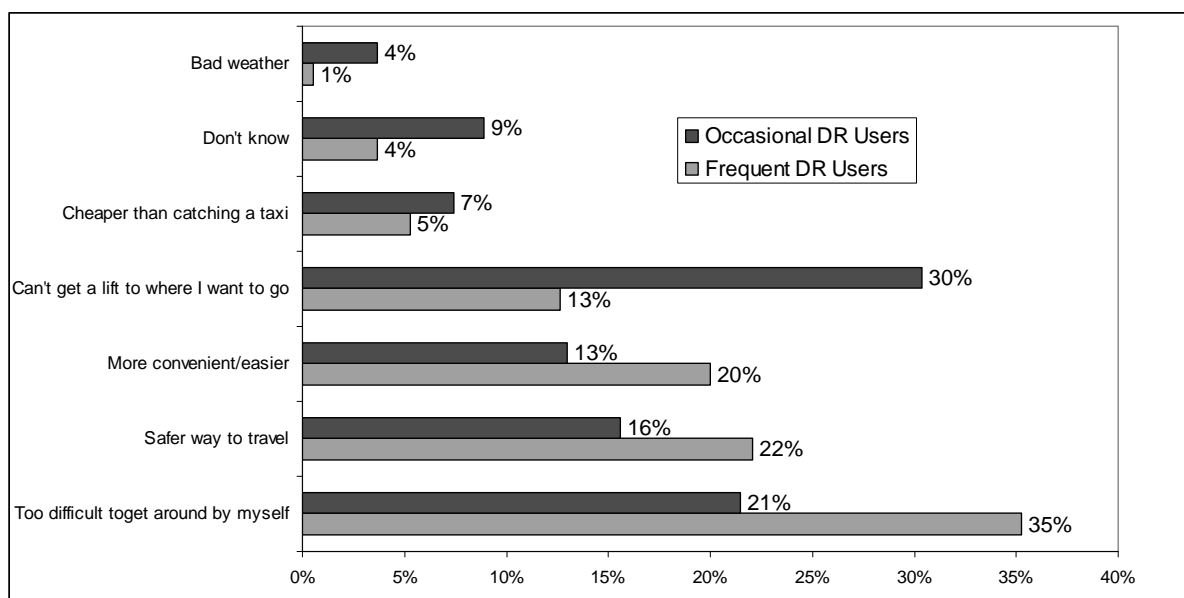
**Figure 2: Use of demand responsive feature by age group**

As shown in Figure 2, of those over 55 years old who utilise the DR feature, most (81%) use it frequently. In comparison, the majority of the younger users (aged 15 to 54) of the DR feature occasionally take advantage of the feature. Females DR users are by far the most dominant group, representing 74% of the DR users and 81% of the frequent DR users (Table 2).

**Table 2: Demand responsive usage by gender**

|               | Demand Responsive Usage |      |            |      | Total | %    |
|---------------|-------------------------|------|------------|------|-------|------|
|               | Frequent                | %    | Occasional | %    |       |      |
| Female        | 154                     | 81%  | 88         | 65%  | 242   | 74%  |
| Male          | 36                      | 19%  | 47         | 35%  | 83    | 26%  |
| Total Persons | 190                     | 100% | 135        | 100% | 325   | 100% |

Eighty percent of those DR users who report having a health condition or disability that affects their travel take advantage of the DR feature almost every time they travel on the Telebus. Clearly, for those frequent DR users, the DR feature helps them to overcome their reported “difficulty getting around by myself” (35%); for occasional users, the DR feature addresses difficulty in “getting a lift” (30%). As Figure 3 shows concerns for safety in travelling and convenience factors were also common reasons for using the DR feature.



**Figure 3: Main reasons for using the demand responsive feature**

It can be seen that those people who use the DR feature on a *frequent* basis appear also to be *dependent on it* for their mobility and access needs, as a result of:

- difficulty getting around generally due to older age and/or health condition/disability;
- heightened concerns for safety in travelling alone, due to gender or older age; and
- perceived convenience provided by the DR feature.

This is illustrated from the following quotes obtained from an intercept survey of bus users conducted as part of the Telebus study:

- “It’s too hard for me to walk by myself especially if I have shopping.”
- “I find it hard because of my arthritis to walk to the bus stop.”
- “I need it. I don’t drive and would stay at home if it wasn’t there.”

The availability of the pick-up and drop off feature has certainly improved access to activities and the opportunities for social inclusion for older persons in general, as powerfully captured in the following feedback obtained in the intercept survey:

- “I would say it's improved my enjoyment of life; I probably wouldn't go out to a seniors' club. They're [the driver] so good”.
- “We go and have coffees on Fridays; it's the convenience and the social aspect of it. Everybody is enjoying each other's company on the bus.”

For those occasional users, comprising both commuters and younger persons, the DR feature offers additional sense of safety for travelling in evenings and independent mobility for young persons as illustrated in the following:

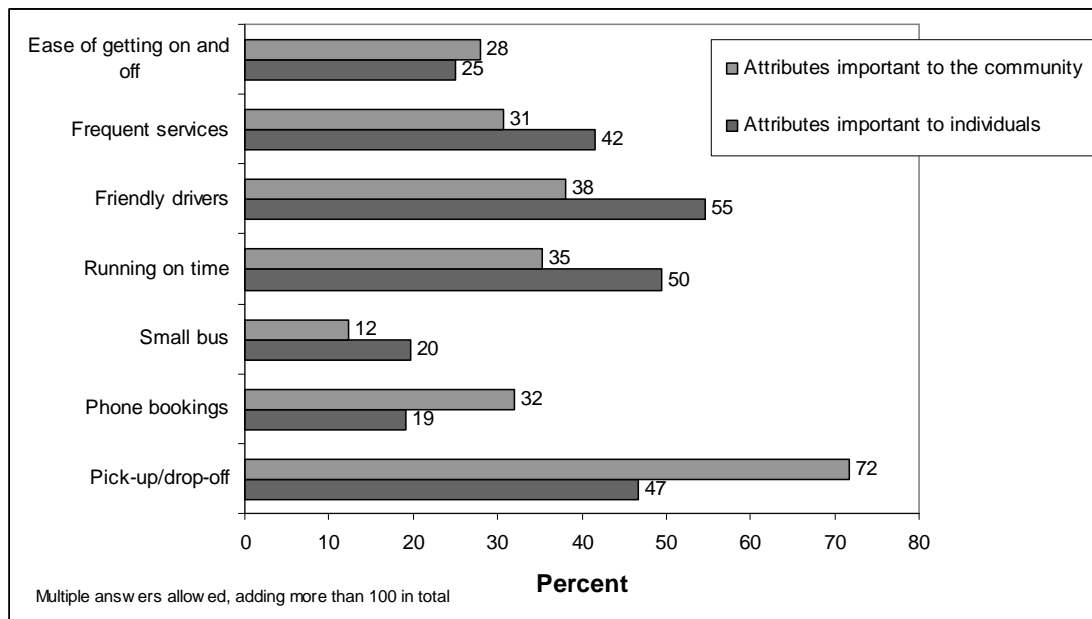
- “My husband appreciates the fact that I’m not walking around the street at night-time”.

- “My mum is constantly going on: I'm sick of driving you kids everywhere - we've got a pretty big family - so it's nice to be able to go out and do things without having to ask mum.”

### Tensions between different user groups

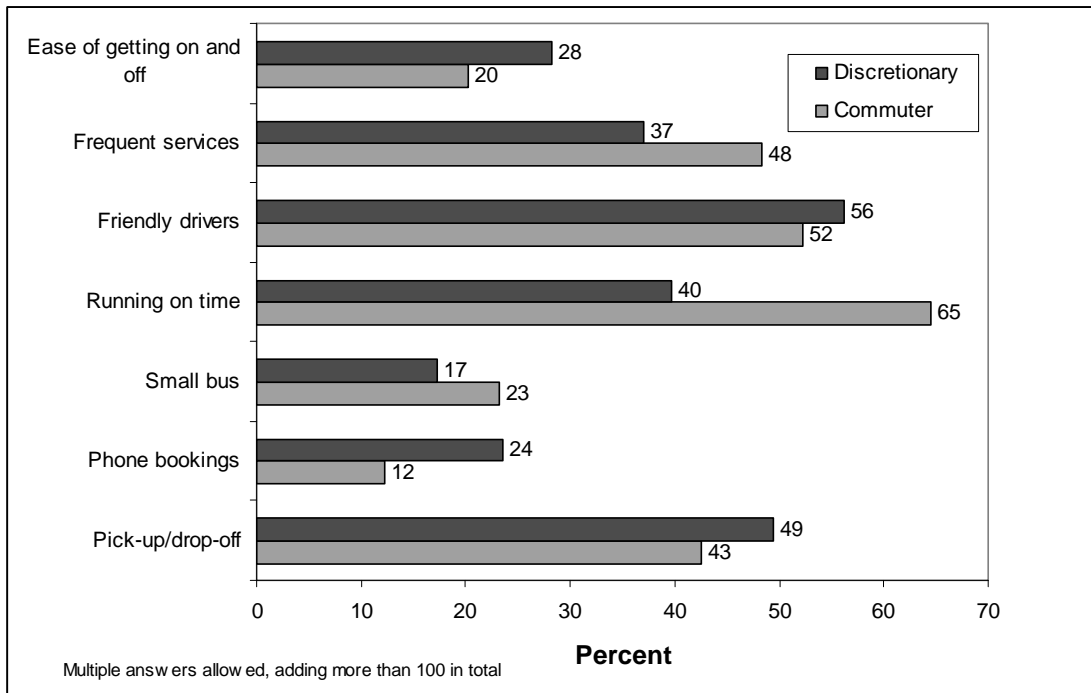
During the intercept survey Telebus users were also asked to nominate the three most important bus attributes to them individually and to the community in general.

Most Telebus users (72%) recognised that Telebus’ demand responsive feature is good for the community. Speaking for themselves, however, having “friendly drivers” was the most important bus attribute (55%), which is followed by having buses “running on time” (49%) (Figure 4).



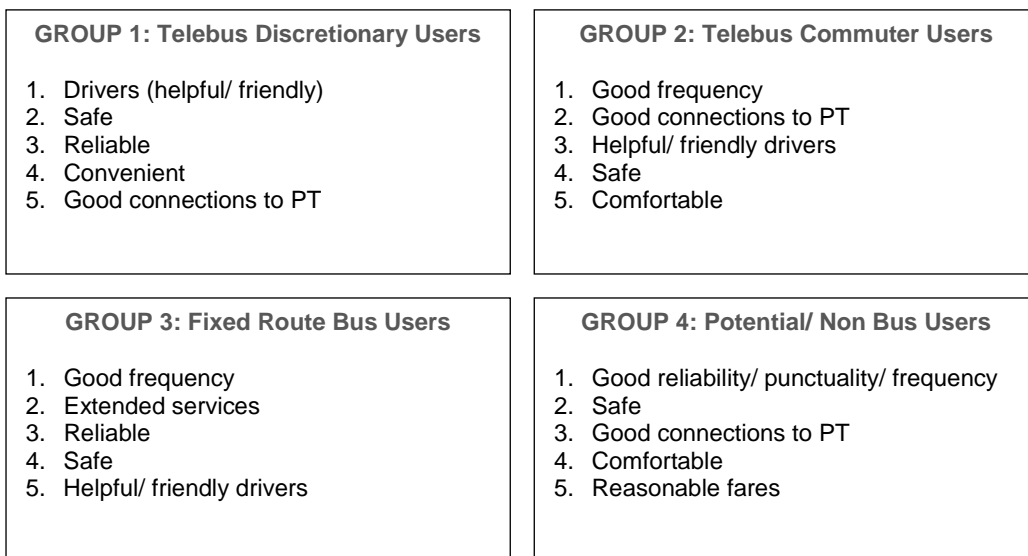
**Figure 4: Most important personal vs. community attributes**

Further analysis of the intercept survey results also reveals that there are significant differences in expectation of a good bus service between the commuter and the discretionary users of Telebus services. Helpful and friendly drivers are clearly more important to the Telebus discretionary users who are mainly older persons and who travel for purposes other than work and education, then followed by home pick-ups. But for the Telebus commuters, service punctuality or reliability is the most important feature; the second most important feature is also friendly drivers, followed by service frequency.



**Figure 5: Bus service attributes that are important to individuals by trip purpose**

Results from four focus group discussions included in the Telebus study further support that different users have different service preferences (Figure 5).



**Figure 5: User preferences for a good bus service**

The above results clearly indicate that different users have different service preferences because of their different travelling needs.



## DISCUSSION

The foregoing discussions suggest that a demand responsive bus service like the Telebus would be much welcomed by older persons since it provides additional ease of physical movements, a personalised customer interface, and assurance of safety in travelling. This project confirms other research findings that these features are highly valued by older persons (Boyles et.al., 2007; The Beverly Foundation, 1999 and 2003; AARP, 2001). At the same time the Telebus study indicates that the travelling needs of commuters and school children may not be as well served as they would be by a fixed route service. Conversely a fixed route service meeting the needs of some other groups well, might not serve older persons as well as the Telebus.

Clearly both older users and other bus riders are seeking to address their mobility needs by using public transit services, but their service preferences vary with underlying differences in their travel needs and constraints. Older users who travel for discretionary purposes value personalised services, such as helpful drivers and home pick ups whilst other users, such as commuters, are more concerned with reliability and frequency of services. The decline in the use of the Telebus for work-related trips over the last thirty years may be due to the fact or perception that it is more suitable for older persons than for other users. It is possible that some people may have elected to “opt out” as the service became too problematic for them. What have happened to these groups? Further research is needed to understand what alternatives these groups have turned to and what impacts that might have on their quality of life.

At the operational level, such a conflict may be resolved by providing both more frequent and direct services in the peak periods and demand responsive services in the off-peak. At the same time, many older people do need to travel in the peak for medical and other appointments and will be disadvantaged by the lack of peak period DR services. Conversely some commuters such as casual workers who may have to travel in off-peak periods may also be disadvantaged because of indirect routes associated with the demand responsive feature.

The mismatch between traditional transit services and older persons’ mobility needs is likely to increase in the future with the growth of an ageing community, unless appropriate responses are developed.

There are many possible responses. Publicly these could include increasing the uniform level of public bus services in the suburbs; providing choices between direct-run and demand responsive services locally, offering discounted taxi services; and integrating with other transport providers such as community transport services that currently are offered only to the frail and people with disabilities and also have restricted trip purposes. In addition, older persons have also been found to frequently rely on lifts from others (RACV, 2006). Clearly both public and private options could be considered to provide an integrated range of mobility options for older persons; this is consistent with the policy framework that considers transport provision as a part of larger quest for improving well-being and social inclusion for the community.

Recognition that public transport services need to respond to different needs of the general population have underpinned calls for services to be more customer focused and tailored (U.S DOT, 2003; TCRP, 2002). This push is suggesting a new face of public transport; public transport should be developed to better match users’ mobility and access needs, rather be constrained by the mode of operation. The conventional public transport with fixed route and

fixed timetable services is most likely not able to respond to different needs with the population adequately. Under this new framework, public transport agencies should work closely with community organisations and other agencies to provide a range of mobility options that are affordable, acceptable, and accessible to distinct needs groups.

## **CONCLUSION**

Based on a recent evaluation of the suburban Melbourne Telebus service, the paper discusses the different roles both a conventional bus route and a demand responsive bus service play in meeting the mobility needs of older persons and other bus users. The study clearly shows that re-configuring traditional transit services can be responsive to the needs of older users—but at the risk of compromising the needs of other users. Yet this problem can be addressed to some extent by increasing the levels and choices of public transport provided to both sets of users. In addition, the paper suggests that other public and private options could also be considered in order to provide an integrated range of mobility and access options for specific user needs such as those of older persons.

This study highlights the importance of understanding and responding appropriately to the different mobility needs of different sub-groups. It argues first, that successful public intervention requires the development of different mobility choices for different groups, and second, that the public transport sector needs to re-evaluate how it defines its identity in order to meet the mobility challenges of an increasingly diverse, and ageing, society. The challenges that lay ahead are to make the best use of existing resources, and to ensure that older travellers (and other distinct user groups) are able to use the mainstream services and continue to be included in the larger life of the community.

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