Increasing Car Occupancy Levels: 3 for Free Parking in Canberra

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Abstract:

Travel demand management (TDM) uses incentives such as priority access to, and pricing of, parking to influence motorists to use private vehicles more efficiently (especially for commuting) by forming car pools.

This paper examines the usage rates and user characteristics of the two 3 for Free high occupancy vehicle carparks in Canberra as a TDM tool.

Analysis indicates the use of the carparks doubled after their upgrading and the promotional campaign, with most of the new users converting from single occupant cars — the optimal TDM target group.

3 for Free carparks thus seem to be a useful TDM measure with quite considerable potential in the Canberra transport climate to give both transport efficiency and environmental benefits.

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Introduction

The economic, social and political environment of the 1990s has three important themes for planners and providers of transport services, namely budgetary constraints, increasing environmental concerns and the need for more and better community consultation. These have meant that the thrust of transport planning and operations is moving away from the traditional supply emphasis towards travel demand management (TDM).

This paper examines high occupancy vehicle (HOV) carparks as a measure to encourage increased commuter vehicle occupancies in the context of TDM. In particular, it examines Canberra's 3 for Free carparks as an example of such measures.

Car-pooling and TDM - Theory and Practice

The first step in linking TDM and car-pooling is defining each term. For TDM, a broad definition centring on effectively meeting transport needs (rather than demands) seems most appropriate, for example: 'Measures for reducing the impact of travel on the road system, rather than those directed principally at reducing the need to travel, or the total amount of travel' (Pak-Poy and Kneebone, 1990, p1); or 'Any measure which can reduce the peak demand for travel by providing a relative advantage for another mode, origin, destination, route, time or frequency of travel' (Beard, 1990, p1)

Car-pooling is 'the use of one person's private or company vehicle to carry one or more fellow passengers, either by using one car and sharing expenses or rotating vehicles so that no money changes hands' (Sweetland, 1992, p1)

Figure 1 suggests a method of placing car-pooling within the theoretical framework of TDM, by tracing HOV carparks through a hierarchy of specific measures, strategies and objectives to a TDM 'goal'.

At the policy and operational level, car-pooling has been clearly identified as an important initiative by the ACT Government. Both the ACT ALP's 1992 political platform (ALP, 1992, p1&3) and the 'ACT Transport Policies and Strategies' document (ACT Government, 1991, p5&11) advocate car-pooling as a key incentive to more efficient use of private cars, especially by commuters.

Whilst this policy set the scene for advocating formal car-pooling in Canberra, successful Australian examples of formal car pool systems are rare (Hodgkin & Anderson, 1990). There has, however, been a substantial resurgence of interest in car-pooling by transport professionals in the last two years, driven by the dual pressures of economic efficiency and environmental concern. Transport planners are generally not repeating the experiments of the 1960s and 1970s to set
Figure 1: Car Pooling in a TDM Framework

THE GOAL

OBJECTIVES
- Targeted traffic flows
- More public transport use
- Higher vehicle occupancy
- Denser urban form
- Employment location to encourage "backloading"

STRATEGIES
- Paratransit
- Car pooling
- Trip reduction ordinances
- Higher public transport load factors

SPECIFIC MEASURES
- Information (matching schemes)
- Work practices
- MOV car parks (availability, location, price)
- Transit lanes
- Traffic and area access priority

monitor our progress toward the goal of reducing traffic congestion and improving public transportation use.
up systems to create carpools by matching users, but rather establishing the transport environment to encourage the 'natural' formation of car-pools. This means giving HOVs price and location incentives for parking, road use and traffic priority and employer incentives (Hodgkin & Anderson, 1990; Richardson, 1992; Sanderson, 1992; Sweetland, 1992).

On balance, car-pooling has historically been a transport 'tough nut', but is showing increasing promise given the new economic and environmental agendas of the 1990s.

The Canberra Transport Environment

Canberra has been planned and developed with four separate 'town centres' which provide large dispersed commercial/retail centres (See Figure 2). It has only been in the last seven years that the most central and oldest centre (Civic) has become the prime focus for development and its rapid growth has meant increasing congestion (albeit limited compared to most other capital cities) and the pressure to provide new and expensive road and parking infrastructure.

Even so, Canberra is very car-dependent for a city of its size (290,000 people). Based on 1986 Census figures (ITPA, 1990, p10-11) Canberra has the highest levels of car availability (1.51 vehicles/household) and among the lowest public transport journey-to-work modal share (22%) of any Australian capital city.

Figure 2: Major Town Centres in Canberra

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However, the ACT Government is encouraging more efficient car use by commuters, with car-pooling being identified as a specific measure. In particular, behind this general policy objective, there are five distinct factors which make the underlying transport environment in Canberra especially conducive to the use of HOV carparks.

Economic Stringency

The economic circumstances of the 1990s have meant that the funds available for transport investment and operations are the scarcest for over forty years. At the system-wide level this has resulted in a push for transport efficiency and effectiveness through regulatory reform, new work practices and ever tighter budgets. The impact often can be as severe at the individual level, with less disposable income often changing the amount and way in which people travel. The better transport resource use and money-saving advantages of HOV carparks become more attractive in such circumstances.

Environmental Pressures

A high profile has been given to the Greenhouse and Ecologically Sustainable Development initiatives by both politicians and the community in the ACT, and the existing transport system is seen as a key element which has to be changed if significant environmental gains are to be achieved.

This has generally been enthusiastically supported by many transport planners, as the changes sought by environmental groups are equally desirable for transport efficiency reasons. Indeed, stressing the environmental case may be an easier way of selling a transport change or restraint policy, as people can better understand how their vehicle contributes to pollution rather than to congestion (Hills, 1991, p33).

Increasing Pressures on Parking

Parking supply (especially in Civic) is declining in both absolute and proportional terms; is getting expensive (25% increases in Civic in January 1990 and in both Civic and Woden Town Centre in July 1990 with rates expected to double again in the next few years); there are commuter parking bans in surrounding residential areas; and active promotion and discrimination towards public transport. There may also be other specific traffic management measures to favour HOV implemented in the near future (eg transit lanes). These factors combine to make parking sufficiently scarce and expensive to prompt changes in travel behaviour, such as using HOV carparks.
Government Control of Parking

The ACT is rare in having one level of government and administrative organisation which controls the public transport system, traffic management and much of publicly available parking facilities, and thus is able to influence and monitor the key variables of parking, public transport and traffic in an unusually controlled environment.

Having a relatively high level of control of the 'trip end' is critical in being able to influence peoples' travel methods and patterns - the essence of TDM.

Urban Form

As a 'planned city', Canberra has developed with dispersed town centres spread over a large urban area. This has meant long distance (although generally rapid) commuter trip lengths with very low occupancy rates (a peak hour average of 1.14 persons per car). There is now active support for urban consolidation, particularly along transport corridors. While the prime beneficiary of these moves will hopefully be public transport, it will also make HOV use more attractive through shorter pick-up distances at the residential trip-end.

The five factors outlined above mean that encouraging HOV use in Canberra should provide a favourable outcome for such TDM measures. If it doesn't work in such relatively favourable circumstances for a low density city, the chances will not be good for wider acceptance elsewhere in Australia.

What we had

Commuter parking charges are relatively new to Canberra with long-stay parking fees introduced in Civic only in 1986. Commuters, long accustomed to free and convenient parking, were opposed to the charges, regarding them as purely revenue raisers, and apparently not recognising that they may perform a legitimate role in rationalising the use of a scarce resource. Similar resistance was anticipated to the introduction of parking charges at Woden Town Centre, the second largest employment centre, which was then being planned.

The following HOV parking system was thus conceived in a climate of increasing uncertainty and became as much a foil against public criticism as a positive TDM initiative.

In this scheme, to be considered an HOV, a car would need to have at least three persons, of no specific age, on board. In areas where parking charges were levied, particular carparks would be identified as providing free parking for HOVs for a limited time on weekdays. During these hours an attendant would be present in a booth at the carpark entrance to verify the number of occupants per car and to
'3 for Free' Parking in Canberra

distribute free parking vouchers as appropriate. Low occupancy vehicles, or any cars
arriving outside HOV hours, would pay the full parking fee.

Canberra’s first HOV carpark was launched in late November 1988, at Woden
Town Centre, in conjunction with the introduction of pay parking. The 180-space,
long-stay carpark was operated by a private subcontractor who included the free HOV
component as a marginal operation, part of a much larger carpark contract. No spaces
were reserved exclusively for HOV use. A booth was staffed until either the carpark
was full or until the attendant left in the afternoon. The subcontractor was obliged to
erect a small sign at the carpark entrance advising patrons of the conditional free
parking. This was the sole reference to the scheme. As would be expected, the
subcontractor did no further promotion or advertising. The only other publicity given
to the HOV parking scheme was its mention at the end of a media release announcing
the new parking charges.

HOV parking was introduced in Civic in February 1990, linked to a ban on
commuter parking in residential streets surrounding the Central Business District. The
decision to make HOV parking available was used to deflect public criticism and
publicity was limited to a media release.

The 135 space carpark was operated by the ACT Government and it was open
for HOV use between 7am and 10am when an attendant was present. Otherwise, the
carpark provided only voucher controlled short-stay parking with no spaces reserved
for HOV patrons. A folding sign at the carpark entrance displayed the HOV rules
while the attendant was present. Outside HOV hours the sign would be folded to
display standard short-stay voucher details and omit any HOV information.

Patronage statistics for Woden HOV scheme were kept by the subcontractor
for the purposes of payment. However the data are regarded as unreliable and
patronage trends have been based on experience gained later with the second HOV
carpark.

The Woden HOV scheme had three things against it. Firstly, Woden’s history
of free parking would have discouraged a culture of car-pooling. Secondly, the
absence of publicity meant that only people who happened to notice the small sign at
the carpark entrance would have learnt of the scheme’s existence. And finally the
parking charges were not high enough ($1.00 or $1.50) to significantly encourage car­
pooling. Therefore initially very low HOV usage would be expected with growth
depending on word of mouth.

By 1990, parking surveys show that before 8.30am the carpark was usually
full of paying customers with only a handful of HOV patrons managing to find a
space. The situation was unchanged in September 1991 - so that this certainly was no
incentive to car-pool!

HOV patronage in Civic had more in its favour. Parking fees were double
those at Woden and had been in place for four years before the arrival of the HOV
scheme in 1990. An embryonic car-pooling culture may possibly have been
developing unassisted, and a relatively convenient carpark location plus a
comparatively tight parking supply in Civic should have encouraged usage.

In fact HOV patronage was initially low at Civic with only between 8 to 14
cars per day. Five months after opening, 45 to 55 HOV cars were parking each day

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This level of usage remained relatively stable, though occasionally drifting down to 30 to 40 HOV users per day, until September 1991.

It should be stressed that, from the beginning, variations can be seen between days of the week. For instance, on Mondays and Fridays usage tends to be lower as members of car-pools take extended weekends or are more likely to use their own car for shopping or socialising. Car-pools are also casualties of school holidays.

What we did

The ACT Transport Strategy, released in 1991, emphasised the importance of encouraging more efficient vehicle use, with the commuter car a particular target in the light of Canberra’s low journey-to-work car occupancy. In this context, the poor performance of the HOV carparks was an obvious target, and it was clear that the carparks should be promoted if the Government was serious about TDM and committed to the Transport Strategy.

From HOV to 3 for Free

The HOV scheme was in place at two carparks. Each was differently administered and partly disguised as offering purely long-stay or short-stay parking. They had been partly established to offset public perception that the Government was using parking control purely as a revenue raiser and had then been ignored. They had no name and no identity and had been discovered by their few patrons probably by sheer chance. Before any campaign could be devised the carparks had to be made promotable and brought under the same management.

As a first step the name 3 for Free was chosen to convey the essentials of the scheme and a logo depicting three figures in a car was designed. (See Figure 3)

At Woden responsibility for free HOV parking was shifted from the subcontractor to the ACT Government and the 3 for Free carpark was moved to a centrally-located 130 space Government short-stay voucher carpark.

The Publicity Campaign

A low-cost campaign was developed around the new carparks' identity, and new Woden location, to raise the public profile of the scheme. It was based on the four elements of radio advertising, improvements to signage, free media coverage, and a
Figure 3: 3 for Free Publicity Material

Pamphlet posted with 55,000 ACT Government rates notices in October 1991

Stickers handed out with survey forms and at other events
pamphlet insert with rates payment notices. These had been chosen on the basis of value for money and guess-work, in the absence of any HOV market research in Canberra.

For two weeks in late September 1991 the major commercial radio stations carried 3 for Free advertising during morning and evening 'drivetime' programs, including a 'Win Breakfast for Three' competition open to 3 for Free patrons. The Canberra Times carried an article about the scheme and its place in the Transport Strategy and pieces appeared in the local community papers, and interviews and reports made the local TV and radio news bulletins.

Well-designed direction signs, featuring the logo and name, were placed at key intersections and on approach roads to both carparks. At the carpark entrances new, far more prominent folding signs were installed, which could display both standard parking voucher information and '3 for Free' details outside opening hours.

To conclude the campaign the Minister for Urban Services, Terry Connolly, drew the winners of the breakfast competition. Several weeks later, as a reminder, a 3 for Free pamphlet was sent out with 55,000 rates notices (see Figure 3).

There was no attempt to provide information or 'matching services' to directly form car-pools. Rather a parking incentive was provided and publicised which offered financial savings and convenience.

The Survey

A simple user survey was developed to obtain information on users, including length and frequency of use, how users travelled prior to car-pooling, effectiveness of the 3 for Free publicity, and where they lived.

A survey was taken at each carpark from 7am to 10am on a Tuesday in December 1991 and a Wednesday in March 1992 to provide data snapshots. The method of collection was made as user-friendly as possible to ensure the maximum response. Collectors distributed pencils and a questionnaire to every member of each car-pool with a request to complete the form and to leave it under the windscreen wiper for collection. A copy of the survey form is Appendix A. Responses from each car-pool were aggregated for comparison. The response rate was overwhelming, up to 96% in Civic and 83% in Woden. The results will be discussed in the next section of this paper.
What we got

Patronage

During the campaign, usage at Civic climbed from around 50 to between 70 and 80 cars per day, with a peak of 93 just after the campaign. Allowing for daily variation, usage remained steady between the high 70s and high 80s until pre-Christmas when it rose to the low 90s, peaking at a record 106 cars in early December. During the holiday period after Christmas, patronage plummeted to between 30 and 50 cars per day. By early February it had recovered to between 80 and 90 cars per day.

At Woden, patronage rarely reached 20 cars per day before the carpark location was shifted, as previously discussed. During the campaign between 12 and 24 ears per day were recorded. In the weeks following, usage nearly doubled. After a drop in patronage over Christmas, usage recovered to the previous level, exceeding 50 cars per day on occasion.

In patronage terms, this meant that occupancy rates in Civic initially rose from 40% to 78% (subsequently stabilising at about 70%) and from 10% to 30% in Woden. These patronage trends are shown in Figure 4.

Survey results

As previously noted, response to the survey exceeded expectations and gave good statistically significant results (See Table 1). A portrait of the average user compiled from the survey data shows that they are most likely to be in a long-term permanent car-pool, the other members of which are co-workers or a mix of co-workers and adult family members. A minority share only with children. Most Civic patrons claim to have learned of the scheme from other people whereas slightly more patrons at Woden discovered 3 for Free from signs than by word of mouth. The vast majority (98%) of patrons are workers, rather than shoppers or others.

Before the survey, there was concern that the 3 for Free scheme might merely have been attracting bus commuters. It was also anticipated that the typical user might be one adult plus a carfull of children using the scheme only casually. In fact only 27% of patrons fit these categories. Rather, 3 for Free is attracting commuters away from solo journeys to work into permanent, long term car-pooling arrangements with co-workers, or a mix of co-workers and adult family members - the optimal TDM target group!

User comments indicate that most are well satisfied with the scheme, and many suggested that other carparks should be converted to 3 for Free parking. The high response rate may have been the result of (unfounded) concerns that the 3 for Free carparks might be under threat of closure, which is borne out by the number of comments suggesting that the scheme 'was a Godsend and should be kept going'. Daily statistics indicated that 98% of 3 for Free users arrived between 7.30 and 9.30 am.
Figure 4: "For Free" Patronage Trends
### Table 1: '3 for Free' Parking in Canberra

<table>
<thead>
<tr>
<th>Nature of Car-pool</th>
<th>CIVIC</th>
<th>WODEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>81%</td>
<td>70%</td>
</tr>
<tr>
<td>Trial</td>
<td>0.5%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Casual</td>
<td>15%</td>
<td>20.5%</td>
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</table>

<table>
<thead>
<tr>
<th>Frequency of '3 for Free use - Days/week</th>
<th>CIVIC</th>
<th>WODEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than once</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5.9%</td>
<td>1.0%</td>
</tr>
<tr>
<td>2</td>
<td>1.6%</td>
<td>6.5%</td>
</tr>
<tr>
<td>3</td>
<td>2.4%</td>
<td>2.1%</td>
</tr>
<tr>
<td>4</td>
<td>4.4%</td>
<td>19.3%</td>
</tr>
<tr>
<td>5</td>
<td>7.2%</td>
<td>12.9%</td>
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<table>
<thead>
<tr>
<th>Pre-Carpooling Travel Mode</th>
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<tbody>
<tr>
<td>Alone by car</td>
<td>37.2%</td>
<td>34.4%</td>
</tr>
<tr>
<td>By car with another</td>
<td>34.4%</td>
<td>30.0%</td>
</tr>
<tr>
<td>Bus</td>
<td>24.0%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Cycle</td>
<td>2.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other</td>
<td>2.0%</td>
<td>2.1%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Other Members of Car-pool</th>
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</thead>
<tbody>
<tr>
<td>Co-workers</td>
<td>51.6%</td>
<td>51.6%</td>
</tr>
<tr>
<td>Neighbours</td>
<td>5.2%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Adult Family Members</td>
<td>27.2%</td>
<td>26.9%</td>
</tr>
<tr>
<td>Child Family Members</td>
<td>1.6%</td>
<td>5.37%</td>
</tr>
<tr>
<td>Friends</td>
<td>13.6%</td>
<td>3.2%</td>
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<table>
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<tr>
<th>Reason for Using Carpark</th>
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<tr>
<td>Work</td>
<td>94%</td>
<td>86%</td>
</tr>
<tr>
<td>Shop</td>
<td>3.2%</td>
<td>4.3%</td>
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<tr>
<td>Recreation</td>
<td>0.4%</td>
<td>5.4%</td>
</tr>
<tr>
<td>School</td>
<td>1.6%</td>
<td>2%</td>
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<table>
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<tr>
<th>Means of Discovering '3 for Free'</th>
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<tr>
<td>Radio</td>
<td>8%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Newspaper</td>
<td>8.4%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Other people</td>
<td>55.6%</td>
<td>30%</td>
</tr>
<tr>
<td>Leaflet with Rates</td>
<td>0.8%</td>
<td>0%</td>
</tr>
<tr>
<td>TV</td>
<td>2.8%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Signs</td>
<td>23.3%</td>
<td>58%</td>
</tr>
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<table>
<thead>
<tr>
<th>Age of Car-pool</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Formed before Christmas 1991</td>
<td>54.4%</td>
<td>38.7%</td>
</tr>
<tr>
<td>Formed after Christmas 1991</td>
<td>44.8%</td>
<td>61.3%</td>
</tr>
</tbody>
</table>

Nil responses account for percentages not totalling 100%
In early May 1992, after one week's notice, the carpark hours changed from 7.00am - 10.00am to 7.30am - 9.30am. No complaints have been received.

Abuse

Abuse of the system, fortunately, has tended to be limited to around 5% - 6% of users. The main culprits are local shop owners, and their staff, who are known to cling to the belief that parking should be free, at least for themselves. The usual pattern appears to be that, after driving in alone, the drivers collect their passengers around the corner from the carpark and then drive in with a full complement. A variation on this theme is those who arrive before parking restrictions apply and park outside the shop until the staff arrive and then move into the 3 for Free car park.

We have been very fortunate in the calibre of the 3 for Free staff, who have dealt with these situations sensitively but firmly in the absence of any published rules. The need for widely recognised publicly accepted regulations has been recognised and is being addressed.

Why is Woden lagging behind?

Patronage at Woden 3 for Free is less than half that of the Civic carpark. The reasons for this may partly lie in the forces working against car-pooling at Woden, namely:

- Woden's employment base is only 12,000 compared to 25,000 jobs in Civic. There is also a more mixed employment profile in Civic.
- Parking charges at Woden are still relatively low at $1.40 or $2.40 per day, which is about half the average cost in Civic.
- There is much better accessibility to Woden by bus. It is close to the geographical centre of Canberra, and far more people can catch a single bus to Woden than to Civic.
- It is also possible that competition with a Park 'n Ride bus commuting system is detracting from 3 for Free. Certainly we know that Park 'n Ride is not without significant abuse, and possibly in the Woden environment local employees see it as cheaper and more convenient than car-pooling or catching the bus.
What does it mean?

Publicity and car-pools

While the modest two-week publicity campaign effectively doubled 3 for Free usage, the user surveys are the only means of discovering how effective individual campaign components were. However, the main unanswered question from the survey is how most people came to learn about 3 for Free. While 86% stated that ‘other people had told them’ it is very difficult to get to the origin of the information. As can be seen from the original HOV carpark experiment, word of mouth alone has only a limited effect without a catalyst. In a tight financial climate, future publicity campaigns will be as difficult to plan as the first, without a clear indication of which advertising medium is the most effective. As fliers were cited by only 2% as their introduction to 3 for Free, next time an alternative to these might be tried.

The dynamics of 3 for Free car-pools could easily be the subject for a separate research project on ‘finding the half-life of a car-pool’. With the available data only guesses are possible, but it is likely that car-pools only survive if they can withstand the stresses of losing members, either to changing employment, through redundancy or by changing address. Purely ‘internal’ car-pools, those whose members live together, are possibly less stressed than ‘external’ car-pools whose members don’t share the same address.

From the limited information available on the tapering-off rate of patronage, it appears that many car pools tend to fragment after about 18 months. Accordingly, recurring publicity campaigns must be undertaken to prompt creation of new car-pools. These can either be discrete 3 for Free promotions of specific duration using advertisements, media coverage etc.; or low key ‘opportunistic’ promotions such as displays and brochures at relevant seminars or community events (the Canberra Show, for instance).

Experience with 3 for Free indicates that any campaign should be linked to some new initiative, such as the launch of the new name and logo, the relocation of the Woden 3 for Free carpark or the opening of a new 3 for Free site.

The survey results may also provide an additional aspect of a future publicity campaign. If the current pattern of a large numbers of co-workers’ car-pools is to be sustained and increased we may be wise to involve major employers in promoting 3 for Free to their employees. In Canberra this would be Federal and ACT Government Departments. Experience elsewhere shows that ‘dating agency’ style matching is prohibitively expensive and very rarely works (Hodgkin & Anderson, 1990). However, informal, workplace-based matching with employer encouragement could spawn further generations of car-pools or regenerate those that have lapsed.
The costs and benefits of *3 for Free*

The *3 for Free* upgrade and promotion in 1991 cost around $20,000 to mount. The major cost was for signage and relocating the Woden carpark. Recurrent operating costs are around $5,000 per year, including diverting the time of two staff members to be booth attendants for two hours per day. Parking charges forgone have been estimated at around $70,000 per year in Civic and $25,000 per year in Woden.

Yet these costs are well outweighed by the benefits of the system. Ideally (at current usage rates), if two-thirds of each car-pool left their car at home we would see around 270 fewer cars on the road and in carparks. Even a pessimistic estimate of 135 fewer cars per day is still a small carpark which would cost about $600,000 to install. At full car park capacity of 265 spaces, the most optimistic scenario of a two third reduction in cars would mean 530 fewer cars using the roads and carparks or a saving of $3 million on parking provision costs.

Another more extreme TDM option is not to supply, or even to reduce, parking spaces. However, given Canberra’s existing levels of congestion, the realistic option is to manage the existing resources better through such TDM measures as *3 for Free*.

The individual user also can benefit from *3 for Free*. Savings of over $1,000 per year are possible in parking fees alone, not including savings in vehicle operating costs.

The community also benefits from road infrastructure savings, less pollution and greenhouse gas emissions and better residential amenity.

Conclusions

On balance it seems the *3 for Free* carparks have been a useful and successful TDM tool, but realistically we must question the extent of success, and who incurs the costs and benefits.

The costs of *3 for Free* are limited. The Government outlays capital funds, marginal salary costs, parking fee revenue forgone and funding of intermittent promotional campaigns as outlined above. Admittedly the costs of a *3 for Free* carpark would be much higher if the land had to be acquired and an at-grade or structured carpark built. Individuals lose some personal mobility and convenience.

In contrast, the benefits can be substantial, and accrue to numerous groups and individuals, as follows.

- *Users* can make very substantial financial savings (as outlined above).
- The *general community* gains through fewer cars meaning less traffic congestion and pollution and greater residential amenity.
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- Politicians can present 3 for Free as a successful initiative which 'gives something for nothing' and where everyone benefits.
- Transport planners and providers can make useful TDM gains particularly in the context of using 3 for Free as a 'carrot' to balance the 'stick' of less parking supply, more controls and higher prices.
- Finally, everyone is educated about the complexities and trade-offs necessary in providing transport, and what can be achieved with all-round co-operation.

The key factor is to get the proper balance between the above factors and beneficiaries so that everyone wins. Admittedly, this is relatively easy to do in the '3 for Free' case in the current Canberra transport environment. The bottom line is, how effective is 3 for Free in furthering the TDM goal? While the existing '3 for Free' users represent only about 1.5% of commuter car users in Civic and Woden, if the present usage rate was doubled (as seems quite possible) a 3% improvement in transport efficiency is still quite useful. Also, as there would be a multiplier effect at key intersections, the gains may be considerably higher in terms of overall system efficiency.

Thus, while it is still early days, the initial assessment seems to be that the 3 for Free carparks are a useful TDM measure. Although they have had limited impact so far, they have quite considerable potential in the Canberra transport climate to give both transport efficiency and environmental benefits.
This survey has been prepared by the Roads and Transport Branch of ACT City Services. By spending a couple of minutes to complete these survey questions you will be helping us to find ways of encouraging more people to share their cars, so that we can make transport in Canberra as efficient and environmentally friendly as possible. We appreciate your response and invite your comments and suggestions. Thank you for using 3 for Free parking. For further information on 3 for Free, please ring 2462451 or 2463123.

Please tick appropriate boxes for each question

1 Where did you find out about 3 for Free parking?
   Radio ☐
   Newspaper ☐
   From other people ☐
   Leaflet with Rates notice ☐
   TV ☐
   Signs ☐

2 Why have you parked here today?
   Work ☐
   Shop ☐
   Recreation ☐

3 Who have you shared the car with today?
   Co-workers ☐
   Neighbours ☐
   Adult family members ☐
   Child family members ☐
   Friends ☐

4 Did you "Car Pool" before last Christmas?
   Yes ☐
   No ☐

If yes did you use this Carpark?
   Yes ☐
   No ☐

5 What arrangement is your "Car Pool"?
   Permanent ☐
   Trial ☐
   Casual ☐

6 How many times per week do you use 3 for Free parking?
   1 ☐
   2 ☐
   3 ☐
   4 ☐
   5 ☐

Less than once a week ☐

7 How did you travel before you were a member of a "Car Pool"?
   Car Alone ☐
   Car with another ☐
   Bus ☐
   Cycled ☐
   Other (please specify) ☐

8 What suburb do you live in?

Comments or suggestions:

__________________________________________________________________________

__________________________________________________________________________

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The views stated are those of the authors and not necessarily those of the ACT Government Service.

References


Beard, C (1990) Demand management as a planning tool in Brisbane, pp1-6 of *The Institution of Engineers (Australia), Queensland Division Technical Papers* Vol 31, No 17, Aug 1990


Pak-Poy and Kneebone (1990) *Road Demand Management* Sydney: Austroads

