Changing travel behaviour through individualised marketing: application and lessons from South Perth

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Abstract:

The Perth metropolitan region in Western Australia sets the lead for car domination in Australia. The Western Australian Department of Transport has partnered a project with the City of South Perth to test a method that encourages people to use alternative modes of transport (ie walking, cycling and public transport) to the single car driver trip.

A three-stage behaviour change program has been implemented by SOCIALDATA:
1. Travel survey to assess current behaviour and motivation to change
2. Individualized marketing
3. Evaluation survey to measure extent of behaviour change.

Four hundred households were involved in the program and 36% of them expressed an interest in using other modes. These people were motivated and provided with localised information on the use of these alternative modes through face-to-face contact. Current users of the alternative modes were rewarded for their behaviour (9% of the sample). The evaluation survey showed a 10% reduction in car driver trips and a 14% reduction in motor car VKT. Conversely, public transport trips increased 21%, cycling 91%, walking 16% and car as a passenger 9%.

The SOCIALDATA (Werner Brog) approach has been applied separately to public transport and cycling in numerous European cities. This project is unique in that cycling and public transport was combined for the first time and walking also included.

The results of the program will be invested into the local community through local "opinion leaders" undertaking a two step process:
1. Learn from the analysis of the travel patterns and behaviour change process
2. Develop an action plan for behaviour change and improvements to transport services and infrastructure.

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Introduction

The need to change the mode share for travel in the Perth Metropolitan Region is clearly enunciated as a set of targets in the region's Metropolitan Transport Strategy. The traditional mobility management approach to achieve mode change has been through the provision of transport services and infrastructure, including pricing, and the longer term land use policies. The application of a behavioural approach, especially in a car dominated city like Perth, has not, until recently, been in the transport planner's tool box.

This paper outlines the rationale for using the behavioural approach, how it was applied and the results. The technique employed has been developed by Werner Brög over many years and its application in South Perth was a further step in the refinement process by combining cycling with public transport and introducing walking. This is the first known project in the world to use individualised marketing to reduce car use.

Some of the constructs used in this paper are detailed in greater detail in the paper titled "Behavioural Approach to Travel Demand" presented at the 21st ATRF Conference. This paper is the next progression down the implementation path.

Transport Policy Setting

The Metropolitan Transport Strategy (MTS) provides the overall policy setting for the need to achieve a better balance in the use of the motor car. The reasons for this better balance are common for most developed cities through out the world. The MTS provides a vision for a livable city, of which transport is a contributor, and is supported by a set of principle and targets (Department of Transport *et al*, 1995).

The set of principles are:

- Safety,
- Efficiency,
- Effectiveness,
- Environmental Responsibility,
- Social Responsibility, and
- Robustness (able to respond to and take advantage of unpredictable changes).

The relevant MTS targets for the behavioural approach are:

1. The car occupancy target is to increase car occupancy from 1.21 in 1991 to 1.25 by the year 2029 (the trend is to an occupancy rate of 1.13 by 2029)

2. The trip length target for personal trips is to reduce the average trip length from 8.4 km in 1991 to 7.2 km in 2029 (the trend is to 10.7 km in 2029).

3. The mode share targets are shown in Figure 1, which clearly illustrates the aim of redistributing car driver only trips across the preferred modes.
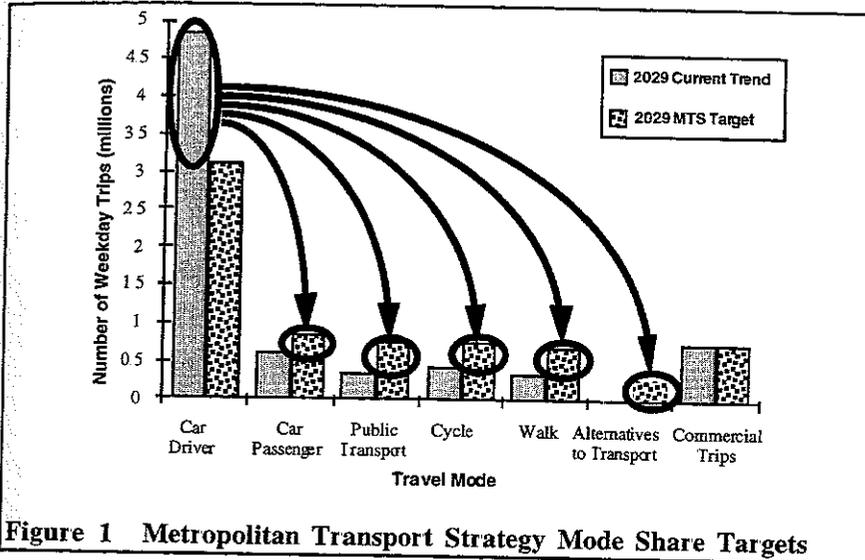

Figure 1   Metropolitan Transport Strategy Mode Share Targets

The primary target for the behavioural approach is the mode share target. The challenge confronting the transport planners is to stop the trend and then change it's direction.

Action Research

A brief examination is provided of an applied learning process, called participatory action research. Both the need for evidence and the outcome driven delivery of government services require such an approach.

Participatory action research can be defined as "collective, self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social ... practices" (Seymour and Hughes, 1996, p1). The key feature of action research is the continuing interdependent cycle, as shown in Figure 2. The progress from one cycle to the next cycle is dependent on the results of the first cycle.

Participatory action research is extremely useful for practitioners as it allows for achievement of actions or outcomes while research or learning is being undertaken This is most useful when seeking funds for innovative and untested approaches to mobility management, especially involving the introduction of behaviour change

Figure 2: Action Research Cycle
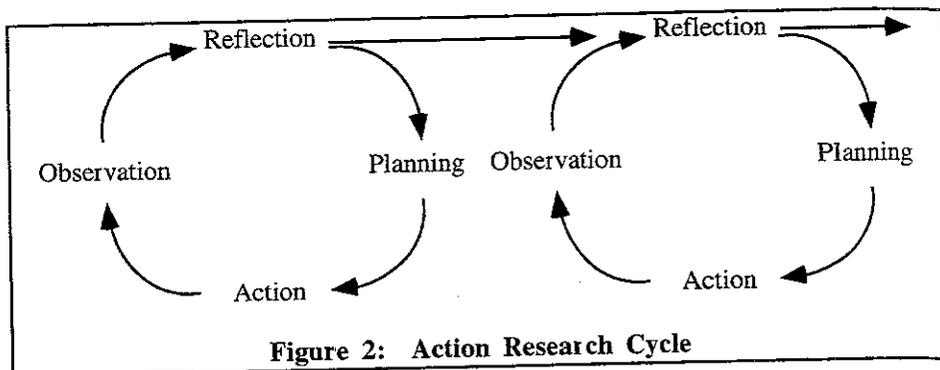
Interdependence

The application of behaviour change programs is interdependent on:

1 Land use patterns
2. Transport supply - infrastructure and services

Within this context, the municipality of the City of South Perth, one of thirty two in the Perth Metropolitan Region, was chosen to implement the first marketing program The area of South Perth is an inner city suburb with the following attributes:

1. Many urban opportunities, especially employment, are located close to South Perth.

2. There is capacity on the current public transport services and a basic safe cycle networi exists.

Added to this, the local community are experiencing the negative impacts of growing traffi and the Council, having responded through various traffic calming projects, are looking fr other solutions

Branding

The use of branding for marketing campaigns is standard practice The behaviour chan activities in Perth was run under the "TravelSmart" branding as shown in Figure 3

Figure 3   TDM Marketing Name, Logo, and Catch Phrase
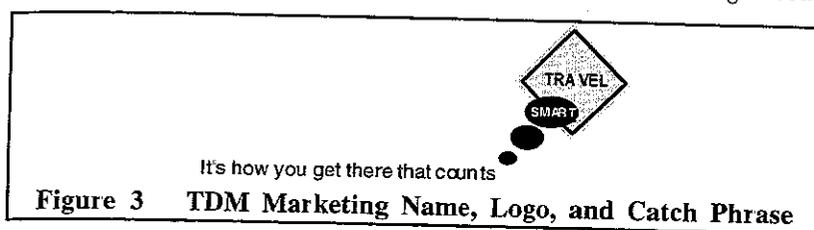
All the South Perth marketing material was run under this as an umbrella branding, with the normal branding for public transport ("Transperth") and cycling ("Bikewest"). In the case of walking, the information material was run under the "Heart Foundation" branding.

Which Marketing Technique ?

The traditional approach to change community behaviour, especially in the health promotion area, is social marketing

Andreasen defines social marketing as "the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of their society" (Andreasen, 1995, p7). Social marketing differs from commercial marketing in that it ultimately benefits the targeted individual and society, not the seller; and yet is similar in that market share (mode split in the case of travel demand management) and the target audience have the primary role in the marketing process

The normal approach to social marketing is market segmentation based on the attributes and attitudes of people. The term to describe these attributes and attitudes is psychographics. Reliance simply on demographics is not specific enough for effective marketing campaigns. Psychographics directs the marketer to the target audience, helps define how the message should be told and the best channels to reach the target audience.

In discussions with Brög, he argues that the application of traditional social marketing focussed on target audiences is not appropriate to change travel behaviour. His primary arguments are that:

- People's travel decisions are based as much on their environment as their attributes.
- People's distorted views of cycling and public transport are best corrected through use of the modes
- People need help to identify which trips can be used by alternative modes which is different for each household and each household member.

The individualised marketing approach has a number of advantages over the traditional social marketing approach. First the information promoting the various modes is taken to the potential "customer" rather than relying on the hope that the potential customer will

catch it. Secondly, direct contact with dialogue allows the message to be individualised and related directly to the specific situation of the person or household. Therefore two people with the same attributes used to identify them for traditional target marketing would make different travel decisions because of their different situations. This is important in the travel scene because people make on average 1,000 trips per year, for different purposes, destinations and times, with each travel decision having different circumstances.

Critics of individualised marketing would argue that it is very expensive with relatively little return. This issue is addressed at the end of the paper.

Prochaska, Norcross and Di Clemente developed a five step behaviour change model from their extensive work on "Quit Smoking (Prochaska, Norcross and Di Clemente, 1984). The individualised marketing technique applied by Brög has four basic steps. Figure 4 shows the steps of both these models. The individualised marketing technique goes through a quick process of identifying the contemplators from the pre-contemplators, then through motivation and information to the stage of helping them through the preparing to act stage to being actors or users of the alternative modes.
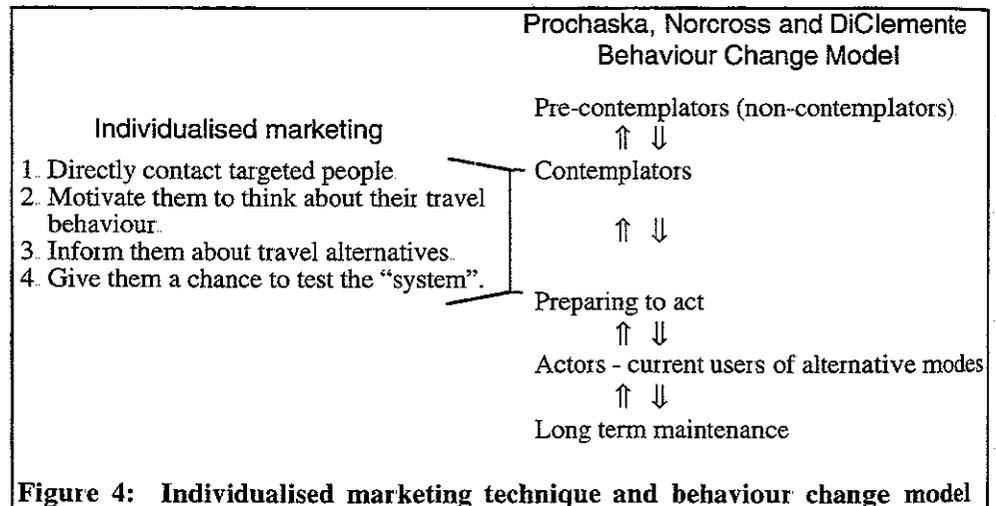

Figure 4:   Individualised marketing technique and behaviour change model

Program Outline

The pioneering nature of behaviour change programs in Perth, being opposite to the traditional demand satisfaction approach, highlighted a strong need to collect empirical evidence of behaviour change. In line with the action research model, the first project was a pilot with a small random sample.

As a consequence, the South Perth Travelsmart project had three distinct stages:

1. A survey of existing behaviour
2. Implement the individualised marketing program.
3. Measure behaviour change after the marketing program.

Existing Behaviour

Stage one undertaken in September 1997 provided a benchmark of current travel behaviour in the South Perth community. A gross sample of 498 households, was selected. Of these, 383 households (77%) or 865 persons agreed to be further involved. The primary survey tool used was the travel diary.

The winning of the South Perth contract by Socialdata provided another opportunity. Socialdata undertook the 1986 Perth region wide travel survey. This allowed comparison between the 1997 bench mark survey and the 1986 travel survey.

An analysis of the existing travel behaviour in South Perth in 1986 and 1997 shows:

- a number of trends that underscores the need for change;
- yet shows how little some of the fundamentals have changed.

Figure 5 shows the growth in the mode share of "car as driver", most likely at the expense of "walk", "cycle" and "public transport", "car as passenger" remained stable.
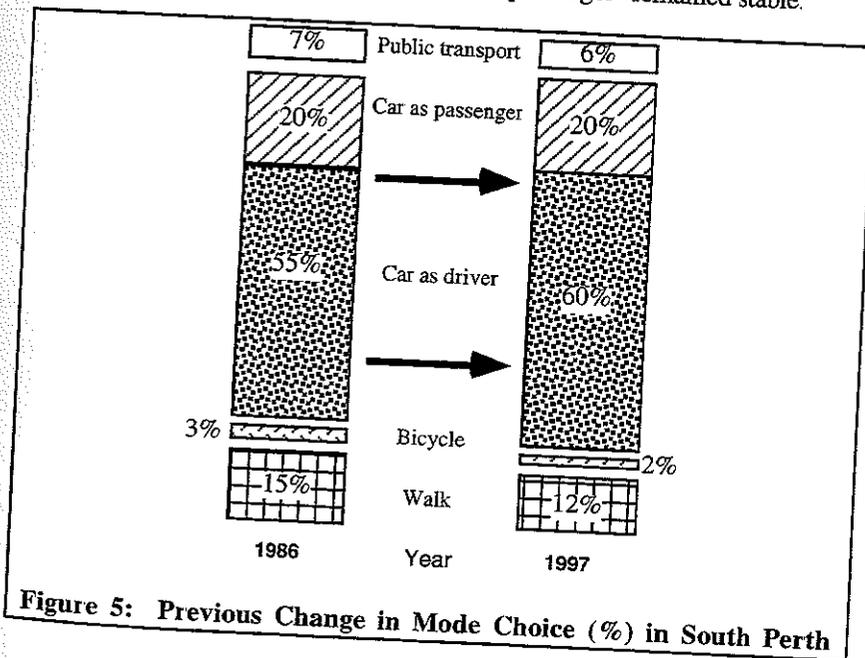

Figure 5: Previous Change in Mode Choice (%) in South Perth

The change in mode share has occurred within other mobility measures that have remained constant

| Measure (per person per day)	1986	1997
Activities visited	2.0	2.0
Travel time	61 minutes	58 minutes
Trips	3.4	3.4
Distance (km)	30 km	27 km

These mobility measures suggest that the changes to mode share are due to subjective reasons more than objective (land use and transport supply) reasons. If this is the case, the potential for behaviour change is strong. This claim is supported by an analysis of trip distances. Figure 6 shows the distances travelled for all trips and car trips. It is evident that there is a great deal of opportunity to convert car trips to walking and cycling due to the short distances people travel. Obviously there are other factors to consider, such as the number of shopping items when shopping.
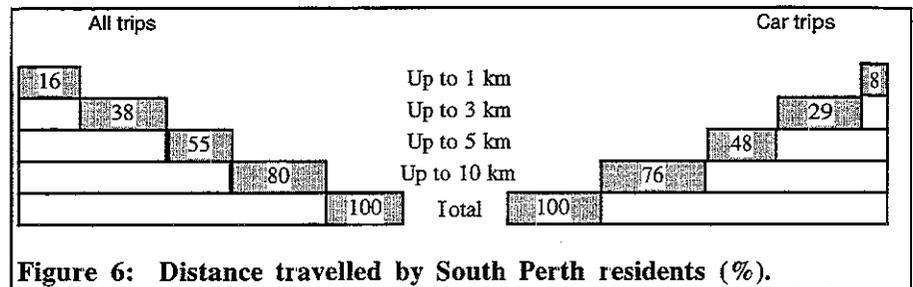
Figure 6:   Distance travelled by South Perth residents (%).

Extent of Change Required

Critics of behaviour change tend to expect large scale changes directly affecting people's lifestyle. Proponents do know that behaviour change is difficult and requires maintenance. The sum of small changes can however make a major impact. If for example South Perth residents changed six trips per month to two trips each to walking, cycling and public transport, the changes shown in Figure 7 are possible:

Figure 7:   Potential change - effects of small changes
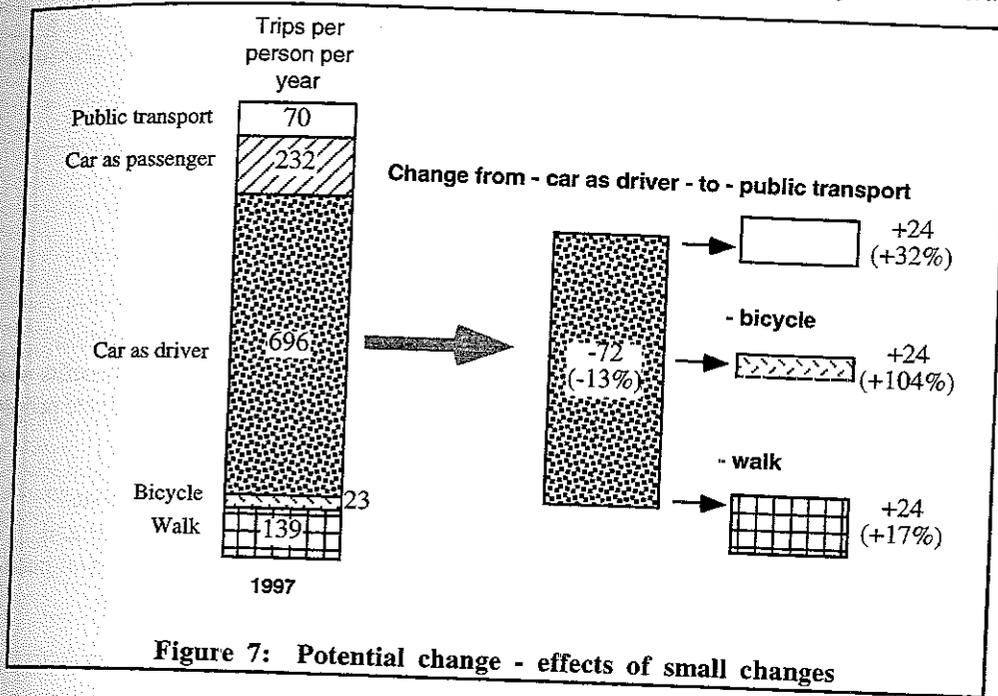
Application Of Individualised Marketing To South Perth

All 383 households were contacted with 94% highly interested in alternative modes. Of these, 36% were classified as "interested" (or contemplators ?), 9% "regular users" of alternative modes and 49% "not interested" (pre-contemplators). This aligns very closely to 37% of car commuters surveyed in the United Kingdom being interested in using alternative modes (Curtis (1997)). The interested group were helped in their classification if they could identify how they would use the alternative modes more frequently. On average 2.3 alternative modes were indicated.

Another advantage of individualised marketing is that it is not locked into the traditional transport product thinking aligned around public transport, car as driver and cycling. In the case of the South Perth Travelsmart project, 56% of the interested people were interested in all three modes (walking, cycling and public transport), 33% in two modes and only 11% in a single mode.

In support of the motivation step, information on the travel alternatives was then provided The main forms of information provided are as follows:

Public transport	Bus stop specific timetables Ferry timetables Local public transport map	Transperth
Bicycle	Cycling brochures - cycling and the law Recreational cycling maps and tours	Bikewest
Walking	Local access map "Think globally, walk locally" Heartmovers Kit	Heart Foundation The health benefits were used to motivate people to walk more

The final step, testing the system was provided to 56 people, 41% of the "interested" group. This entailed a visit by the public transport operator to the person's home and included a free transit pass for one month It was not available for existing users of public transport and was used in a deliberate way to introduce new users to the system

Regular users of the alternative modes were given a reward in the form of a letter from the public transport operator, a small gift or a home visit by Socialdata.

At the end of the campaign, 94% of the people contacted advised that they liked the direct and individualised contact.
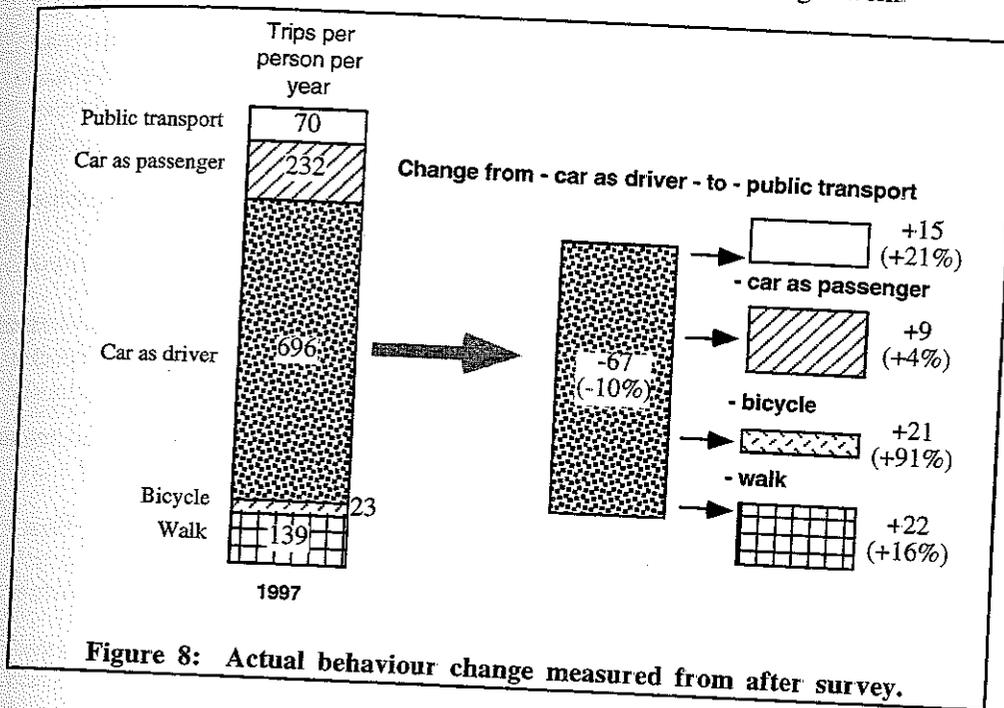
Behaviour Change

An after survey was undertaken in November 1997 following completion of the individualised marketing to ascertain the extent, if any, of behaviour change. The survey also occurred after the free one month public transport pass had expired The behaviour change achieved is shown in Figure 8

Other interesting aspects of the analysis of change include:

- A 5% reduction in the number of cars used, less car trips made (from 3.3 to 2.8 tips per day) and 5 minutes per day less use of the car.

- A 14% reduction in car vehicle kilometres travelled.

- Increased use of local shops and services with 4% of longer distance trips now being local

- People still visiting the same number of activities (eg shops, school, etc).

- People not travelling as far (2 kilometres less per day) but taking longer (4 minutes per day)

- People change travel modes for all different trips, not just commuting to work.

Figure 8: Actual behaviour change measured from after survey.

Community Involvement And Learning

The application of travel behaviour change in Perth is new and largely unknown to the general community. The traditional response to traffic impacts has been the application of traffic calming measures and to blame the problem on outside people travelling through the area. To bring about an understanding and generate ownership of the travel behaviour change approach, a community learning program is about to be implemented

The objective of a community learning program is to develop a travel demand management action plan. The action plan will encompass a partnership between the City of South Perth and the Department of Transport, including public transport ("Transperth") and cycling ("Bikewest"). The community learning program will also focus on identifying and involving local key opinion leaders. This should be the first step in generating a community climate supportive of Travelsmart initiatives and self responsibility for traffic impacts. A crucial issue will be community ownership of both the process and the product

Larger Scale Program

The successful results of the individualised marketing program provides the evidence that a larger scale program would be successful. The per household cost for the 15,000 households would be cheaper as the base measurements have already been undertaken Five sixths of the estimated cost for all three modes, excluding information materials, would be recovered by the expected increase public transport revenue within twelve months.

The implementation of various other initiatives in support of a larger scale individualised marketing program would be advisable. These include:

1. Review of current public transport services to meet anticipated growth in public transport patronage. Specific improvements could be more direct routes with increased frequency, and bus stop specific timetables at both the bus stop and improved pocket size timetables distributed to the household adjacent to that stop (or group of stops)

2. School based initiatives that promote cycling and walking, and possibly linked into safe routes to school.

3. Specific packaged cycling and public transport materials for major trip attractors adjacent to the municipal boundaries (Perth CBD and Curtin University).

Project Reflection

The project produced a number of positives that are a valuable base for extension of travel behaviour changes techniques, such as individualised marketing, on a larger scale and into other locations:

1. There is a strong interest in using alternative modes and behaviour change to reflect this interest.

2. The individualised marketing techniques assists people in identifying which trips they can undertake using alternative modes.

3. The interest in repackaging of the existing public transport timetables is very strong

4. People have an interest in all modes for different trip purposes, which sits outside the traditional approach of planning and marketing of transport modes separately.

5. There is a market for promoting walking, which universally seems to not have a champion.

6. Individualised marketing provides an excellent medium for proactive health marketing to address national concerns about an over weight and unfit population

Conclusion

The application of individualised marketing in the City of South Perth has achieved mode shift back to that which was occurring in 1986. The ability of the technique to show people how to translate their concerns for the environment and health into changed travel behaviour within their own travel context provides the bridge that traditional social marketing techniques struggles with The key challenges for the South Perth program is to gain community support to expand the scale of the project and maintain the resulting behaviour change over an extended period of time

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