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Behavioural Approaches to Travel Demand Management

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Abstract:

The need to reduce the growth of car driver only trips in urban areas has been identified in transport strategies for Perth, Melbourne, Sydney and Brisbane. One of the available tools to mitigate this growth is travel demand management. Travel demand management requires behaviour change interventions common in public policy areas such as health. This paper explores the relevance of various social change processes to reduce car driver only trips. Social change processes reviewed include planned social change, social marketing, organisational behaviour and community involvement. The lessons learnt from these reviews are then applied to two travel demand management initiatives being trialed in Perth, Western Australia.

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Introduction

The need to reduce the growth of car driver only trips has been identified in transport strategies for Perth, Melbourne, Sydney and Brisbane. One of the available tools to address this growth is travel demand management. Travel demand management requires behaviour change which has achieved varying degrees of success in the social policy areas of government.

This paper explores the relevance of various social change processes to the new directions espoused in these transport strategies, reviews approaches that have been applied and outlines a change process currently being trialed in Perth. The relevance of these change processes to practioners will be assessed at the completion of the two trial projects.

What is Travel Demand Management ?

This section of the paper defines Travel Demand Management (TDM) and outlines the relevance of TDM for transport planning in Perth.

A definition of Travel Demand Management (TDM)

A definition of travel demand management that is widely accepted throughout Australia is *"actions to modify travel decisions so that desirable social, economic and environmental objectives can be achieved and adverse impacts of travel reduced"* (Andrew O'Brien and Assoc, 1994 and The Institute of Engineers, Aust, 1996).

What does this mean to the average person in the street who is the one being influenced to modify their travel decisions ? Very little is the likely answer. The first task of the newly formed Travel Demand Branch in the Western Australian Department of Transport was to develop a marketing name that clearly enunciated the essential theme of TDM (ie how people arrived at their decision to travel). Figure 1 shows the adopted marketing name, logo and catch phrase under which TDM initiatives in Perth will be implemented.

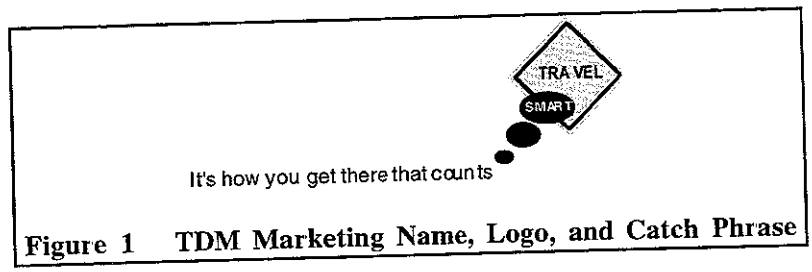

Figure 1 TDM Marketing Name, Logo, and Catch Phrase

Developing the marketing name is only the first step on a long journey. More fundamental issues are what interventions work best in influencing people's travel decisions and why should they change their behaviour anyway ? The next two sections of the paper address these two issues.

TDM Interventions

People's travel decisions are influenced by their attitudes and experiences, the availability of transport services and infrastructure, and the spatial layout or land use of the city they live in. Figure 2 shows the inter-dependence of travel demand management actions in this context (James and Binning, 1995).

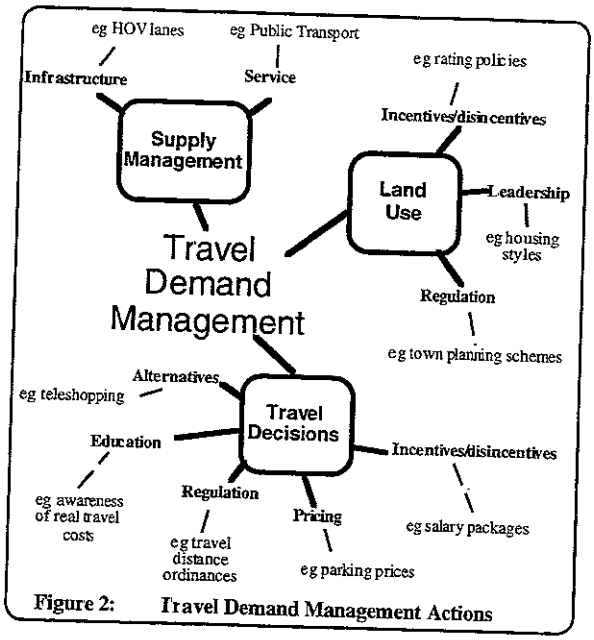

Figure 2: Travel Demand Management Actions

A fundamental shift in adopting the TDM paradigm is acceptance that Supply Management and Land Use can be used to influence people's behaviour rather than simply satisfying expressed behaviour (ie market forces). The use of these two groups of actions(see Figure 2) must be linked with the implementation of Travel Decision actions, both passively, in terms of the traveller's context, and proactively influencing a person's travel decisions.

The need for TDM in Perth

For people to change their current travel patterns they need to have justification for the change. The definition of TDM identifies this justification in two ways:

1. Expressed future desired outcome, often in the form of a vision
2. Minimising negative impacts of current and predicted travel behaviour.

The former tends to be used more for strategic plans while the latter is more relevant for day to day planning decisions. Therefore community support for change is likely to be stronger where they experience the negative impacts of current travel behaviour (eg high traffic volumes on inner suburban streets). The remainder of this section deals with the former as the latter is contingent on local factors.

The justification for a change in the direction of the current travel patterns can be summarised by the need to improve the three "E's" (Richardson, 1996, p7):

1. "**E**quity through accessibility for all
2. **E**fficiency of the transport system.
3. **E**nvironment and livability of cities."

The consequences of the current trends in Perth, and as identified in transport strategies for Sydney and Brisbane, show that the three "E's" are declining rather than improving (Richardson, 1996).

The desired future outcomes to improve the three "E's" in Perth is described in the form of a vision, and a set of principles and supporting transport targets (Department of Transport *et al*, (1995). The vision is for broad quality of city life of which transport is a contributor. The principles include safety, efficiency, effectiveness, environmental and social responsibility, and robustness (able to respond to and take advantage of unpredictable changes). The relevant targets for TDM are:

1. 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. To reduce the average trip length (for personal trips) 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 3. Figure 3 illustrates how current trends (demand satisfaction) for the usage of various modes of transport in 2029 differ from the desired MTS mode share targets for the same year, including the redistribution of car driver only trips across the preferred modes.

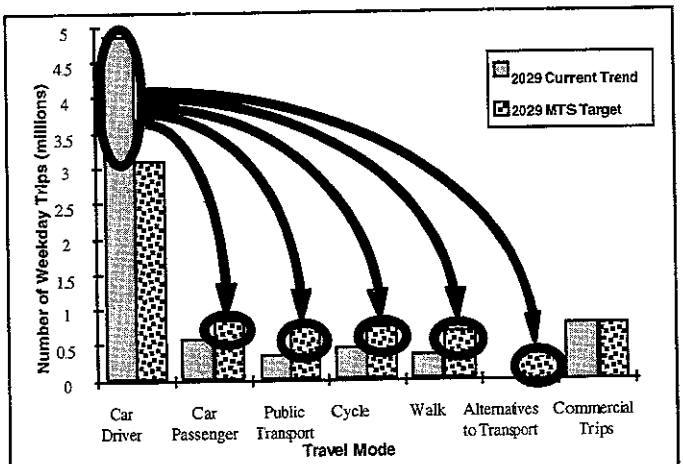

Figure 3 **Metropolitan Transport Strategy Mode Share Targets**

Social and behavioural change processes

Travel demand management involves people changing their behaviour. This section of the paper examines a number of schools of behavioural change and how they have been applied to TDM. Conclusions are drawn at the end of this section about the relevance of the theory and lessons learnt for TDM.

Four schools of behavioural change are examined. They are:

1. Planned social change
2. Social marketing
3. Organisational behaviour
4. Community involvement and change

Planned social change

Theory: Sheth and Frazier (1982, p15) define planned social change as "active intervention by change agents (eg officials in public agencies) with a conscious policy objective to bring about a change in magnitude and/or direction of a particular social or consumption behaviour by means of one or more strategies of change".

Sheth and Frazier also developed a useful typology of a strategy mix for planned social change. It is shown in Figure 4.

Relevant Behaviour	Attitude: Positive	Attitude: Negative
Engaged	Reinforcement Process 1 Behaviour Reinforcement 2 Psychological Reinforcement	Rationalisation Process Attitude Change
Non-engaged	Inducement Process Behaviour Change	Confrontation Process 1 Behavioural Confrontation 2 Psychological Confrontation

Figure 4: A Typology of Strategy Mix for Planned Social Change

This typology recognises that there is a mix of attitudes and behaviours in the community and that planned social change needs to respond with a range of strategies.

Application to TDM: This school of behaviour change is implicit in the implementation of TDM strategies.

In Perth the Metropolitan Transport Strategy provides the policy objective and the entity with the primary change agent task is the Transport Demand Branch within the Department of Transport. Local government, other state government agencies and community groups also have an important change agent role.

TDM is in the early stages of development and acceptance in Perth. This means that the strategy mix for planned social change is not likely to include the confrontation process. Rather, reinforcement, rationalisation and inducement processes (the shaded area in fig 4) will be the favoured mix of approaches. These are the education and incentive/disincentive actions in Figure 2.

Social marketing

Theory. Social marketing has developed primarily in the health field through campaigns designed to change people's behaviour to reduce the incidence of ill health. Well known examples are smoking, drinking and AIDs campaigns. It is now being applied in Perth in the family services sphere to improve parenting.

Social marketing has been derived from traditional or commercial product marketing. Commercial marketing is based on changing people's spending behaviour, often to a different retailer of the same product. Changing people's attitudes is recognised as being a more difficult task.

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 also differs from commercial marketing in that it ultimately benefits the targeted individual and society, not the marketer; and 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.

Application to TDM: The "Go Green" initiative is a region-wide public awareness and education program in the Greater Vancouver Regional District (GVRD) aimed at promoting trip reduction programs and other TDM concepts. "Go Green" is a collective effort launched in 1990 by the GVRD, British Columbia Transit, Environment Canada and the Government of British Columbia.

The "Go Green" program has been successful in helping to raise public awareness about the relationship between air quality and the transport choices people make. The first advertising campaigns were were aimed at dispelling the myth that smokestacks are the major cause of air pollution in the region. After two years, more than 80% of those surveyed recognised vehicle emissions as the primary cause of air pollution. The focus then shifted to an advertising blitz encouraging commuters to take transit. Growth in transit ridership, beyond capacity, has necessitated "Go Green" to focus more recently on promoting walking, cycling and carpooling.

The "Go Green" campaign is also aligned with a number of other TDM initiatives. These offer a range of work based motivations and reward schemes for behaviour change. These include a transit pass program, ridesharing programs and an annual Air Quality Award to the employer who has developed the best trip reduction program.

The above suggests that the success of the "Go Green" campaign, beyond awareness raising, is more likely to be due to motivations and rewards rather than just a public awareness and education program.

The "Clean Air 2000" Initiative, being run by the NRMA in Sydney, is a five year campaign which aims to improve people's awareness of the the major cause of air pollution (i.e. exhaust from vehicles) as well as encourage changes in travel behaviour.

The campaign combines traditional awareness raising approaches using a variety of media, including the mass media (e.g. television, radio), as well as community workshops and presentations. It also incorporates a more innovative approach, to encourage behaviour change, which targets individual households.

The campaign recognises that the likely reason for the inability of awareness programs alone to change behaviour is that "reducing the use of the car at the individual household

level may seem unrealistic and difficult to many people" (Göllner and McKenzie, 1996, pg 9). NRMA research indicates that people recognise the need for action to improve air quality but may feel confused and uncertain about what they can do to make a difference. However, most people are waiting to be lead towards the adoption of appropriate solutions. Göllner and McKenzie, and Brög identify the way through this difficulty is for people to make small but regular changes to their travel patterns (Göllner and McKenzie, 1996 and Brög, 1997). Göllner and McKenzie refer to this as "travel blending".

This approach has been trialled in individual households with encouraging results (Göllner and McKenzie, 1996 and Brög, 1997). The "Clean Air 2000" initiative consists of a package of four kits used by households to investigate their travel blending opportunities. The kits encourages members of the households to think about their travel in advance and ways of blending modes and activities over time. Diaries and vehicle log books are used to make the travel activity tangible and as a basis for giving feedback to participants.

Organisational behaviour

Theory. The behaviour change aspects of organisational behaviour are relevant to travel demand management, especially with respect to individual behaviour. Behaviour change within organisations is considered one of the components of effective management and is advocated for today's organisations to succeed in a rapidly changing environment.

There are four fundamental aspects of organisational behaviour relevant to TDM. These are discussed below.

1. Values - judgemental element of what is right, good or desirable and vary in both content and intensity. These form the basis for understanding attitudes and motivation. Table 1 defines a set of values identified by one author.

Table 1 **Value Levels** (Robbins (1986) p 95)

Value levels	Characteristics	Type of marketing message
Reactive	Unaware of themselves and others and react to basic physiological needs	Marketing will have little effect
Tribalistic	High dependence and strongly influenced by tradition and authority	Authoritarian messages
Egocentrism	Believe in rugged individualism	Promote individualism of specific modes eg cycling
Conformity	Low tolerance of ambiguity and desire others to accept their values	Defining what norm is likely to be important
Manipulative	Strive to achieve their goals by manipulating others	Relate change to achievement of their own goals
Sociocentric	More important to be liked and to get along with others than get ahead	Promote "cool" image with certain types of behaviour
Existential	High tolerance of ambiguity and people with differing values	Produce logical argument for change

2 Attitudes - favourable or unfavourable evaluative statements.

In contrast to values attitudes are less stable and are easier to alter through marketing campaigns. Whilst organistional behaviour is only concerned with three primary attitudes, TDM needs to consider a much wider array of attitudes.

3 Motivation - is the willingness to exert effort or change to satisfy an individual need.

There are a number of motivation theories that lead to behaviour change. Robbins concludes that the theory with greatest acceptance is the "expectancy theory" (Robbins, 1986). Figure 5 outlines the stages in the expectancy theory

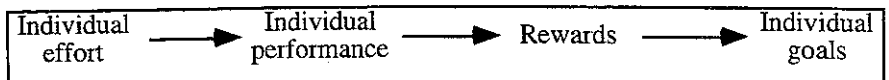

Figure 5: Expectancy theory of motivation

The strength of desire by the person to act in a certain way depends on:

1. The attractiveness of the reward in meeting the person's goal.
2. The extent the person believes that certain performance will realise the reward.
3. The linkage between the perceived probability that a certain level of effort will lead to performance.

Application of this theory to TDM suggests the following hypothetical approach for the journey to work:

Table 2: Application of Expectancy Theory of Motivation to Travel Decisions

Expectancy theory	Public transport user	Cyclist	Factors affecting behaviour
Individual effort	Catching the bus each morning to go to work	Owning a bicycle, arranging shower and parking facilities at destination	Availability of bus services, cycling facilities including showers at the destination for long trips
Individual performance	Making ten trips per week to and from work on the bus	Commuting to work by bicycle regularly	Reliability of services and facilities
Rewards	Saving money, possibly more convenient, less stress, and feeling their contribution to reducing air pollution	Feeling healthier, saving money and possibly more convenient and feeling their contribution to reducing air pollution.	Internal and external recognition of performance
Individual goals	Help the environment Personal advantage	Help the environment Personal advantage	The importance of the goals to the individual

The traditional approach to transport planning (ie supply management) is focused on meeting the individual efforts and performance. The expectancy theory gives high importance to rewards and individual goals yet very little is understood about these two aspects of people's decisions in their mode choice.

4 Change process - planned interventions to make values, attitudes and behaviour different.

Robbins identified a range of styles or tactics available for behaviour change processes in the workplace (Robbins, 1996). These are summarised in Table 3

Table 3: Organisational Behaviour Change Intervention Styles

Style	Possible Form of Persuasion
1. Education	see logic
2 Participation	involved in decision making
3 Facilitation and support	support to reduce resistance eg. training
4. Negotiation	give and take (may include incentives/rewards)
5. Manipulation and cooption	twist facts, false rumours
6. Coercion	direct threats/force (regulation)

It is noted that the first four styles are applicable to TDM and consistent with the strategy mix which is shaded in Figure 4, whilst the latter two are less applicable to TDM being consistent with the unshaded area in Figure 4.

Robins indicates that for behaviour change to be permanent in the workplace the last style coercion must be used to "freeze" the change. This style is used in the social change process associated with drink driving campaigns. Unless there are regulations in place this style is not applicable to TDM, which is unlikely given current community and political support. Similarly, manipulation and cooption would also be an unacceptable style for application to TDM.

Application to TDM The explicit assessment of values and individual motivations has not been evident in the social marketing examples reviewed by the authors. Rather, TDM campaigns such as the NRMA's "Clean Air 2000" initiative and an affiliated "Newcastle Car Share" program undertaken by the City of Newcastle have tended to focus on the assessment of attitudes to the environment and car. This appears to be consistent with overseas experience. For example, a manual for implementing and promoting workplace based trip reduction programs in Seattle (developed by the Metropolitan Seattle Municipality) recognises the importance of understanding the attitudes of the target audience. It focuses on identifying and targeting two market segments for a typical workplace, those staff which are predisposed to respond to environmental messages and those which recognise personal advantages in the way they commute.

A method that appears to use the components of the Expectancy Theory of Motivation is the "Kontiv" methodology developed by Werner Brög (1996). This method combines the use of travel diaries followed by individualised marketing (including motivation); supported by localised information targeted to those people with specific travel patterns (ie those trips for which non-car trips can be substituted for) and rewards/reinforcement for current preferred behaviour or changed behaviour. The Kontiv method has been applied for cycling and public transport trips and has achieved behaviour change. It is currently being trialled throughout a number of countries in Europe, including the United Kingdom.

Community involvement

Theory: Community involvement processes have developed in local planning, community empowerment and conflict resolution. The spheres have been land use planning, environmental issues such as landcare, water resource management and traffic calming.

The Murray-Darling Basin Commission has used the study circle process to involve people within the Murray-Darling Basin to address the problems of blue-green algae outbreaks. A study circle is "an informal group of 5 to 15 people who organise themselves to find out what they want to know about a topic" (Murray-Darling Basin Commission, 1996). Supporting materials are provided for the study circles to work through three steps:

1 Understand the nature of the problem.
2. Define solutions to the problem.
3 Action the solutions.

Application to TDM: Community involvement processes have been applied by a number of local/county councils and community/activist based groups in the transport sphere. Hampshire County Council has employed a region wide community involvement process, called "Headstart", for their constituents to gain awareness of the extent of traffic problems in the county and for the community to identify and action solutions.

The process adopted involves workshops with a broad cross section of community groups and encouragement for groups, local authorities, schools, hospitals and companies to develop and implement traffic reduction strategies The responses by these groups appears to be ad hoc and piecemeal

David Endwicht is developing a community involvement process that is focused on the local neighbourhood (Endwicht, 1996). The traffic reduction kit entails five steps over a nine week period with participants being motivated to participate, review their own behaviour and then change their behaviour. The emphasis is very much on fun with high involvement of children A likely conclusion of this model is that mothers and children are more likely to change their travel behaviour, especially for local trips than adult males The ultimate outcome of the Endwicht model is for residents to reclaim their streets from the motor car through negotiation with their local council.

The Smogbusters program has also employed community involvement processes to generate increased awareness in the need for changed travel behaviour The experiences of Smogbusters suggests the requirement for a local community scale and a slow realisation by participants that internal changes to their own behaviour are as important as seeking external solutions, such as improved bus services.

Action orientated learning

This section of the paper makes a brief examination of an applied learning process for TDM practitioners. The process is called participatory action research.

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 6. 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 travel demand management, especially involving the introduction of behaviour change. It also lends itself to the community involvement process as it allows the community to participate in the cycle

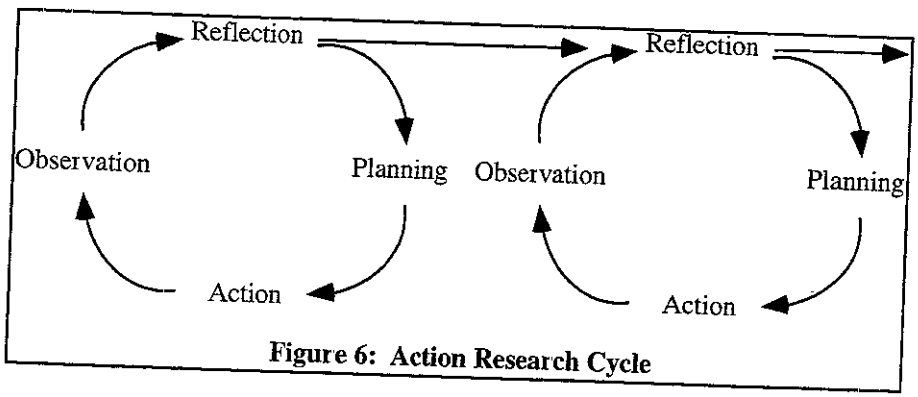

Figure 6: Action Research Cycle

Application in Perth

This section of the paper discusses the approach being taken in Perth, reflecting on the theories developed by the schools of behavioural change and how they have been applied in other locations to Perth. The participatory action research model is also applied.

The Travel Demand Branch is applying TDM interventions at two locations:

1. Workplace - commute destination.
2. Household - trip origin

Workplace Travelsmart

The workplace Travelsmart initiative to date has relied on education (awareness) with the use of logic to persuade people to review their travel behaviour. In otherwords, it is primarily based on social marketing with education as the style of intervention

The project involved the participation of a number of private and public organisations located in the Perth CBD. The project incorporates before and after surveys for each intervention type to measure changes in awareness, attitudes and behaviour. The project is summarised in Table 4 using the participatory action research model approach.

The intervention used in the second cycle involved an information campaign. All organisations, except two used as control groups, were given information about the impacts of cars on air quality and traffic congestion and the personal and community benefits of using alternative modes to driving alone to work. The information campaign was conducted over a six month period.

Table 4 Application of Participatory Research to Workplace Trip Influencing.

	Cycle 1 Secondary research	Cycle 2 First primary research	Cycle 3 First interventions
Reflection	Focus at trip destinations to influence travel decisions (broadened from initial carpool proposal)	Determine best intervention types and channels.	Determine whether a further intervention type will be trialled, the participants and channels.
Planning	Review current literature	Obtain agreement from participating agencies to interventions and develop work program.	Obtain agreement from participating agencies to interventions and develop work program
Action	Obtain Minister's approval and agreement of participants.	Launch the workplace trial, undertak base survey of participants, implement intervention & evaluation survey on effectiveness of intervention.	Implement the intervention and conduct an evaluation survey
Observation	Levels of commitment by participating agencies	Analysis of results	Analysis of results

Application of the participatory action research model to this project (Table 4) indicates the learning process, particularly through the second cycle, is hindered. This is most obvious by the absence of observation and reflection inquiry in relation to the base survey.

The expectations of the project coordinators at the commencement of the project is for the level of awareness to only change.

The project has provided invaluable knowledge of the current level of awareness and acceptance, especially by employers. A key lesson is that access to changing the behaviour of commuters is limited through the workplace. Teleworking may be the exception.

Trip origin Travelsmart

The trip origin Travelsmart initiative being applied in South Perth is more sophisticated than the workplace trial. Table 5 provides a summary of the project. The area of South Perth has been chosen for three main reasons:

1. The local community are experiencing the negative impacts of growing traffic.
2. There is capacity on the public transport services and a basic safe cycle network exists.
3. Many urban opportunities, especially employment, are located close to South Perth. An analysis of journey to work shows that most car driver trips are less than 10 kilometres.

The project is running over an eighteen month period and is a joint exercise with the City of South Perth and the Department of Transport, involving Transperth (public transport coordination), Bikewest and the Transport Demand Branch. The project involves a social marketing/organisational behaviour stream and a community involvement process. The former will occur in cycle 3 of Table 5, while the latter will be undertaken following cycle 3 as an additional cycle. The community involvement process will be contracted out separately to the main component of the initiative.

The project follows the participatory action research model. This is shown in Table 5.

Table 5: Application of Participatory Action Research to Local Area Trip Influencing.

	Cycle 1 Secondary research	Cycle 2 First primary research	Cycle 3 First interventions
Reflection	Focus at trip origins and destinations to influence travel decisions	Assess best direction/ courses of action to take	Analyses results of data and reflect on the best set of interventions for which target audience.
Planning	Review current literature	Obtain agreement of beneficiaries on method, time, outputs, etc.	Determine which set of interventions through which channels will be most effective.
Action	Select an area and obtain agreement/funding from key players/beneficiaries	Call tenders, appoint contractor and undertake first survey.	Implement interventions
Observation	Agreement by key beneficiaries and their conditions	Robustness of survey and validity for next cycle.	Evaluation survey on effectiveness of interventions to change behaviour.

Conclusions

There are a number of conclusions that can be drawn from the reviews undertaken in this paper.

The growing acceptance of the need for different approaches to the seemingly intractable problems of air quality, traffic congestion and traffic impacts on urban amenity increases the impetus for implementing Travel Decision Actions. The sharing of experiences and lessons learnt from different interventions will be an important addition to the knowledge of behaviour change in travel demand management.

Supply Management and Land Use Actions need to be supportive of Travel Decision Actions to achieve the best results. The implementation of these three actions in isolation (Land Use more in the long term), which tends to currently occur, will achieve the least amount of behaviour change.

Both the planned social change and organisational behaviour schools include a mix of intervention strategies and styles for use in community and organisational change. The positive interventions are applicable to TDM. The authors consider that there is currently insufficient evidence to gain community support for the application of the negative or confrontational interventions from these schools.

Arguably, social marketing which uses mass media campaigns (e.g. "Go Green" in Vancouver and "Clean Air 2000" in Sydney) should also be supplemented with initiatives which provide motivations, rewards or information specific to the needs of the individual. Mass media campaigns may be effective in raising awareness and changing attitudes but, for TDM, doubtful in changing behaviour. This is supported by research findings associated with the "Clean Air 2000" initiative which indicates that people recognise the need for action to improve air quality but may feel confused and uncertain about what they can do to make a difference. Further more, people are waiting to be lead towards the adoption of appropriate solutions. Because of the complexity of travel decisions, marketing campaigns need to target the individual in their local context. The use of mass media techniques tend to be divorced from the individuals local context.

The importance of individual values and motivations is not explicit in the behaviour change processes currently applied to TDM. It is, however, more evident in the "Kontiv" approach through rewards and reinforcement than the "Clean Air 2000" approach. The "Kontiv" program and the travel blending component of the "Clean Air 2000" initiative have a number of similarities and differences. Both make use of travel diaries and personal contact with each household (referred to as dialogue marketing) that leads to behaviour change derived with the involvement of the household. The "Kontiv" program takes an additional step by providing specific information on cycling and public transport routes and services for the household for those trips identified in the travel diary that could be made by these modes. The travel blending component also differs in that it entails vehicle logs to record trip distances undertaken by car.

The precursor to community involvement is acceptance that there is a problem requiring a solution. This provides the impetus for people to become involved. As mentioned previously, it is highly likely that the impetus for involvement (for TDM) is the negative experiences of travel behaviour of others.

An interesting dilemma facing the Hampshire approach is whether people change their attitudes through awareness or the experience of changed behaviour (eg being told of the benefits of cycling to work or from the experience of cycling to work one day).

There are two major limitations with the community involvement process. The first constraint relates to scale. The creation of small groups leading to action means that it is limited to local solutions to local problems. The second constraint is that actions will be ad hoc and diverse to suit the local situation and the interaction of the individuals in each group. If the sum of these ad hoc and diverse actions achieve a large overall change, then this process on its own may be sufficient.

Another caution with the community involvement process could be the desire by participants to seek actions that change the travel behaviour of others rather than themselves. For example, the Murray-Darling Basin program allows participants to plant a tree or lobby their Council for action. The act of changing how you take your children to school is a much more internalised action that requires an ongoing commitment.

The use of action research is a valuable tool for practitioners to learn while they implement the above change processes.

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