

***Event Based Behaviour Change: A
Literature Review Focussing on
Transport Applications***

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Title: Event Based Behaviour Change: A Literature Review Focussing on Transport Applications

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Abstract: This report details findings from a literature review which focussed on the travel behaviour change potential of major events such as a Ride to Work day. Experience with event based behaviour change from the health and transport sectors is reviewed. A range of initiatives are identified which have the potential to maximise involvement in the event and habitualise the behaviour change after the event.

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Keywords: travel behaviour change, ride to work, bicycle commuting, travel demand management

EXECUTIVE SUMMARY

The Ride to Work and Beyond! project is being undertaken by the Victorian Department of Infrastructure and Bicycle Victoria with input from the Institute of Transport Studies at Monash University. It builds on the successful Ride to Work event which is run annually by Bicycle Victoria. This project aims to maximise the behaviour change impacts of the Ride to Work event and facilitate the embedment of those behaviours into habits.

This report focuses on the results of a literature review which:

- Examines the role of event based behaviour change drawing specifically on health and transport applications,
- Identifies the range of initiatives used to maximise involvement in the event and habituate the behaviour change after the event, and
- Assesses the nature of evaluations conducted of event based behaviour change and the impacts of the initiatives

'Events' in the health sector are now viewed as but one part of the health promotion framework. This suggests that 'Ride to Work' will have most effect when imbedded within a broader program. In this respect there is an obvious natural synergy with the TravelSMART campaign. A broader 'Cycle Instead' campaign, like that run in West Australia could maximise the benefits of an event such as Ride to Work by imbedding it within a broader strategy aimed at encouraging cycling. The health sector is increasingly focussing on particular target groups in the population to bring about change. Defining and focussing initiatives on particular target market segments has received scant attention in the field of event-based, travel behaviour change initiatives and would be a potentially valuable dimension to the design of the initiatives/interventions to be trialled as part of the Ride to Work and Beyond project.

There is very limited material reported in the published, peer reviewed literature which addresses event based behaviour change in the transport context. This report draws heavily on project reports and material available on web sites to examine transport applications.

There are a number of potential initiatives which could form part of a Ride to Work event. Involvement in the event can be maximised through pre-event and event related initiatives while the habituation of the behaviour change is likely to rely on post-event initiatives. In a relative sense the least attention has been given to post-event initiatives yet the health promotion field emphasises the maintenance is important for behaviour change to be sustained. The range of initiatives identified in this report will provide the basis for selecting a mix of pre-event, event related and post-event initiatives to be included as part of the trial to be undertaken as part of this project.

While there has been major travel behaviour change events run in many cities round the world, in most cases it appears that the vast majority of the resources goes into running the event rather than conducting or reporting on the results of any evaluations of these

initiatives. The lack of evaluation results is, in some cases, undermining the viability of the events. The limited evaluation results which are available do however suggest that events such as Ride to Work do attract people who have not previously ridden to work. Clearly this is a clear market segment. There is also evidence that well designed post-event initiatives can sustain the travel behaviour change. Equally importantly, there is evidence that the behaviour change impacts can extend beyond the travel context of the event to include non-work related travel such as shopping. That is very important in the light of the broader objectives of the TravelSMART program.

Finally, this review has highlighted that the Ride to Work and Beyond! project represents ground breaking work and is certain to generate interest both elsewhere in Australia and overseas.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
INTRODUCTION.....	1
INSIGHT FROM THE HEALTH SECTOR.....	2
INSIGHT FROM THE TRANSPORT SECTOR.....	5
INITIATIVES EMPLOYED.....	6
<i>PRE-EVENT INITIATIVES</i>	6
<i>EVENT INITIATIVES</i>	8
<i>POST-EVENT INITIATIVES</i>	9
EVALUATION RESULTS.....	10
CONCLUSIONS	16
REFERENCES	17

INTRODUCTION

'Ride to Work' is an annual event run by Bicycle Victoria which actively promotes riding to and from work and attracts thousands of participants. Up to 35 per cent of those participants ride to work for the first time as part of the event. This suggests that the event has a potentially valuable role to play in stimulating travel behaviour change.

The Ride to Work and Beyond! project is being undertaken by the Victorian Department of Infrastructure and Bicycle Victoria with input from the Institute of Transport Studies at Monash University. The project aims to maximise the behaviour change impacts of the Ride to Work event and facilitate the embedment of those behaviours into habits. In this way it forms a logical component of the Victorian TravelSMART program which aims to reduce the negative impacts of car travel through a reduction in vehicle trips and kilometres travelled, achieved through voluntary changes by individuals, households and organisations towards more sustainable travel choices.

This report represents an initial step in the project and focuses on a literature review of event-based behaviour change programs. The objectives of this review are to:

- Examine the role of event based behaviour change focussing on health and transport applications
- Identify the range of initiatives used to
 - Maximise involvement in the event
 - Habitualise the behaviour change after the event, and
- Assess the nature of evaluations conducted of event based behaviour change and the impacts of those initiatives

The structure of this report is as follows. Insight provided by the health sector is considered first and then attention is turned to the transport sector. In the context of transport applications both date-fixed and date-flexible events are examined. Bike to work events are a classic example of an event where the date of the event is fixed, usually well in advance. Smog Alert days typify date-flexible events where strategies and initiatives may be pre-planned but the 'event' will only be called if air quality levels fall below a pre-determined threshold. In the context of date-fixed events, consideration is given to the range of initiatives employed before, during and after the event. Finally, results of evaluations of event-based behaviour change initiatives are reviewed.

INSIGHT FROM THE HEALTH SECTOR

On the surface there would appear to be a number of events in the health field where there is the potential to learn about the impact of behaviour change events. These health behaviour change events include Quit Week, World No Tobacco Day, AIDS Day, Heart Health Day, Falls Awareness Week and Active Australia Day to name but a few. Importantly, examples from the health sector, particularly the growing area of health promotion, are being used as a reference point for behaviour change initiatives in the transport sector (eg Ferguson et al 1999).

The foundation of the behaviour change work in the health sector appears to be the often cited work of Prochaska and DiClemente (1983) who developed a model of behaviour change (called a transtheoretical model) in the context of smoking campaigns. Their work, which is now used extensively in the health promotion field and increasingly in a transport context, emphasised the successive stages in behaviour change from pre-contemplation to contemplation then preparation, action and finally maintenance. Its application, and relevance, is typified by the work of Sissons Joshi and Senior (1998) who studied the uptake of walking and cycling to work in Oxford, UK. That study suggested that people at different stages in the behaviour change process tend to focus on different perceived barriers, and may therefore present a series of problems which will need to be overcome through targeted initiatives to achieve behavioural change. This clearly has important implications (as addressed later) for the design of initiatives for the Ride to Work event.

In the 1980's and early 1990's single initiatives were often introduced in isolation in the health promotion field. Examples include advertising in Sun Smart campaigns, information or exercise only in falls prevention campaigns, and strong social marketing or scare campaigns covering HIV/Aids. Many of these campaigns suffered because they were not sufficiently tailored to meet the needs of particular market segments (at the extremes being either too general or too specific) and there was often inadequate attention to the sustainability of the initiative. Over time the health promotion field has matured and now the behaviour change process is imbedded within a Health Promotion Framework (cited in Dept of Human Services, 2000) (see Figure 1). That framework emphasises a range of initiatives covering medical, behavioural and socio-environmental approaches. This entire framework now underpins many health promotion activities.

HEALTH PROMOTION EVENTS ARE NOW VIEWED AS PART OF THIS FRAMEWORK, NOT ONE-OFF INITIATIVES WHICH WILL ALONE PRODUCE BEHAVIOURAL CHANGE. Campaigns such as Quit, SunSmart and Falls Prevention now have multiple strategies and initiatives applied across the whole health promotion framework as shown in Figure 1. This approach is now influencing the development of programs to address obesity as well as breast and cervical cancer. This has important implications in the context of 'Ride to Work'.

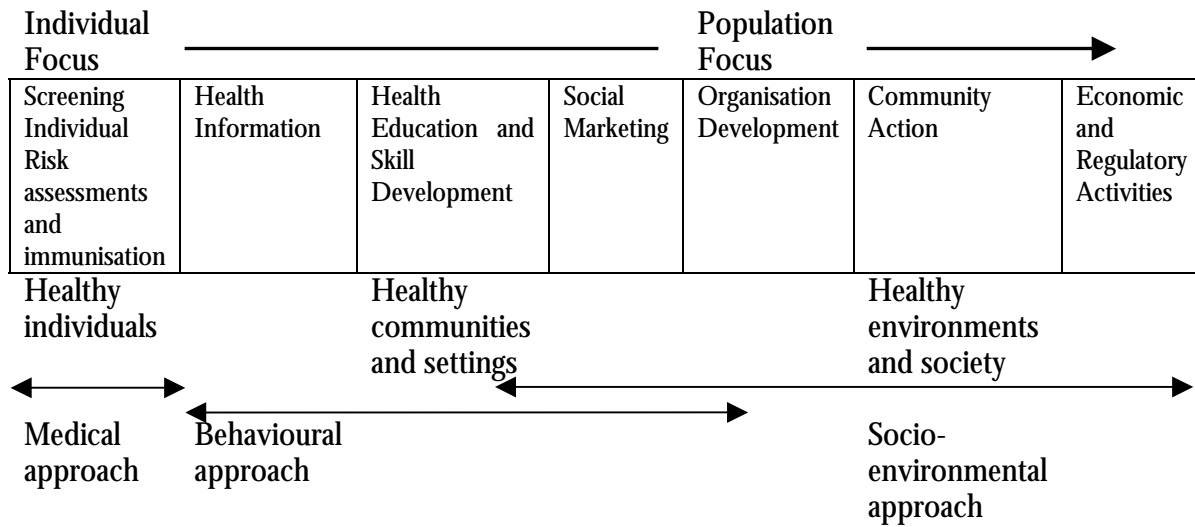


Figure 1: Health Promotion Framework (Modified from Dept of Human Services, 2000)

The experience in the health promotion sector would suggest that ‘Ride to Work’ will have most effect when imbedded within a broader program. This is clearly the message from the ‘Promoting Active Transport’ report of the National Public Health Partnership (2001) which states that:

“comprehensive, long-term strategies are essential when attempting to change transport modes across all settings, and to achieve behavioural change there is a need to focus on policy and environmental changes in addition to individual change strategies”

While this project aims to maximise the behaviour change potential of the Ride to Work event, the natural synergy of that event with the TravelSMART campaign, and in particular with the Cycle Instead campaign run in West Australia (Greig, 2001) suggests that the benefits of the event will be maximised where is it imbedded as part of a broader strategy aimed at encouraging cycling.

There are important areas where we can learn from the health promotion field. Ferguson et al (1999) highlight a number of important issues. First, in the travel mode choice change field to date there has been limited consideration to how behaviour change can be focussed on particular target groups in the population to bring about change. For example, Sissons Joshi and Senior (1998), undertook a study focussed on active transport modes, specifically the uptake of walking and cycling to work in Oxford, UK. They suggest that people at different stages in the behaviour change process tend to focus on different perceived barriers, and may therefore present a series of problems which will need to be overcome to achieve behavioural change. This implies that a need to develop initiatives for target market segments in the different stages of behavioural change. As we will see later, defining and focussing initiatives on particular target market segments receives scant

attention in the field of event-based, travel behaviour change initiatives. Ferguson et al (1999) also emphasise that maintenance of behaviour change is important but that it is often overlooked. While the maintenance phase is clearly an explicit component of the model of behaviour change proposed by Prochaska and DiClemente (1983) it needs greater attention in the travel behaviour change area. This is clearly relevant to event based behaviour change, particularly where one objective is to habituate the behaviour change stimulated by the event.

INSIGHT FROM THE TRANSPORT SECTOR

While there is experience with event based behaviour change initiatives, such as Ride to Work, the programs have largely grown from the enthusiasm and commitment from a core team and rarely have these events been rigorously designed from a behaviour change perspective. If nothing else, the review has reinforced that this project represents ground breaking work and is certain to generate interest both elsewhere in Australia and overseas.

One point which needs to be made in the context of discussing event based behaviour change in the transport context is that there is very limited material reported in the published, peer reviewed literature. This section draws heavily on project reports and material available on web sites. It is important to keep in mind that these sources have not, by their nature been subjected to independent peer review.

In the transport context there are a variety of events which are potentially of relevance to this project including commuter challenges, smog alerts, rideshare weeks, bike2work days and CarFree days. All of those events are considered in this section with experience drawn from case studies in Australia, Canada, USA and Europe.

We begin by drawing a distinction between date-fixed and date-flexible events. Bike to work events are a classic example of an event where the date of the event is fixed, usually well in advance. Smog Alert days typify date-flexible events where strategies and initiatives may be pre-planned but the 'event' will only be called if air quality levels fall below a pre-determined threshold. In the Australian context there appears to be little if any evaluation of Smog Alert days. The perceived limited impact of these sometimes widely publicised events is probably a contributing factor to the reduced emphasis placed on this type of initiative by environment protection authorities (Millard, 2003). The San Francisco Bay area runs a 'Spare the Air' program when ground-level ozone reaches unhealthy levels (Tools for Change, 2003d). The program's main objective is to promote voluntary measures to reduce polluting activities, especially car use, in favour of less polluting alternatives when poor air quality is forecast. The number of Spare the Air days declared each summer (roughly June to October) has ranged from 3 to 25 over the last decade. Individuals are able to register to receive email notification of Spare the Air days and the print and electronic media are also used to make the announcements. Positive results were achieved for those who chose to participate with trip reductions reported in email, web and hardcopy surveys (Tools for Change, 2003d). Results from random public phone surveys (as shown in Table 1) are less positive and tend to ***highlight that the advertising and media coverage raises awareness but do not result in much behaviour change*** (Tools for Change, 2003d).

Table 1: Results of Spare the Air Evaluations

		Aware of the 'Spare the Air' campaign	Aware of a 'Spare the Air Day' Episode	Knew it was a 'Spare the Air Day' and drove less for air quality reasons
Random public phone surveys	1998	67 %	38 %	5.6 %
	1999	75 %	42 %	7 %
	2000	80 %	53.8 %	11.3 %
Pre-registered individuals	1998 email (and web) surveys	97.3%	95.7 %	49.2 %
	1998 hardcopy survey	81.7%	77.6 %	29.7%

Source: (Tools for Change, 2003d).

The following discussion focuses on date-fixed events and is organised in two main subsections. The first reviews the range of initiatives employed and the second focuses on the insight provided by evaluations.

INITIATIVES EMPLOYED

In discussing the range of initiatives employed in travel behaviour change related events, it is useful to draw on the objectives of this review to provide a structure for the discussion. As highlighted in the introduction, the review aims to identify the range of initiatives used to (a) maximise involvement in the event and (b) habitualise the behaviour change after the event. Involvement in the event can be maximised through pre-event and event related initiatives while the habitualisation of the behaviour change is likely to rely on post-event initiatives. The following discussion therefore focuses separately on pre-event, event and post-event initiatives.

PRE-EVENT INITIATIVES

Publicity is a common pre-event initiative even when it is not explicitly described in the event documentation accessed for this study. In the case of Washington DC's Bike to Work Day (Commuter Connections, 2002) this pre-event publicity included emails to cyclists on the Washington Area Bicyclists Association contact list, links to information from various web sites, radio and print media advertising, direct email marketing to human resource professionals, a newsletter aimed at employers and direct recruitment of employers by a team

of Employer Service sales representatives. The California RideShare week (which promotes commute alternatives such as carpooling and public transport as well as riding a bike) prepares:

- employer promotion packs,
- a 'Save the Date' postcard mailed to employers in advance of the employer packs and designed to announce the Ride Share Week dates and the special website address for the event,
- participation in health, safety and transportation fairs held throughout the Bay Area during the two and a half months prior to the event,
- roadside billboards
- bus placards and
- posters displayed at outdoor public locations (Beroldo, 2002).

There is also an incentive of a \$20 gift voucher at a book and music store which is offered to employee transportation coordinators, human resource personnel and transportation program managers who book a Rideshare Week promotion at least a month in advance of the event.

Commuter Challenges have been pioneered in Canada (e.g. in Calgary and the National Capital Region around Ottawa) (Tools of Change, 2003a and 2003b). These week long events, which have grown from 'cycle to work' days, are designed to encourage commuters to explore alternative transport options and are usually held in conjunction with National Environment week. These can involve arranging a team captain/champion working in an individual employment site/building. Those volunteers were invited to a free breakfast in advance of the event which featured a notable speaker from the environment movement as well as a promotional presentation about the Commuter Challenge. These champions within each organisation also aim to create an atmosphere of friendly competition. The notion of the competition apparently had more effect within Environment Canada (one of the major participants in the National Capital Region) when they were inter-departmental rather than purely internal to one department. Given the employer focus, the Commuter Challenge uses poster campaigns and lobby displays to promote the event in addition to emails and personal contact and hands-on events where individuals register in advance and therefore make a commitment to the event. This latter initiative is important because obtaining a commitment can be an effective mechanism for increasing involvement (Tools of Change, 2003c).

Following on the commitment theme, it has been suggested in the context of the Californian RideShare Week that sending a reminder email to registrants prior to the event, could reduce the number of people who forget about their pledge or commitment to try another commuter mode (Rides for Bay Area Commuters, Inc., 2001).

EVENT INITIATIVES

There are a number of initiatives, or features of the event, which may encourage participation on the day, or alternatively reward those who do participate.

A not uncommon initiative is some form of 'Ride to Work' function or breakfast. This is not only a feature of Ride to Work days in Australia but is also used in Washington DC (Commuter Connections, 2002) where it included prize draws (including bikes and bike equipment), speeches and opportunities to talk to elected officials, bike on bus/van demonstrations and entertainment (live bands). The Washington event also included 15 convoy bicycling routes, designed to assist new and existing cyclists. These routes also included a number of 'pit stops' or rallying points. One of those was located in the downtown (as had previously been the case) and four additional ones were added throughout the DC region. The notion of 'pit stops' is also employed in Denver, Colorado where during the Bike to Work Day over 60 bike stops are set up largely in conjunction with individual sponsors (Mouton, 2003).

The rewards for participation, which may be given away to all participants (depending on sponsorship) or offered as prize draws include everything from bikes and bike equipment to gift certificates and books. While perhaps a one off case, there is one example where a major prize was not the incentive it was hoped to be. California's RideShare week 2001 was offering a prize draw for those who followed through on their pledge to participate. In this case the grand prize was a trip for two to Paris. Unfortunately the Ride to Work week took place about three weeks after the tragic events of September 11, 2001 and consequently, Beroldo (2002) notes:

“generally we push the Grand Prize trip to entice people to sign up, however, with people more apprehensive about travelling, even a vacation to Paris was not as big a selling point as we expected.”

In the Commuter Challenges in Canada (Tools of Change, 2003a and 2003b), T-shirts are given away as prizes, certificates are given to recognise participation, but an emphasis is placed on being “green” rather than winning a prize.

The Toronto/Ottawa region in Canada developed a 'Clean Air Commute' campaign which has a date-fixed format and is built round a month-long Clean Air Campaign (Tools for Change, 2003e). The whole campaign aims to raise awareness about smog, vehicle emissions and related respiratory problems with the Clean Air Commute designed as a one-day fun event. In the event, companies were challenged to compete with one another by collecting points for employee participation in smog-reducing forms of commuting. In 1996, 16000 employees participated in the event (Tools for Change, 2003e). The Clean Air Campaign employed a variety of media advertising and coverage opportunities to promote the event (pre-event publicity). Companies were able to register for the Clean Air Commute challenge and they received brochures and promotional material. There were over 100 prizes for resource-efficient commuting (bikes and accessories, transit passes etc) and companies sometimes also supplied their own giveaways for employees. On the day of the event employees arriving at work recorded the activity they undertook on a chart and the event

organisers collected the charts and tallied the results. Recognition was provided through an awards ceremony for companies that earned the greatest number of points and through newspaper ads which listed all participating companies.

POST-EVENT INITIATIVES

There is little attention given to post-event initiatives which would support the habitualisation of the behaviour change motivated by the event.

Monash University arranges a regular cyclists breakfast which could be regarded as a follow-up initiative to build on the Ride to Work day event held on campus.

The questionnaire distributed to participants in the Bikewest 2003 Ride to Work Breakfast (Greig, 2002) identified that nearly 40 percent of respondents would like access to a bicycle breakdown service. This could be taken as a possible indication of a post-event initiative which could encourage regular cycling to work.

The Calgary Commuter Challenge (Tools of Change, 2003a) included a “wrap-up bash” on the last evening of the event which was open to all participants and organisers. This event was sponsored by a prominent Café which provided the venue and free snacks. While not explicitly mentioned in any of the literature accessed for this study, this notion of an end of event activity could be extended to a post-event function for the volunteers, such as the team captains or workplace champions, to emphasise the importance of ‘maintenance’ activities in their organisations to sustain the behaviour change stimulated by the event.

In Vancouver British Columbia, the Bike to Work Society (BTWS) organised Greater Victoria’s annual Bike to Work Week. The BTWS also runs a Traffic Skills Course which they regard as an adjunct to further behaviour change (Cubberley, 2003). Clearly a Traffic Skills Course could also be used as a pre-event initiative.

Of particular relevance to this project, however, is a 1996 pilot project conducted subsequent to the Toronto/Ottawa regions Clean Air Commute’ campaign (Tools for Change, 2003e). This pilot tested an initiative designed to build on the one-day commitment and encourage lasting, measurable changes in commuting behaviour. Companies which had participated in the 1996 one day challenge event were targeted and the coordinators in those companies were sent a package about three weeks after the Clean Air Commute Event. The package included a poster for display and a questionnaire for distribution. The companies were asked to display the poster for a few days before handing out letters and questionnaires designed to stimulate interest in the project. The letters signed by a company executive commended employees for the results achieved in the challenge and informed them of a further opportunity to participate. The questionnaire collected information on past actions and included an option for the respondent to agree to participate in a three month pilot. This is potentially an important initiative designed to build commitment. The names and signatures of those who agreed to participate were displayed at the worksites and each month results were collected and marked on the display. The public display therefore served as a motivation for individuals to maintain their commitment. As discussed in the section on

evaluation, this follow up activity was found to significantly improve the on-going commitment to use alternative modes.

EVALUATION RESULTS

While there has been major travel behaviour change events run in many cities round the world, it appears that the vast majority of the resources goes into running the event rather than conducting or reporting on the results of any evaluations of these initiatives. The lack of evaluation results is, in some cases, undermining the viability of the events as the following example demonstrates:

“I am aware of only very limited local research into consequent attitudinal and behavioural change. This seems to be a direct result of the small Bike Week budget being fully committed on promotional materials, co-ordination and PR, rather than any shortage of enthusiasm for research. It has recently become clear that research into the real value of Bike Week and Bike2Work Week, possibly confirming the hitherto anecdotal examples of behavioural change, will be essential if the Department of Transport is to reverse its decision to withdraw funding in 2004.” (Harvey, 2003)

Similar sentiments were expressed by Cubberley (2003) who noted that in relation to the Victoria BC Bike to Work Week, “the organisers spend up to 40 per cent of their time trying to secure the funding for the event. The biggest hurdle we face is securing adequate funding for the event.”

Of the evaluations which have been done, there tends to be an emphasis on process evaluation, or at best measurement of participation levels, rather than outcome evaluation. For example, when considering the Bike to Work Day 2002 in the Washington DC Metropolitan Region, Commuter Connections (2002) discuss the various avenues through which the event was publicised, the resources deployed in the event in terms of the number of brochures, posters, T-shirts etc. which were distributed and the sponsorship obtained. The cost effectiveness of the event was calculated by dividing the total cost of the program (\$40,000 including partner and sponsorship contributions) by number of registered participants to yield a cost of \$40 per registered participant. This process evaluation emphasis also appears in much of the discussion of the International Car Free Day Campaign which is focussed this year on the 22nd of September 2003 (www.22september.org). Within Europe this appears to be promoted as part of ‘European Mobility Week’ and ‘In town, without my car!’ (Climate Alliance, 2002). While information is available on the range of projects, activities and initiatives arranged, and the total number of people participating (sometimes by mode), little if any attention seems to be focussed on the behaviour change impacts of the event.

Where participant surveys are sometimes undertaken at travel behaviour change based events, they tend to focus on measuring participation and establishing the socio-demographic profile of participants (Greig, 2002) rather than exploring issues of behavioural change per se. In many cases, limitations in survey methodology (possibly due to lack of

resources) means that sample design is often largely ignored, even to the extent of being unable to establish response rates because no records are maintained of the number of questionnaires distributed (Greig, 2002).

Despite the above shortcomings, there is some valuable insight provided by the somewhat limited number of evaluations for which results have been able to be obtained.

The Queensland Ride to Work Day has been evaluated with a questionnaire distributed to participants (Mellifont, 2001 and 2002). About 270 responses are analysed in the 2001 survey, and about 380 in 2002, however no indication of response rate is provided. Interestingly in both years, about 8 per cent of respondents indicated that they had ridden to work for the first time as part of the event. However, the bulk of respondents (74 per cent) reported already riding to work daily or very regularly (2 to 4 times per week). While data was collected on work travel mode on the preceding day, results are not reported to identify, for example, the predominant mode of those who rode to work for the first time. The work travel mode data is also difficult to interpret since respondents were asked to tick all modes that they used without any indication for the time or distance covered in each of those modes. It would also appear that no information on home location was obtained because no results are reported for commuting distance. Interestingly the Queensland results in terms of the percentage who had ridden to work for the first time (8 per cent) is considerably lower than the 35 per cent figure claimed for the Victorian Ride to Work Day event (Victorian Department of Infrastructure, 2002). Never-the-less, these figures highlight that these events are clearly influencing individuals to try a new mode and that highlights their potential as a foundation for travel behaviour change.

The main reasons for riding on the day in the Queensland event are summarised in Table 2. Clearly the Ride to Work Day event attracts a number of people who are already riding to work. The relative importance of the free breakfast was stronger in 2002 while the other main factors remain participating for the exercise and friends/workmates encouragement.

Table 2: Factors influencing involvement in Queensland Ride to Work Day

What is it about Ride to Work Day that most encouraged you to ride today? (Multiple responses allowed)	Number of responses	
	2001	2002
Usually ride	141	172
Free Breakfast	83	158
Exercise	73	97
Friends/workmates encouragement	69	92
Riding in a group	37	54
Other (e.g. social, by chance, prizes, learn new route)	27	39

Source: Melifont 2001, 2002

Roughly three quarters of respondents to the Queensland survey indicated that they were motivated to continue riding to work because of participation in the event and that figure has remained fairly constant in 2001 and 2002. However the question is a hypothetical one

and no follow up data is reported to establish whether that motivation to continue riding translated into action to ride to work.

The Queensland surveys also explored the factors which would encourage people to ride more often. The results are shown in Table 3. Again, cross tabulating these responses with the frequency of riding to work would have been valuable but is not reported. The results in Table 3 are surprising given that about three quarters of respondents to the survey are already very regular riders (of course we do not know whether they answered this question). One would imagine that the first two items identified in Table 3 would need to be present anyway with such a high percentage of respondents already regular riders. On- and off-road facilities also rate highly in the 2002 survey.

Table 3: Factors which would encourage riding to work more often

What would encourage you to ride to work more often? (Multiple responses allowed)	Number of responses	
	2001	2002
Secure bike parking	93	132
Showers at work	103	135
More on-road cycle facilities	112	171
More off-road cycle facilities	98	160
People to ride with	35	41
Flexible work hours/dress code	27	54
Nothing	15	8
Other (driver education, path connectivity, lockers, tax/medicare rebate, safer arterial roads etc.)	36	23

Source: Mellifont 2001, 2002

An evaluation reported by LDA Consulting (2002) of Metropolitan Washington Council of Government's 2001 Ride to Work (RTW) Day is rigorously structured but the poor response rate (12 per cent corresponding to only 133 completed questionnaires) cautions against generalising the results. To be fair to this study, at least a response rate is reported. The response rates in the surveys discussed earlier may be no better. Like in Queensland, the event attracts a number of participants who are already cycling regularly to work (nearly 50 per cent of respondents indicated cycling at least 3 days per week). About 16 percent of respondents indicated that they did not commute by bike before they participated in the event. This is about twice the percentage from the Queensland survey reported above. From that 16 percent, about 10 percent did not ride to work after the event while the other 6 per cent started to ride to work after the event. This suggests that the event was successful in stimulating travel behaviour change with some people picking up a new mode. Importantly, about 14 per cent of respondents who were riding before, indicated that they were riding more often after the event. In this case the event was successful in increasing the rate of participation of those who were already riding to work. The event was also successful in stimulating greater use of the bike for non-work trips with a small percentage of

respondents (2 per cent) indicating that they started to ride their bikes for non-work trips after participating in the BTW day while about a third said they used their bikes more often for non-work trips after BTW day and before the event. ***These latter results are important and indicate that the travel behaviour change impacts extend beyond the context of the ride to work day event itself to other travel decisions.*** In terms of the mode used on non-bike commute days, nearly a half used public transport while roughly one third drove alone.

Of those who did not continue to ride to work after the Washington RTW event, about 40 per cent said this was because it was too far to ride on a regular basis. Unfortunately, while commute distance was reported, the responses to this question were not cross tabulated against commute distance to appreciate how severe the distance barrier was.

The evaluation of the California RideShare Week 2001 provides evidence of the potentially valuable role of asking registrants to pledge or commitment to make a travel behaviour change on the day of the event. Just over 8000 people participated in the week long promotion and were entered into a draw for a number of prizes (Rides for Bay Area Commuters, Inc., 2001). The majority of participants became aware of the Rideshare Week through their employer or the Internet. Importantly, the prize draw was cited as the reason for participating by almost 45 per cent of the participants (Rides for Bay Area Commuters, Inc., 2001). A major focus of the promotion appears to be encouraging individuals who travel in single occupant vehicles to try alternative commuting modes. These individuals were asked to pledge to try a commute alternative before the end of the week.

The results summarised in Table 4 highlight that those who registered and pledged, were already more likely than an average Bay Area commuter to be travelling by carpool, public transport and bicycle. Of participants who were driving alone when they registered, 57 per cent followed through on their pledge to try another commute mode (Rides for Bay Area Commuters, Inc., 2001). About 12 per cent of them tried commuting by bicycle while the most popular alternative modes for these commuters were carpool and public transport. Even those commuting by high occupancy vehicle rode a bike to work at a rate eight times higher than the average Bay Area resident. The results also suggest a residual benefit of the promotion with 37 per cent of participants who tried an alternative continuing to use that mode more frequently than before the promotion. Importantly, 30 per cent of the original single occupant vehicle commuters were found to be still using an alternative regularly (Rides for Bay Area Commuters, Inc., 2001).

Of particular relevance to this project is a 1996 pilot project conducted subsequent to the Toronto/Ottawa regions Clean Air Commute' campaign (Tools for Change, 2003e). As described in the previous section, this pilot tested an initiative designed to build on the one-day commitment and encourage lasting, measurable changes in commuting behaviour. The initiative involved asking employees of companies which had participated in the event to agree to commit to a three month pilot designed to encourage continued use of alternative transport modes. The evaluation focussed on seven companies with three randomly assigned control groups. Those companies in the 'test' groups received one of two versions of the questionnaire reflecting whether individuals had undertaken an activity in the Clean Air

Table 4: California Rideshare Week 2001 Results

	Bay Area Residents	Rideshare Week Participants		
	2001 Base-line commute profile ¹	Original Commuting Mode of Rideshare participants ²	Mode used during Rideshare week by original SOV* commuters ³	Mode used during Rideshare week by original HOV** commuters ⁴
Drive Alone	69 %	34.4%		
Bus/Public Transport	10 %	27.5%	29.7 %	48 %
Carpool	17 %	23.3 %	37.8 %	36 %
Motorcycle	1 %	0.8 %		
Vanpool	1 %	3.2 %		4 %
Bicycle	1 %	6.9 %	12.2 %	8 %
Walk	2 %	2.9 %	12.2 %	4 %
Telecommute	< 1 %	1.1 %	8.1 %	

Source: Rides for Bay Area Commuters, Inc., 2001

- Notes: * SOV = Single Occupant Vehicles
 ** HOV = High occupant vehicles (eg carpool, public transport)
 1: sample size = 3636
 2: sample size = 378
 3: sample size = 74
 4: sample size = 25

Commuter challenge which they were already accustomed to doing or whether they had undertaken a new activity. Telephone surveys were conducted at the end of the pilot to collect information on their clean commuting practices during the pilot and their intentions for the following summer.

Limited information is available from the evaluation. According to Tools for Change (2003e) pilot study participants were significantly more likely than their the control groups to have taken public transport (four times more often), rode a bike (five times more often) or walked or ran to work (seven times as often). Importantly, similar differences emerged in

terms of the commuting intentions for the following summer. There also appeared to be an osmosis or carry over effect on co-workers at the pilot sites who had not agreed to participate in the pilot – that is those co-workers reported similar shifts in clean air commuting.

Reflecting the experience from the Washington Council of Governments 2001 Ride to Work Day evaluation (LDA Consulting, 2002), pilot participants were significantly more likely to have been involved in clean air travel practices for non-work related travel such as shopping and this was also the case for their future travel intentions. This is another important result which reinforces that the travel behaviour change impacts can extend beyond the travel context of the event.

A final result from the pilot which is significant is that pilot participants were significantly more likely to have described themselves as positive and committed to alternative commuting practices. Their co-workers, while significantly less positive and committed than their pilot participants were still significantly more positive and committed than those in the control group.

The results from the Canadian pilot provide strong evidence of the scope for post-event activities to build longer term commitment to alternative commuting modes. This is particularly important in the context of the current project where one objective is to encourage the habitualisation of Ride to Work commuting behaviour stimulated by the event.

CONCLUSIONS

This review has highlighted a number of issues which are of relevance to the Ride to Work and Beyond! project. The experience in the health sector is that events are now viewed as but one part of the health promotion framework rather than one-off events which alone will produce behavioural change. This suggests that 'Ride to Work' will have most effect when imbedded within a broader program. There is an obvious natural synergy with the TravelSMART campaign. It would be particularly relevant to consider running something like the Cycle Instead campaign from West Australia to maximise the benefits of an event such as Ride to Work by imbedding it within a broader strategy aimed at encouraging cycling.

It is also significant that the health sector is increasingly focussing on particular target groups in the population to bring about change. Defining and focussing initiatives on particular target market segments has received scant attention in the field of event-based, travel behaviour change initiatives and would be a potentially valuable dimension to the design of the initiatives/interventions to be trialled as part of the Ride to Work and Beyond! project.

The review has identified a number of potential initiatives which could form part of a Ride to Work event. Involvement in the event can be maximised through pre-event and event related initiatives while the habitualisation of the behaviour change is likely to rely on post-event initiatives. In a relative sense the least attention has been given to post-event initiatives yet the health promotion field emphasises the maintenance is important for behaviour change to be sustained – it does not just happen. The range of initiatives identified here will provide the basis for selecting a mix of pre-event, event related and post-event initiatives to be included as part of the trial to be undertaken as part of this project.

While there has been major travel behaviour change events run in many cities round the world, in most cases it appears that the vast majority of the resources goes into running the event rather than conducting or reporting on the results of any evaluations of these initiatives. The lack of evaluation results is, in some cases, undermining the viability of the events. The limited evaluation results which are available do however suggest that events such as Ride to Work do attract people who have not previously ridden to work. Clearly this is a clear market segment. There is also evidence that well designed post-event initiatives can sustain the travel behaviour change. Equally importantly, there is evidence that the behaviour change impacts can extend beyond the travel context of the event to include non-work related travel such as shopping. That is very important in the light of the broader objectives of the TravelSMART program.

Finally it is worth noting that while there is experience with event based behaviour change initiatives, such as Ride to Work, the programs have largely grown from the enthusiasm and commitment from a core team and rarely have these events been rigorously designed from a behaviour change perspective. If nothing else, the review has reinforced that this project represents ground breaking work and is certain to generate interest both elsewhere in Australia and overseas.

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