



TRAVELSmart

HOUSEHOLDS IN THE WEST



Australian Government
Department of the Environment, Water, Heritage and the Arts



Government of South Australia
Department for Transport,
Energy and Infrastructure

TravelSmart Households in the West is a project of the Government of South Australia with the Australian Government as part of the National Travel Behaviour Change Project.



VOLUNTARY TRAVEL BEHAVIOUR CHANGE PROJECTS CAN BE PRACTICAL AND MEASURABLE WAYS TO ACHIEVE GREENHOUSE GAS ABATEMENT. THEY ALSO CONTRIBUTE TO OTHER DESIRABLE BEHAVIOUR CHANGE OUTCOMES, SUCH AS IMPROVED HEALTH, PHYSICAL ACTIVITY AND ROAD SAFETY.

Foreword

I am delighted to be reporting the results of TravelSmart Households in the West; an outstanding greenhouse gas abatement project, significantly reducing car use and increasing peoples use of sustainable modes of travel in Adelaide's western suburbs.

This report details the TravelSmart Households in the West project from its conception and design, through the approaches used to engage the community and deliver the project on the ground, to the innovative methods used to measure the results. Now that the impacts of this initiative have been evaluated (and there is evidence that it was highly successful), there is significant interest in understanding the key factors that contributed to its success.

I would like to acknowledge the broad range of people involved in all stages of this project. I would especially like to thank those people in the West of Adelaide who have demonstrated that by making small changes to they way they get around – whether by choosing to replace a regular car trip with a bus, train or tram trip, cycling instead, car pooling with colleagues or neighbours, or by combining multiple trips into a single journey – they have collectively made a huge contribution towards reducing our carbon footprint.

Attaining sustainability is one of the key objectives of South Australia's Strategic Plan. I was pleased to see TravelSmart Households in the West recently awarded the 2008 Premier's Award for Attaining Sustainability. The Award recognises the project's role in minimising the impact of human activity on the environment.

South Australia needs to substantially reduce transport-related greenhouse emissions while maintaining accessibility and economic development. The Government's commitment to Tackling Climate Change will help us to build on the important achievements and learnings of this project.



Jim Hallion

CHIEF EXECUTIVE

Contents

PROJECT OVERVIEW

The National Travel Behaviour Change Project	02
The Aims of the TravelSmart Households in the West Project	03
The Target Area	04

PROJECT DESIGN AND DELIVERY

Community Perceptions: The Before Study	07
How TravelSmart Engaged the Community	08
A Community Engagement Approach – Working with Groups	09
Individual Engagement – Connecting with Individuals and Households	11
The Right Tools for Change	15
TravelSmart Friends Legacy Building	17

PROJECT RESULTS

Independent Measurement	19
The Evaluation Approach	19
Results of GPS and Odometer Surveys	23
Personal Examples	26
Other Evidence of Behaviour Change	28
Community Perceptions: The After Study	30
Summary of Project Results	31

ACKNOWLEDGEMENTS	33
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GLOSSARY AND ABBREVIATIONS	34
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The National Travel Behaviour Change Project

- South Australians produce nearly 30 million tonnes of greenhouse gases every year ¹
- each one of us contributes around 20 tonnes of greenhouse gases a year ¹
- transport accounts for 19% of South Australia's emissions ²
- personal travel accounts for 34% of overall household greenhouse emissions. ³

Source:
¹ South Australia: Reducing the Greenhouse Effect. Environment Protection Agency, South Australia, 2000
² SA State of Environment Report, 2008
³ Australian Greenhouse Office, Global Warming, Cool it, 2006

Climate change associated with greenhouse gas emissions is widely recognised as one of the world's most serious challenges. Road transport is a key contributor, accounting for a 20.9% increase in South Australia's emissions between 1990 and 2005. Of the State's total transport-related emissions in 2005, road transport made up about 89%.

In mid 2003 the National Travel Behaviour Change Project (NTBCP) was established, in a partnership with the Australian Government Department for the Environment, Water, Heritage and the Arts (DEWHA) (formerly the Australian Greenhouse Office) and the Governments of South Australia, Victoria, Australian Capital Territory and Queensland. The common goal was to reduce greenhouse gas emissions by changing travel behaviour and decreasing demand for private car travel. Each jurisdiction devised its own project/s, specific to local needs and conditions.

South Australia's component of the NTBCP became the TravelSmart Households in the West Project, initiated by DTEI. It followed small scale feasibility studies in metropolitan Adelaide between 1997 and 2002 and drew upon national and international experience.

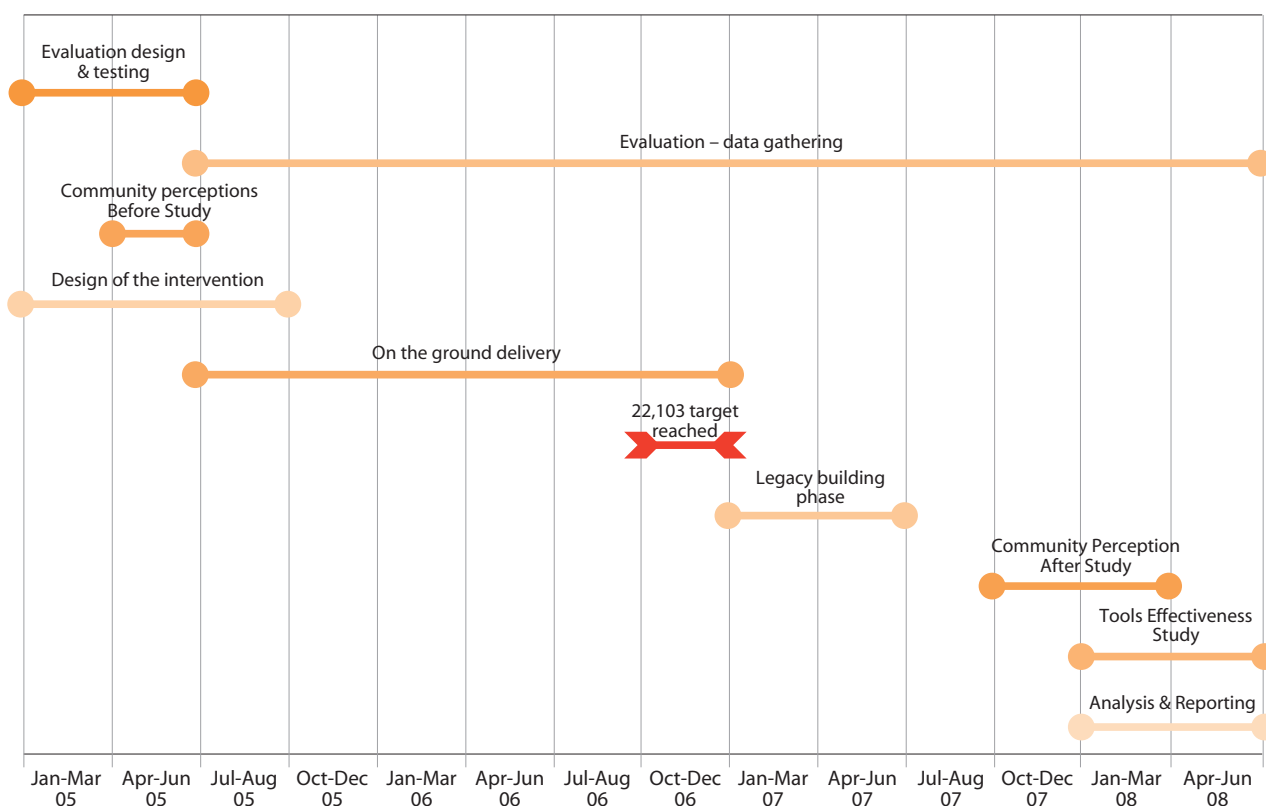
To achieve the amount of **greenhouse gas abatement (tonnes of CO₂)** required by the National Travel Behaviour Change Project it was calculated that TravelSmart Households in the West would **need to engage 22,103 households** and reduce car use by around 14%. The project exceeds this target.

Aims of the TravelSmart Households in the West Project

The project aimed to:

- reduce private car use through behaviour change, measured by vehicle kilometres travelled (VKT)
- achieve ongoing change in travel behaviour
- engage individuals on a voluntary basis
- directly engage people within their own settings and cultural context, capturing interest across all socio-demographics
- provide simple, motivating tools and techniques addressing individuals' most significant barriers to behavioural change
- build strong partnerships with key stakeholders
- integrate continuous improvement into project delivery
- independently measure behaviour change results using statistically valid methods.

A comprehensive timeline was mapped out, to keep work on track and help achieve the ambitious aims of this project. Below is an illustration of the magnitude and scope of the work undertaken.



The Target Area

The project targeted a geographically large and diverse area, comprising 4.5% of the total Adelaide metropolitan area and 13% of its population.



The area contained around 65,000 homes with over 140,000 residents from various socio-economic and cultural backgrounds. This area is highlighted in the map on the previous page.

Three local government areas fell within the boundaries of the project: the Cities of Charles Sturt, Holdfast Bay and Port Adelaide Enfield.

The project area met a range of criteria that would support large scale travel behaviour change:

- it hadn't previously been exposed to a travel behaviour change program
- there were accessible transport options
- it contained vibrant retail, business and activity hubs in Glenelg, Henley Beach, Kilkenny and West Lakes
- demographics needed to be representative of the broader Adelaide area.

BASIC DEMOGRAPHIC STATISTICS FOR THE SPECIFIED TARGET AREA

Area	81.6 km ²
Population	140,846
Number of Households	64,709
Average Household size	2.3 pp/hh
Median age	39 years
% drive to work	65%
% catch public transport to work	6%
% bike or walk to work	4%
% households who do not own a car	11%
Average number of cars per household	1.4%

Source: ABS. The South Australia census statistics are obtained by aggregating Port Adelaide Enfield (LGA45890) with Charles Sturt (LGA41060) and Holdfast Bay (LGA42600) to approximate the evaluation zone.





**THE DEMOGRAPHIC SPREAD WAS REPRESENTATIVE OF THE
BROADER METROPOLITAN AREA, MAKING THE PROJECT
OUTCOMES HIGHLY RELEVANT TO FUTURE APPLICATIONS
WITHIN THE ADELAIDE COMMUNITY.**



Community Perceptions: The Before Study

In early 2005, prior to the TravelSmart Households in the West project delivery, a study of community perceptions about private car use and more sustainable travel options was undertaken.

The before study identified perceived barriers to and benefits of reducing car use and making alternative choices such as walking, cycling and public transport.

The findings of this study influenced the design of the project and its supporting tools, enabling a more strategic approach and targeting the specific concerns of the community.

A post-project community perceptions study was conducted in November 2007 to discover how the TravelSmart Households in the West project had impacted on these same perceptions. (See page 31 for results of the After Study.)

ENGAGING IN MORE SUSTAINABLE TRAVEL BEHAVIOUR – COMMUNITY PERCEPTIONS

Barriers

Time taken
Work commitments
Inconvenience
Lack of connectivity

Benefits

Money
Petrol reduction
Environment
Health/physical activity



“What sorts of things are stopping you from reducing your car use?”

How TravelSmart Engaged the Community

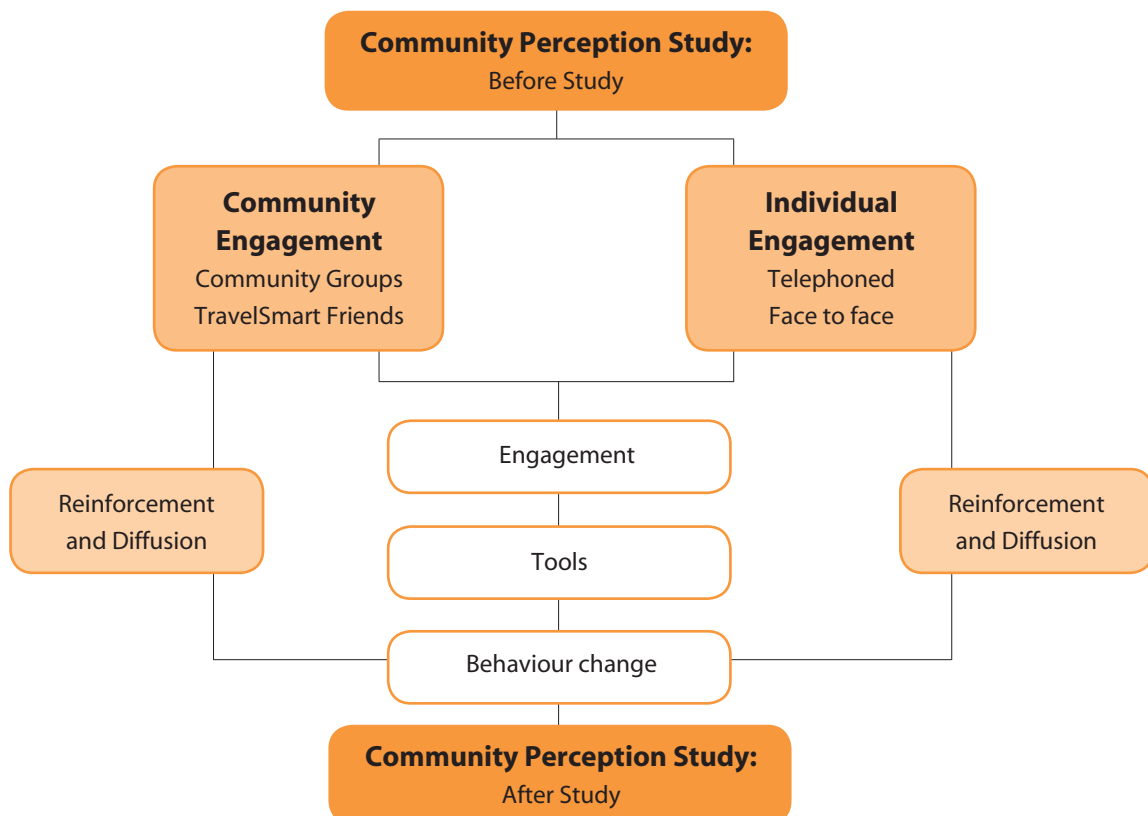
Residents in the target area were approached using a model for behaviour change that had two components:

- (1) a community development approach
- (2) an individualised conversation-based approach.

These two components were delivered concurrently over the life of the project.

The community engagement approach **aimed to empower the community for change**, prime people for reducing car kilometres, and encourage individuals, households and groups to shape the project so that change continued in the long term.

PROJECT ELEMENTS; HOW TRAVELSMART ENGAGED THE COMMUNITY



A Community Engagement Approach – Working with Groups

The community engagement approach was undertaken by identifying people and groups who were passionate about spreading the “TravelSmart” message in their community.

It was considered important to identify and involve people who were influential in shaping community opinions and views. Key people in organisations or groups were also contacted. Synergies between their organisations and TravelSmart were discussed along with an appropriate engagement process. Community groups were engaged through either attending a public event, or meeting, or responding to a TravelSmart article in a newsletter. Some individual members of groups had personal conversations with TravelSmart officers to discuss their transport issues and were subsequently engaged as a participating household.

Strategies were developed to work with these categories of groups:

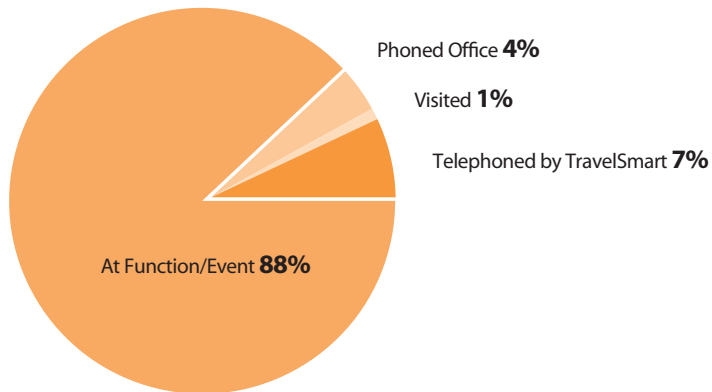
- those with high membership and potentially high influence (e.g. Rotary, Lions Club, Probus)
- those with high membership and good community networks (e.g. church groups)
- people with particular needs (e.g. people about to lose their licence through age, and Job Networks).

Of the 341 groups contacted, about two thirds agreed to host a TravelSmart presentation (67% participation rate). From the 191 presentations to groups that were made, 1,423 households were engaged over the life of the project, representing about 6% of all engagements for the project.



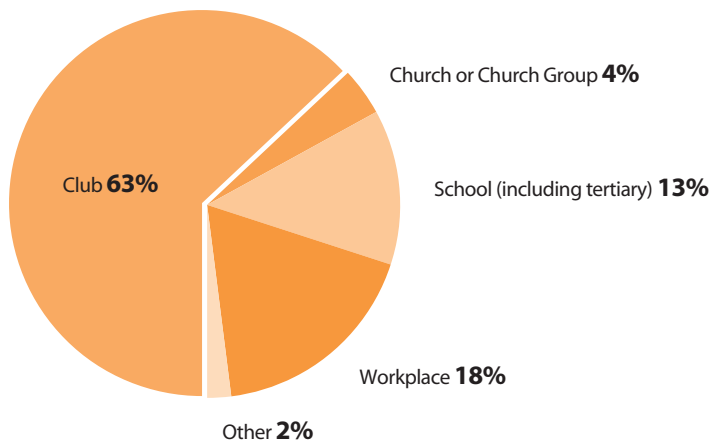
PERCENTAGE OF ENGAGEMENTS THROUGH GROUP OR COMMUNITY CONTACT METHODS

Groups Engaged Through Community Engagement Approach



TYPES OF GROUPS OR ORGANISATIONS FROM WHICH PEOPLE WERE ENGAGED

Organisation Type



Individual Engagement – Connecting with Individuals and Households

To engage 22,103 households, TravelSmart officers had a guided conversation with at least one person in that many households. Tools were provided to each household to address their specific needs and to assist them to reduce their car use.

INITIAL CONTACT LETTER

A letter of introduction was mailed to over 65,000 households to let potential participants know about the project and tell them they would be contacted shortly. This letter was sent before people were contacted personally by phone or face-to-face. This gave credibility to the TravelSmart officers when they called or visited and generated an awareness of the process.

THE CONVERSATION

The behaviour change model that was used focused on having a guided conversation either over the phone or in person with at least one person in the household. A household comprising more than one person was provided with an opportunity to offer solutions to each member's travel requirements. The conversation was aided by tools to help people make changes that appealed to them and were consistent with their values or motivations.

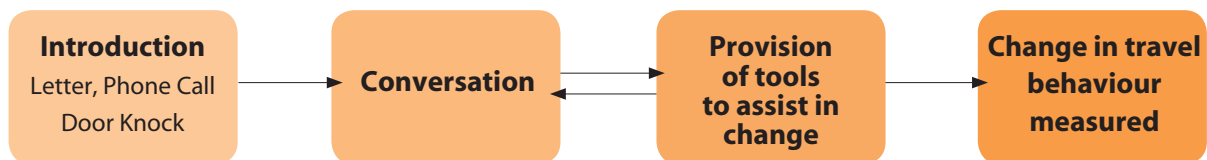


Through conversation, the TravelSmart officer encouraged householders to think about negative aspects of car use with questions such as:

- When were you last in the car and wished you weren't?
- What bothers you about getting around in the car?
- Have you thought about using your car a bit less?
- Do you use your car the same, more, or less than this time last year?



HOUSEHOLD ENGAGEMENT PROCESS



The conversation was intended to identify a person's motivations and/or frustrations about transport, exploring issues specific to the individual. With that person's permission the TravelSmart officer continued the dialogue, coaching them and working together to devise a solution where reducing car use led to personal benefits.

This approach took into account people's different stages of readiness for change. It also demonstrated an understanding of conditions that are more likely to facilitate change.

For example:

- changes are likely to be continued if they fit in a practical way into the lives of householders, or with an individual's desired lifestyle
- solving a current problem related to car travel
- providing practical solutions to improve an individual's desired lifestyle
- reducing car use, rather than focusing on broader environmental goals
- using a household-based approach so that other family members could support and reinforce each other's behaviour
- encouraging people to think of short and long term changes
- telling others about changes they made.

Voluntary behaviour change happens when an individual decides to make changes that will improve his or her lifestyle in some way.

The desire to change can be triggered by any of the following:

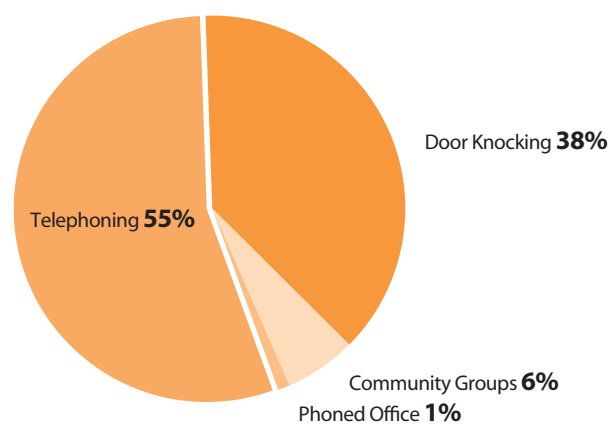
- the negative effects of an existing activity reaching a certain level of intolerance
- the realisation that it is possible to change
- hearing of someone else who has changed, especially a trusted person
- experiencing a change moment e.g. a new job or new school, moving house etc.
- wanting to keep up with new social norms or fashion.

Along with a guided conversation, or coaching, tools were provided to encourage people to change their travel behaviour voluntarily.

SUMMARY OF PROJECT ENGAGEMENT

NUMBER OF:	TOTAL
Community Groups	191
Households	22,103
Households engaged through telephoning	12,342
Households engaged through by door knocking	8,278
Households engaged through attending a group	1,282
Households engaged through phoning TravelSmart office	192
Tools requested	45,992

HOUSEHOLD ENGAGEMENT METHOD



A man and a woman are walking on a paved sidewalk. The man, on the left, is wearing a dark sweater over a collared shirt and dark trousers, and is smiling. The woman, on the right, is wearing a black top, a patterned scarf, and glasses, and is also smiling while pushing a shopping cart. The cart is filled with various items, including a blue bag and a box of cereal. In the background, other people are walking, and the scene is brightly lit, suggesting a sunny day.

IF BEHAVIOUR CHANGES IN TRAVEL ACHIEVE A PERSONAL GOAL, IMPROVE LIFESTYLE OR BEHAVIOUR THAT IS COMPATIBLE WITH PERSONAL VALUES, IT IS MORE LIKELY THE CHANGES WILL BE MAINTAINED IN THE LONG TERM.

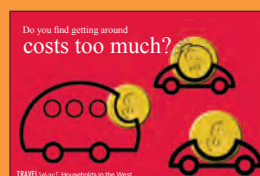
The Right Tools for Change

Personalised solutions were identified and discussed with householders to help reduce dependency on their cars, save money and reduce impact on the environment. These included:

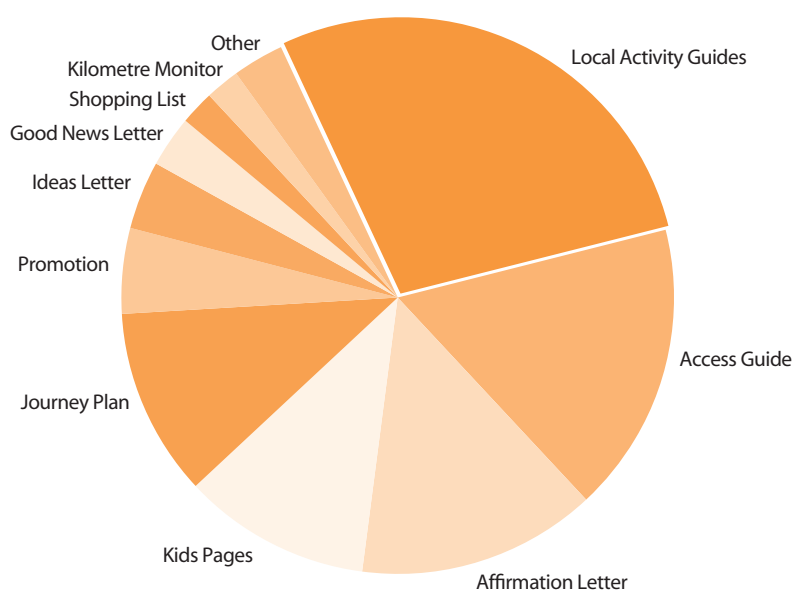
- planning activities ahead, 'trip chaining', giving someone a lift etc.
- walking to nearby shops and using local services
- participating more in local activities
- travelling to work by train, bus or tram
- walking or cycling
- using the internet or phone for bills and banking.

The TravelSmart team provided a range of 'tools' to complement and reinforce the solutions that participants identified as achievable and desirable. A further study is being undertaken to assess the effectiveness of the tools in facilitating behaviour change.

The range of tools provided to participants included:



DISTRIBUTION OF TOOLS REQUESTED BY FREQUENCY



The following table describes the tools and their frequency of distribution.

TOOLS AND THEIR APPLICATIONS

TOOLS	FREQUENCY	DESCRIPTION/USE	HOW THE TOOL ENCOURAGED VKT REDUCTION
Local Activities	27.6%	Guides to local shops, services, clubs and activities to assist people to use local alternatives.	Encouraged use of local facilities so people walked, cycled or trip chained by car.
Access Guide	17.1%	A map for people who wanted to walk/cycle more or take a specific route.	Increased walking or cycling
Affirmation Letter	14.2%	A letter to praise past reduction of km and to reinforce the benefits the person articulated.	Reinforced any previous behaviour change and encouraged further change.
Kids Activities	11.1%	Activity pages for children of different ages to encourage adult participation in a discussion about changing travel behaviour.	Encouraged family thinking of ways to reduce car travel.
Journey Planner	10.7%	Individually tailored Journey plan for a public transport, cycling or walking trip that substitutes a current car journey.	Increased public transport use, walking or cycling.
Promotional postcards	5.0%	Reinforced the benefits of behaviour changes (save time, money and gain health).	Encouraged behaviour change.
Ideas Letter	4.5%	A letter to remind participant of the changes that they decided on during the conversation.	Reinforced any planned behaviour change.
Good News Letter	2.7%	Permission to use their story to encourage other people and increase commitment to behaviour.	Reinforced any previous behaviour change and encouraged others to change.
Kilometre Monitor	2.0%	Self-monitored recording of kilometres driven for one week.	Generated awareness of kilometres travelled and encouraged pride in reduction.
Shopping List	1.6%	To assist in organising shopping trips to be travel-efficient.	Increased trip chaining.
Memory Jogger	0.3%	To keep track of travel over a week, then options identified and discussed with TravelSmart Officer.	Generated thought and discussion of any potential behaviour change.
Travel Blending	0.3%	A one week diary with personalised feedback identifying travel changes that fit into their lifestyle.	Reduced car use by any means.
Work from Home	0.2%	Information about working at home.	Reduced car use for the journey to and from work.

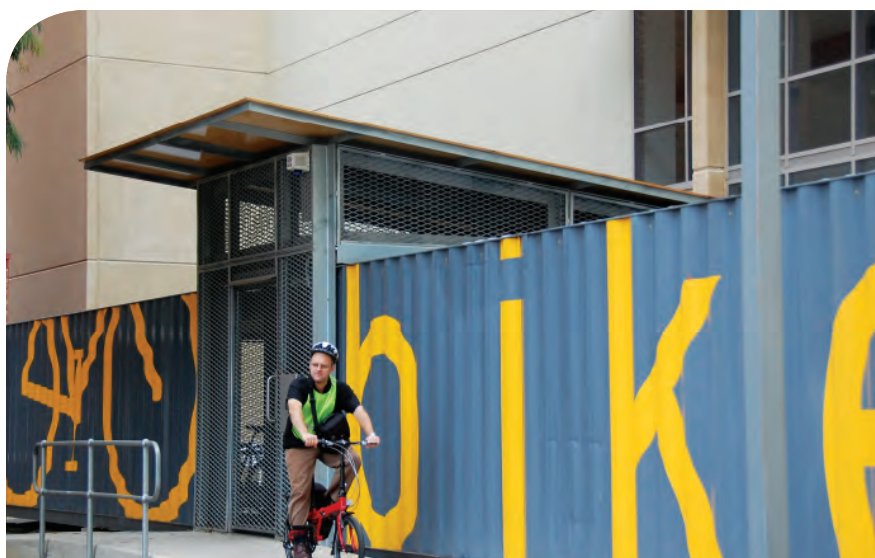
TravelSmart Friends – Legacy Building

In the concluding phase of the project (January 2007 – June 2007) the TravelSmart team worked with the community to reinforce successful kilometre-reducing behaviours or initiatives.

The project turned its focus on legacy building by mentoring or training people and organisations to continue to support themselves or their members to reduce car use. A network of people was identified, along with initiatives that were likely to be catalysts for a reinforcement and legacy program. This was expanded upon with a workshop for ‘TravelSmart Friends’ (those people who had shown interest in building on the TravelSmart ethos), to explore ideas and develop some initiatives to implement.

These included:

- training various community groups to assist their members/clients to prepare personalised journey plans – usually for public transport using Adelaide Metro’s existing phone or internet facilities – www.adelaidemetro.com.au and info line (08) 8210 1000
- helping community groups to assist their members/clients/peers to address transport-related issues and concerns (e.g. using Access Maps, forming a bike-buddy group within their organisation)
- distributing a “You Did It!” newsletter throughout the western suburbs about project achievements, including testimonials demonstrating a range of circumstances and solutions
- working with staff at Queen Elizabeth Hospital (QEH) in preparation for a new bike facility.



TravelSmart assisted at the QEH to generate use of the new bike parking facility.

Adelaide Metro INFOBAR

FREE

SCHEDULE

Service	Frequency	Start Time	End Time	Notes
Adelaide Metro	10 min	06:00	23:00	
Adelaide Metro	10 min	06:00	23:00	
Adelaide Metro	10 min	06:00	23:00	

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Independent Measurement

The primary objectives of the evaluation were to:

- provide statistically sound data to measure changes in household travel behaviour, focusing on travel by private car
- understand the factors (barriers and benefits) that contribute to travel behaviour choices.

DTEI was committed to independent and rigorous evaluation of the TravelSmart Households in the West project. To meet this aim, evaluation of the project was managed separately from project delivery to eliminate any bias. For a statistically valid result to be captured, the following criteria was incorporated:

- appropriate sample size
- demographically representative spread
- use of a control group.



The challenge for evaluators was to **identify, quantify and describe the occurrence of travel behaviour change.**

The Evaluation Approach

The overall aim was to measure whether there were detectable changes in the amount of VKT as a result of TravelSmart Households in the West, as well as any detectable changes in travel modes.

Behaviour change measured VKT and the number and type of trips participants made.

Evaluation used two measurement instruments:

- Global Positioning System (GPS) Surveys
- Vehicle Odometer Surveys.

Repeated sets of measurements ('waves') were carried out from 2005 – prior to household engagement, to establish existing behaviour, or 'baseline data', until the end of 2007, after the conclusion of project delivery. This is outlined on the next page.

EVALUATION METHODS

MEASUREMENT INSTRUMENTS (METHOD)	DESCRIPTION	SAMPLE SIZE	MEASUREMENT INTERVALS
GPS Survey	Tracking people's travel for 7 day periods using GPS data logger.	Average panel of 218 households. (all over 14 years of age).	Annual survey (3 waves conducted).
Odometer Survey	Recording odometer readings from all cars in the household.	Panel of 1,166 households.	Survey conducted every four months (8 waves conducted).

Each 'wave' of measurement involved continuous monitoring of all households in the panel for a week.

Over the life of the project repeated sets of measurements were carried out with panels of participants and non-participants. The non-participant panel, drawn at random, was representative of the target area's population and used as the control.

At the beginning of the project, the decision to use two methods of measurement was made as GPS was an emerging technology as a personal logging device. Frequent recording of vehicle odometer readings served as a backup to account for any uncertainty regarding its reliability. Fortunately, the data obtained via the GPS devices was highly reliable.

Historically, measuring travel behaviour change has been problematic. For example, using a different panel of people for each wave will result in different sampling errors being returned on each occasion. This is also the case for travel diaries, which are **subject to inaccuracies** and not particularly user-friendly. The method employed to evaluate this project **using longitudinal panels avoids this**, and makes the comparison of change much more precise.



The rolling ‘wave’ method of data collection provided a number of benefits:

- waves enabled the calculation of average daily VKT over a four month period, accounting for variations on individual days or weeks (for example, weather or traffic disruptions). Because the variation was reduced, smaller and longer-term trends were easier to identify.
- the risk of variations in results caused by introducing new households was eliminated because the same households were measured each wave
- if a household missed a wave (e.g. because of a holiday) but continued in the survey after this absence, the team was still able to determine average daily VKT by using an average of data from the waves before and after
- vehicle use and turnover was tracked as well as changes in the household that may explain changes in household VKT.

A key strategy was to ensure that households participating in the evaluation survey were not told of any connection to the TravelSmart initiatives to avoid bias in reporting. During the evaluation recruitment process, the survey was referred to as an ‘Adelaide Household Travel Study’ without mention of the TravelSmart Households in the West project.

The evaluation also researched the theory of a Hawthorn Effect, i.e. that people change their behaviour in the short term when they believe that they are being observed. The analysis found this did not occur and there was no short-term self-conscious behaviour that rapidly tailed off. Participants may have been expected to ‘do the right thing’ more often when they were first under evaluation, with a reduction of this effect over time as people become comfortable with being observed.

THE GPS SURVEY METHOD

The GPS Travel Survey was the largest of its kind conducted in Australia. The data recorded by GPS devices was analysed in conjunction with extensive Geospatial Information System (GIS) data related to the region. This allowed information such as mode of transport, number of trips made, trip duration and distance travelled to be accurately captured and evaluated.

**This
survey was
pioneering
in its use of
GPS in travel
research.**

The GPS Survey required all household members aged 14 years or older to carry a personal passive GPS data logger for one week, once a year over each of the evaluation years.

Because the GPS device supplied data on each of a number of days of travel, and for each individual member of a household, it provided a much larger data sample than is apparent from looking at the number of households taking part in the panel.

For example, in a panel of 200 households, about 440 people each carry GPS devices for a period of seven days. Even assuming that the person does not go out of the house on at least one day a week, this will provide about 2,600 person days of travel data. As such, the 200 households who participated in the GPS panel and completed a one-week GPS Survey produced a statistically sound sample size to assess changes in behaviour by both participating and non-participating households.

THE ODOMETER SURVEY

The Odometer Survey panel comprised 1,000 households. Each household reported the odometer readings from all the vehicles they owned every four months over the project evaluation period.

The critical measurement for the Odometer survey was total household VKT, which meant all household vehicles needed to be included in the survey. It was an easy method of quantifying VKT at a household level, even if only one household member was willing to collect the data for all their household's vehicles.

To maintain statistical validity, it was important that the odometer readings of vehicles that were bought or sold during the period between waves of data gathering were retrieved. Any changes to the makeup of the household also needed to be tracked. A customised card was provided for each vehicle in the household, which included such information as demographic data and vehicle information.

This simple process provided an advantage over other traditional methods such as Travel Diaries. It was far easier than asking reluctant household members to record a whole day's travel in a diary.

Despite this rigor, a problem emerged with the odometer survey due to a high turnover of vehicle ownership in households (see page 27).



SUMMARY: COMPARISON OF GPS VS ODOMETER

As the odometer method of monitoring was new, there was uncertainty regarding what sample size would be required to detect a significant change in VKT. It is now apparent that the sample size of 1,000 households used was inconclusive, as the data obtained had an increased risk of sampling and human error, due to the manual nature of odometer recordings. Ideally, a sample size of 1,500 to 2,000 households would have been required to reduce the impact of sampling error and produce statistically significant results.

By comparison, in order to achieve the same degree of accuracy as the GPS method, an odometer panel would require as many as 10 times the number of recruited households. Additionally, the GPS data provides a far more detailed picture of people's travel movements and methods. This allows more behaviours to be examined, and gives the data greater potential for use in other studies and for future project planning.

This is an important outcome from the project, and further demonstrates the superiority of GPS measurement over the odometer measurement. From this analysis it is clear that the 200 household GPS panel provided statistically much stronger evaluation evidence than the 1,000 household odometer panel.

Results of GPS and Odometer Surveys

Response rates and attrition

A pilot study was conducted. The first wave of the GPS Study then commenced in July 2005 with the following features:

- the data collection period ran from August to November 2005
- 699 households were contacted
- 167 households were recruited
- 151 of the recruited households completed this wave of the survey
- 51 of these households had also completed the pilot study.

The evaluation findings include the following:

Participants reduced car travel both on weekdays and weekends.

The average reduction in car use by participants was 10.4 km per household per day, representing a very significant 18% reduction. Car travel on weekends was reduced by 36 km. Conversely, non-participating households showed significant increases in distance travelled over the study period of 14 km on weekdays and 4.5 km on weekends.

Non-participants increased VKT while participants decreased VKT.

The total reduction of VKT per day for all participating households was 229,850 kms per day while non participants increased VKT by 605,030 kms.

Participants exceeded the greenhouse gas abatement target of the National Travel Behaviour Change Project.

Collectively over the life of the project, participants saved a total of 86,000,000 VKT and 28,000 tonnes of greenhouse gas emissions.

Participants learnt to make fewer trips.

Not only did the project achieve a significant reduction in VKT, results also indicate that the number of journeys travelled were also reduced. The decrease in car trips for participants over the evaluation waves was 5%, while non-participants increased the number of trips made by 3.8%.

Participants learnt to travel more efficiently.

Travel time results indicate that from GPS waves one to three, non-participants significantly increased the amount of time they spent travelling for all days. By comparison, participants decreased travel time significantly between waves one to three on weekends, with smaller decreases on weekdays. This indicates that participants learnt to travel more efficiently than non participants.

**Travel
behaviour
change:
a reduction
of 10.4 km or
18% per day.**

Significant household savings in fuel were an additional benefit.

The 22,103 households made a collective fuel saving of \$11.6m (based on average fuel prices over this period of \$1.20/L), which equated to \$525 per participating household.



Overall the TravelSmart Households in the West project achieved a **saving of over 86,000,000 VKT – enough to lap the earth approximately 2,146 times.** TravelSmart Households in the West participation resulted not only in a decrease in kilometres travelled, but it also reversed a trend.

TREND REVERSAL

If the TravelSmart Households in the West project had not been introduced and participants increased their VKT at the same rate as non-participants, the daily increase in travel that would have been expected for the entire region is 918,870 kms. Instead, as the participants reversed a trend, the actual net increase was only 375,180 kms per day.

If the reduction of 18% VKT achieved by participants was adjusted to take into account the control group's increase of 6% VKT, this equates to a 24% reduction achieved by TravelSmart Households in the West participants.

HOW PARTICIPANTS ACHIEVED THE RESULTS

TravelSmart Households in the West participants reduced VKT by making the following changes:

- decreasing the number of overall trips made
- decreasing their total average daily travel distances by all travel methods
- using their cars more efficiently (e.g. by trip chaining and journey planning)
- mode shift to more sustainable transport options.

The figures reported are conservative as the GPS device was unable to distinguish between car drivers and passengers. Therefore, if there was an increase in shared riding (carpooling) by TravelSmart Households in the West participants, this would lead to an even larger decrease in VKT than is currently reflected.

TRIP CHAINING: AN EASY WAY TO MAKE SMALL CHANGES THAT HAVE SIGNIFICANT RESULTS.



WHILE MANY PEOPLE ENGAGED IN MODE SHIFT BY ADOPTING ALTERNATIVE TRANSPORT OPTIONS (SUCH AS WALKING, RIDING OR CATCHING PUBLIC TRANSPORT), MOST MADE SMALL CHANGES IN HOW THEY USED THEIR CARS WHICH HAD SIGNIFICANT RESULTS BOTH AT THE INDIVIDUAL AND GROUP LEVEL.

Personal Examples



FIONA OF WEST HINDMARSH: HOLIDAYING EVERY YEAR WAS A FABULOUS UNEXPECTED BENEFIT OF GIVING THE CAR AWAY.

Fiona decided to make significant changes to her life, including giving her car away. She now rides to work, walks or uses public transport. Fiona found that she was saving almost \$1,000 per month on car related expenses which had the unexpected benefit of allowing her to travel overseas every year. Fiona adds “You can eat anything you want as you burn it off riding, you become fit and healthy and the financial rewards are a welcome bonus”. Fiona is now setting her sights on walking the Kokoda Track, something she would not have contemplated a few years ago.

DENNIS OF SEMAPHORE PARK... SIGNIFICANT HEALTH BENEFITS.

“The benefits for me using the car less have not only helped with the budget but had significant health benefits. I have lost 28 kilos since taking up cycling and using the car less, which has allowed me to effectively control my Type 2 diabetes. Not only have I lost weight but I have gained a better physical condition which has also helped my blood pressure by being more active. This has had other positive flow on benefits. The changes were hard at the beginning but I made a positive choice to do something for myself. A couple of other friends joined me and they too have lost weight and have become fitter as well. We keep each other motivated.”



MARGARET, 84 OF CROYDON WEST: MARGARET GAVE UP HER CAR BECAUSE HER FAMILY FELT IT WAS SAFER FOR HER NOT TO DRIVE.

Margaret now describes herself as being ‘public transport proficient’ and says having no car has not curtailed any of her activities, such as committees, adult education, theatre, concerts and rowing regattas. An unexpected benefit: “I didn’t expect this, but the money I saved by giving up my car allows me to meet friends regularly for lunch and coffee without having to worry about the expense!”



RACHEL OF GRANGE: “WE DECIDED TO GET RID OF OUR SECOND CAR FOR FINANCIAL REASONS, BUT THERE WERE MANY OTHER BENEFITS”.

“We’d worked out that we could actually spend \$2,000 a year on taxi fares and still be better off. My husband has enjoyed bike riding, so he was able to buy a bike. My children love riding bikes around the local area and catching the train into town. We have also noticed improved fitness and energy levels. I changed my job and now I’m able to walk to work. Not having a second car requires planning, but that can be fun as well – as the photo shows.”

MARG OF NORTH HAVEN IS NOW CAR POOLING WITH NEIGHBOURS.

“I approached a neighbour when I discovered her children were going to the same school and kindy.” Car pooling with neighbours to get the kids to school and sport has meant less stress for Marg. “It has provided more free time, stopped before and after school care fees and saved car expenses for all involved. The car pooling has helped bond neighbourhood friendships – it even extends to trips to get take-away meals.”



CAR OWNERSHIP AND TURNOVER

Car ownership statistics were reviewed given the statistically high number of vehicles per household highlighted in the odometer survey.

Interestingly, TravelSmart Households in the West may have resulted in a small decrease in vehicle ownership among participating households, whereas non-participating households increased car ownership over the same period:

- the results regarding car ownership obtained from the Odometer Survey supported the fact that households participating in TravelSmart Households in the West ended up with slightly reduced car ownership when compared to non-participants
- although the decreases in car ownership were small and inconsistent across the annual comparison periods, there was a net decrease
- non-participating households initially had a lower car ownership on average, although this increased over the survey period.

Other Evidence of Behaviour Change

The effect of TravelSmart Households in the West on Public Transport.

One way TravelSmart Households in the West participants achieved a significant reduction in VKT was to choose more sustainable transport options, such as public transport. TravelSmart Households in the West had an impact on public transport patronage as shown below.

Annual public transport patronage from 2003 to 2007 for TravelSmart Households in the West region and other metro areas.

	STATUS	PERIOD	THITW Target Area	Non-Targeted Areas*
Annual Public Transport Patronage (Numbers)	Pre-monitoring	2003	13,494,135	43,257,923
		2004	13,873,625	44,034,316
	Monitoring	2005	14,192,370	44,777,107
		2006	15,996,594	45,418,783
		2007	17,298,641	44,872,016
Percentage of Public Transport Patronage	Pre-monitoring	2003–2004	3.21%	1.80%
		2004–2005	1.74%	1.69%
	Monitoring	2005–2006*	16.72%	1.43%
		2006–2007	8.49%	-1.20%

*Three bus routes and tram upgrade were introduced to the City of Holdfast Bay region during this period.

During the TravelSmart Households in the West project, public transport patronage rates in other metropolitan areas also reported changes. This raises the question whether other factors had an impact on the reported results. The following points compare TravelSmart Households in the West and other metropolitan area patronage rates:

- in other metropolitan areas, annual public transport patronage increased by 1.43% between 2005 and 2006, compared with the TravelSmart Households in the West area of the cities of Charles Sturt and Port Adelaide Enfield, where it rose by 6.16%
- between 2006 and 2007, the public transport patronage in other metropolitan areas declined by 1.2%, while in the target area it maintained an increase.

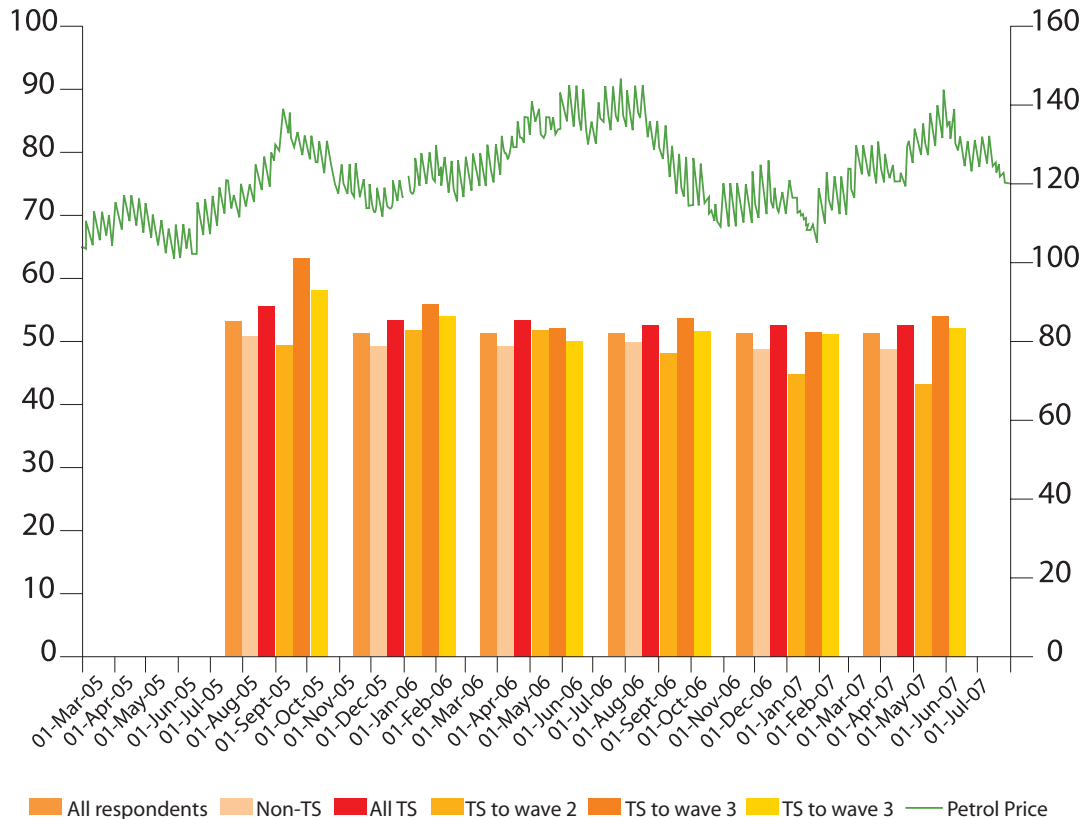
These figures indicate that the TravelSmart Households in the West project had a positive effect on public transport usage in the targeted areas.

DID AN INCREASE IN PETROL PRICE AFFECT BEHAVIOUR?

Other factors that may have impacted on travel behaviour over the study period were considered. Petrol pricing was regarded as a potential key influence. Some of the key statistics include:

- petrol prices significantly increased over the life of the project
- average Adelaide fuel price per litre (regular unleaded petrol) in July 2005 was \$1.18
- prices rose to an average of \$1.26 in early March 2006, further increasing to a peak of \$1.46 in August 2006
- the graph below shows changes in VKT against fluctuating fuel prices from March 2005 to July 2007.

Analysis of this data suggests there has been an increase in VKT in line with falling petrol prices, but there appears to be no relationship between VKT decreasing as a result of an increase petrol prices.



Community Perceptions: After Study

A second Community Perceptions study was undertaken in November 2007, to discover the extent that TravelSmart had impacted on the community's perceptions of more sustainable travel options. The survey examined the same respondents who participated in 2005 and used the same survey method.

Attitudes reported in the After Study, when compared to the 2005 survey, show that TravelSmart contributed to a significant change of attitude.

In particular, evidence was found that participants had significantly increased their willingness to reduce car use. Participants had also significantly increased the level of importance they attached to car pooling, doing several things before returning home, and travelling with others to reduce car use.

No change of attitude was observed in people who were non-participants (the control group). It was concluded that there was evidence that the project had the desired effect of changing the community's attitudes.



Summary of Project Results

The TravelSmart Households in the West project has achieved a significant reduction in car travel, which is by far the most dominant mode of transport in the Adelaide region.

In its target regions within parts of the Cities of Charles Sturt, Holdfast Bay and Port Adelaide Enfield, the project results show that:

- the GPS Survey recorded a drop of 18% in km travelled by participants, while non-participants increased their travel distance by over 6%
- the evidence suggests that public transport patronage has risen by a base value of 6% p.a. in the study regions with the annual rise in other metro regions less than 2%
- the project has had a positive effect in reducing both the average number of trips per day and the average distance travelled daily by participants over the evaluation period
- there is evidence that non-participants actually increased their daily travel amounts.





WHERE TO FROM HERE?

THE STATE GOVERNMENT HAS COMMITTED TO AN EXPANSION OF THE TRAVELSMART VOLUNTARY TRAVEL BEHAVIOUR CHANGE PROGRAM IN HOUSEHOLDS, WORKPLACES AND SCHOOLS. FURTHER TRAVELSMART ACTIVITIES WILL BE LINKED TO TRANSIT ORIENTED DEVELOPMENT, CYCLING PROGRAMS, PUBLIC TRANSPORT SERVICE UPGRADES AND URBAN CORRIDORS INITIATIVES

"Tackling Climate Change: South Australia's Greenhouse Strategy 2007-2020"
Objective 6.2 Achieve more sustainable travel behaviour.

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This publication is based on the technical and academic papers and comprehensive project reports provided by Steer Davies Gleave and the Institute of Transport and Logistics Studies.

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- Community Steering Group
- Seaton Park Primary School, which hosted the project office
- various external advisors and contractors who shaped the project.

And of course the thousands of households in Adelaide's west who very actively took part in the project and its evaluation.



Glossary and Abbreviations

CONVERSATION: A guided discussion, face-to-face or over the telephone, between a participant and a TravelSmart officer. The conversation was the core element of the behaviour change methodology.

DEWHA: Australian Government Department of the Environment, Water, Heritage and the Arts.

DTEI: South Australian Department for Transport, Energy and Infrastructure.

ENGAGED OR ENGAGEMENT: A participant in the project (individual or household) is said to have been engaged.

GPS: Global Positioning System.

LONGITUDINAL PANEL: A study which seeks the same information over a continuous period of time using a group of people representing the socio demographics of the target area.

NTBCP: National Travel Behaviour Change Project.

PARTICIPATING HOUSEHOLDS: One of the 22,103 households who had a conversation with the TravelSmart team and accepted a tool.

PARTICIPANT OR PARTICIPATING: Someone (individual or household) who took part in a conversation and accepted a tool.

RECRUIT OR RECRUITED: Someone (individual or household) who agreed to take part in the project evaluation by either using a GPS data logging device or by forwarding their odometer readings.

TARGETED HOUSEHOLDS: Those 65,000 households within the target area who were approached to gauge their interest in reducing their car use.

TOOL: Information or other aid provided to participants to support and encourage them to make changes to their travel behaviour.

TRIP CHAINING: To combine more than one purpose into a round trip.

VKT: Vehicle kilometres travelled – general measurement used to describe and measure car usage.

WAVES: Repeated sets of measurements which were undertaken for both the GPS and Odometer surveys.

THE TRAVELSMART HOUSEHOLDS IN THE WEST PROJECT WON THE 2008 PREMIER'S AWARD IN THE ATTAINING SUSTAINABILITY CATEGORY. THE PREMIER'S AWARDS RECOGNISE PROJECTS THAT DEMONSTRATE EXCELLENCE IN THE PUBLIC SECTOR. WINNING THIS AWARD REINFORCES THE VALUE OF INVESTING IN BEHAVIOUR CHANGE PROJECTS TO HELP SOLVE A DIVERSITY OF COMPLEX SUSTAINABILITY ISSUES FACED BY INDIVIDUALS, COMMUNITIES AND GOVERNMENTS.



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