

324,000 people can't be wrong - evaluating the world's largest individualised marketing project

David Freer¹, Paul Henderson², Andy Cubie³

¹WorleyParsons, Level 9, 80 Albert Street BRISBANE, QLD 4006

david.freer@worleyparsons.com

²WorleyParsons, Level 9, 80 Albert Street BRISBANE, QLD 4006

paul.henderson@worleyparsons.com

³Ipsos-Eureka, Level 13, 168 Walker Street, North Sydney, NSW 2060

andy.cubie@ipsos.com

Abstract

Queensland Transport is delivering the world's largest travel behaviour change project, targeting 324,000 households in Brisbane, the Gold Coast and the Sunshine Coast. The aim is to reduce vehicle kms travelled by 10%, reduce CO₂ emissions and increase sustainable transport use. As a result of the evaluation process, an unprecedented level of evidence to support the use of Travel Demand Management interventions will also be available.

WorleyParsons is assessing the qualitative and quantitative impacts of the project based on a methodology that goes beyond just measuring journeys – to measure the true effectiveness of the project we must understand how and why people have changed their behaviour and whether this change is a short term reaction to stimuli or a long term shift in attitude. The 3-year evaluation includes an analysis of attitudes, modal shift, external factors (such as policy / infrastructure changes) and public perception. This allows us to evaluate **what** has changed in terms of reduced vehicle trips, increased walking / cycling, reduced travel distances and greater public transport use and **why** it has changed in terms of the behavioural motivators.

We are currently at the end of the benchmarking period of the project, with preliminary results available for Brisbane South / Ipswich – the first of the three project areas to be treated. Data from the Gold Coast and Sunshine Coast project areas will be available shortly.

This paper will give an in depth look at the evaluation methodology used by the authors and how it differs from evaluations of previous TravelSmart Communities projects, supported by qualitative and quantitative data where available. At this stage the paper does not include a full comparison of implementation methodologies (to be completed at the end of the project). A comprehensive review of best practice (national and international) is included in the full Benchmark Report (focused on projects involving direct household contact as opposed to broader initiatives involving schools or workplaces) and is referenced in this paper.

1. Introduction

South East Queensland is growing at a rapid rate, with its population expected to grow from 2.8 million to 4.4 million people between 2006 and 2031.¹ The influx of new residents and the corresponding growth in jobs and demand for services means that efficient management and provision of transport options is essential. In addition, there are personal, environmental and economic implications of individual travel choice and by managing demand and influencing behaviour, various benefits can be realised.

The Department of Transport and Main Roads (TMR) in Queensland has an ongoing program of initiatives under the TravelSmart brand that aim to positively influence travel behaviour. The intention is to encourage users to shift their travel patterns away from single occupancy car use towards public transport, walking, cycling or car pooling. Achieving this modal shift will reduce vehicle kilometres travelled (VKT), increase car occupancy rates and reduce greenhouse gas emissions from transport.

As part of this overarching program, TMR has commissioned the world's largest travel behaviour change project, targeting 324,000 households in Brisbane, the Gold Coast and the Sunshine Coast. The specific aim is to reduce vehicle kilometres travelled by 10% as well as the corresponding benefits described above. The evaluation of this project will not only measure the success of initiatives in each area, but will also serve as a solid evidence base from which future travel behaviour change projects can be planned. By September 2010 we will have a full set of benchmark results available, and this will form the statistical backbone of our work.

This project represents a number of firsts in terms of travel behaviour change initiatives in Queensland, as well as setting a new standard for the evaluation of Community TravelSmart interventions:

- Household contact has been split between three different project teams, each with a different approach, each covering a distinct geographical area, enabling a direct comparison of implementation methodologies (a brief summary is included below)
- Evaluation of the project has been undertaken by an independent external evaluation team using a longitudinal, multi-faceted design as opposed to the standard one dimensional internal evaluation process used on previous Australian projects, which do not account for the impacts of underlying trends or external influences and tend to undertake surveys immediately after interventions have been made
- Travel behaviour data has been collected over a full seven-day period, as opposed to the standard weekday only approach and across all trip types (work, school, leisure)
- The evaluation has been enriched by working in partnership with The Urban Transport Institute (TUTI), utilising the triennial South East Queensland Household Travel Survey2 (SEQTS) to provide comprehensive travel behaviour data.

¹ www.dip.qld.gov.au/seq

² www.transport.qld.gov.au/Home/Projects_and_initiatives/Projects/South_east_queensland_travel_survey/

We are assessing the qualitative and quantitative impacts of the project based on a methodology that goes beyond just measuring journeys – to measure the true effectiveness of the project we must understand how and why people have changed their behaviour and whether this change is a short term reaction to stimuli or part of a longer term shift in attitude. We must also account for external factors that are likely to influence travel behaviour, such as government policy, existing and future transport provision, socio-economic and demographic influences as well as the effectiveness of the implementation methodologies. Underlying trends regarding car use will also be monitored, and this is particularly pertinent in the three project areas, where the continuing increase in population will at least cause overall VKT to rise as there are more residents travelling in and around South East Queensland. This enables us to get a clear picture of what impact the project itself has had on travel habits compared to how externalities have influenced behaviour. A key element of the evaluation process is to account for these external factors when assessing the effectiveness of interventions in each of the three project areas.

2. Background

2.1 Travel Demand Management

Travel Demand Management (TDM), also known as Mobility Management, is a general term for strategies that make more efficient use of existing transport resources as well as improve travel options for the future. The emphasis is on ‘sustainable’ travel options, which can include alternatives to car travel such as public transport, walking and cycling as well as more efficient vehicle use through car pooling / car sharing and reducing the need to travel in the first place through smarter working techniques like home working and teleconferencing. This can also include the promotion of flexible working hours to promote off-peak travel.

Methods to achieve modal shift away from single occupancy car use include organisational travel plans, travel awareness events / publicity and individualised travel marketing. These types of initiatives come under the general term of Travel Behaviour Change and are typified by Queensland Government’s TravelSmart Communities projects.

2.2 TravelSmart

A number of Australian state governments are now using the signature brand ‘TravelSmart’ to encourage this type of behaviour change, following the individualised travel marketing program first developed by the Government of Western Australia³ in the mid 1990s that sought to change individual travel habits in Perth by targeting households through the provision of information and incentives.

This approach has since been adopted in other countries such as the UK, the USA and much of Continental Europe to varying degrees of success. By the end of 2006, all States and Territories in Australia were licensed to use the TravelSmart trademark, with individual actions primarily aimed at households but also targeting schools, workplaces and communities being put in place across the country.

³ www.transport.wa.gov.au/travelmart/14974.asp#household

2.3 Behaviour Change Best Practice

From the first pilot in The Grange (an inner west suburb of Brisbane) in 2001, TravelSmart Communities projects in Queensland have consistently shown that travel behaviour change techniques can help reduce car trips and VKT⁴. Note: these studies were self assessed.

Table 1: TravelSmart Communities Projects in Queensland

TravelSmart Communities Projects in Queensland			
<p>2001 – The Grange</p> <p>450 households</p> <p>Key Results: Increase in walking (16%), cycling (6%) and public transport (51%) and decrease in single occupancy car use (10%)</p>	<p>2003 – Townsville</p> <p>10,000 households</p> <p>Key Results: Increase in walking (26%), cycling (15%) and public transport (13%) and decrease in car trips (8%)</p>	<p>2004 – Redland</p> <p>10,100 households</p> <p>Key Results: Increase in walking (55%), cycling (29%) and public transport (27%) and decrease in VKT (12%)</p>	<p>2006 – Brisbane Nth</p> <p>74,500 households</p> <p>Key Results: Increase in walking (49%), cycling (58%) and public transport (22%) and decrease in VKT (13%)</p>

In the UK, the national Department for Transport has funded three ‘sustainable travel towns’ (DfT, 2010) and Transport for London has undertaken a similar initiative in Sutton (TfL 2010), a large suburban town in southwest London. ‘Smarter Travel Sutton’, for example, was a three-year multi-faceted initiative that included:

- The offer of travel information and advice for all 78,000 households in the borough
- Travel Plans at all 68 schools in the borough
- Travel Plans at a variety of workplaces, encompassing 16,000 employees
- Various community events, attracting 27,000 visitors in the final year of the project

Figures for these four completed sustainable travel town projects are as follows:

Table 2: Modal Shift Achieved in UK Sustainable Travel Towns

Mode	Darlington	Peterborough	Worcester	Sutton (London)
Walking	+14%	+14%	+12%	+13%
Cycling	+113%*	+12%	+19%	+75%
Car (as driver)	-9%	-9%	-7%	-6%
Bus	-2%	+35%	+20%	+16%

* For some of this period Darlington was also a Cycling Demonstration Town

⁴ www.travelsmart.qld.gov.au/TravelSmart-projects/TravelSmart-communities-projects.aspx

2.4 Comparison of data

From an evaluation point of view, without considering external influences and underlying trends, as well as comparative changes in behaviour in control areas, we are left with a modal shift statistic devoid of context rather than an in depth understanding of the impacts of the interventions and how they have influenced behaviour. Previous projects have generally relied on internal evaluation systems that collected a limited range of data fields. The accuracy of behavioural information for the TravelSmart Communities project, however, will be higher than ever before and this will be enriched by a broad spectrum of data on attitudes and external influences on travel choice.

This does present an issue of direct comparisons though – an issue highlighted by the UK Department for Transport report ‘Smarter Choices’ (DfT, 2004) that notes:

“...understanding and comparing the effects of personalised travel planning projects is complex, not least because the reporting styles depend on the technique used. This means that the results of different projects are not directly comparable.”

It will be difficult, therefore, to perform a direct comparison with previous TravelSmart Communities projects, which have relied on a less robust and comprehensive evaluation. In most cases the implementation team have also performed the evaluation, which opens up elements of bias as a favourable result is sought. Also, the ‘after’ surveys tend to take place immediately after the TravelSmart interventions have been introduced, when behaviour change has spiked, rather than six- to twelve months later when travel behaviour has settled into a consistent habit and the true impact of the project can be measured.

The UK Department for Transport report ‘Smarter Choices’ (DfT, 2004) also notes that:

A further difficulty is that headline results which are, at first sight, simple, may be the partial product of quite sophisticated statistical adjustments.”

This reflects the tendency for those reporting the results of such projects to focus on the ‘good news’ aspects of the evaluation rather than providing a full transparent set of outputs.

3. Project Objectives

3.1 Core Objectives

The main objective of the project is to reduce the number of vehicle kilometres travelled throughout the three project areas, with the corresponding benefits to air quality and congestion that this brings. These core objectives, as set out by Queensland Government, are to achieve:

- A minimum of 324,000 contacted households over all project areas
- A reduction of vehicle kilometres travelled of 10% in all project areas
- A reduction in greenhouse gas emissions
- A reduction in journey to work car trips

- An increase in trips using more sustainable forms of transport
- Peak spreading – less concentration of journeys at peak time

The results of this evaluation process will form the backbone of a robust evidence base to support the effectiveness of behaviour change techniques and finally provide a statistical analysis that stands up to the rigorous assessments that other transport projects have to go through. To strengthen this evidence base, WorleyParsons has developed further objectives, accompanied by corresponding measurable outputs and outcomes.

As the underlying objective of the project is to challenge perceptions and change behaviour, this suggests that perception and values should be monitored as well as actual travel habits. We have therefore set out the following attitudinal objectives for the project:

- An increase in knowledge of sustainable transport options
- In increase in perceived quality of sustainable transport options
- An increase in acceptance of sustainable transport options as viable alternatives to the car
- Recognition of the TravelSmart brand

3.2 Outcomes and Outputs

To ensure we get a complete picture of the project results, it is important that we assess not only the outcomes – such as reduced VKT and improved air quality – but also the outputs on both a broad level and a specific basis. In addition to the 324,000 households that must be contacted, broad output objectives are to:

- Provide a valuable service to residents
- Deliver the project in a timely and efficient manner
- Ensure good lines of communication between stakeholders

In addition, specific outputs that relate to the work of the three implementation teams are:

- Number of households contacted by letter / phone / face-to-face
- Level of effort to reach each household (i.e. number of call backs made and alternative methods used for contact)
- Number of packs delivered / number of each individual stock item delivered
- Level of feedback – positive / negative comments received from householders
- Additional literature / publicity material produced by the delivery team for the project
- Number of reports submitted to the Department of Transport and Main Roads (TMR)
- Regularity of reports submitted to TMR

- Number of meetings held with TMR
- Number of meetings held with local stakeholders
- Number of positive media reports generated in project area

The outcomes of the project will be measured against the key performance indicators (KPIs) summarised below. Used in tandem with the measurable outputs, this will give us a complete picture of the program effectiveness in each project area. The use of such KPIs allows us not only to monitor the impacts of the various interventions, but also to better understand the Critical Success Factors involved in implementing TravelSmart Communities projects. As part of this process we have a unique opportunity to evaluate the impacts of three different implementation methodologies, the first time a direct comparison (using homogenous data) has been possible.

3.4 Key Performance Indicators

The identification and monitoring of KPIs is at the core of the evaluation. Historically there has been little accurate data on the effects of travel behaviour change projects, and the effective use of KPIs will produce a robust evidence base from which informed opinions can be formed.

The KPIs relate directly to the objectives, outcomes and outputs as set out above and have been separated into three categories:

- Behavioural Outcomes
- Attitudinal Outcomes
- Outputs

These KPIs, along with their associated targets, are currently being finalised within the project consortium.

4. Evaluation Methodology

4.1 Assessing Project Impacts

The challenge for WorleyParsons was to design a methodology that went beyond just measuring journeys – in order to measure the true effectiveness of the Queensland TravelSmart project it is important to understand how and why people have or have not changed their behaviour, and whether this change is a short term reaction to stimuli or a long term shift in attitude resulting in a change in travel patterns.

Whereas most evaluation processes tend to focus on evaluating the direct benefits of a program (ie – only monitoring mode of travel, and just doing so directly after interventions compared to before treatment), our evaluation process allows a broader appreciation of the fundamental drivers of travel behaviour change. This will have significant benefits in formulating transport and land use policy, allowing it to be sensitive to specific transport user types and demographics.

4.2 Evaluation Structure

Through the evaluation process we can understand **what** has changed by tracking travel behaviour and **why** it has changed by assessing attitudes and motivators to changes. The three key phases in the evaluation process are:

- Benchmarking – establishing a baseline from which future changes in behaviour can be measured
- Mid-wave – surveying households shortly after TravelSmart interventions have taken place to ascertain any immediate changes in behaviour
- Final survey – taking place after the intervention projects have been completed in 2011, to show if the immediate changes to behaviour have been maintained and what the longer term impacts of the project have been

This gives us a two-year picture of travel behaviour and how it has changed – a considerable improvement on previous methodologies that have monitored behaviour immediately before and after interventions with no long-term monitoring involved. These surveys then rest upon five ‘pillars’ which take into account internal and external factors that may influence travel behaviour. This includes ongoing surveys as well as analysis of existing / planned infrastructure, government policy, socio-economic characteristics and international best practice. These factors are then contextualised through an evaluation and assessment of the different implementation methodologies being used in each study area – providing us with a unique opportunity to understand the most effective way of influencing travel behaviour. The evaluation structure is summarised *below*.

Figure 1: WorleyParsons TravelSmart Communities Evaluation Structure

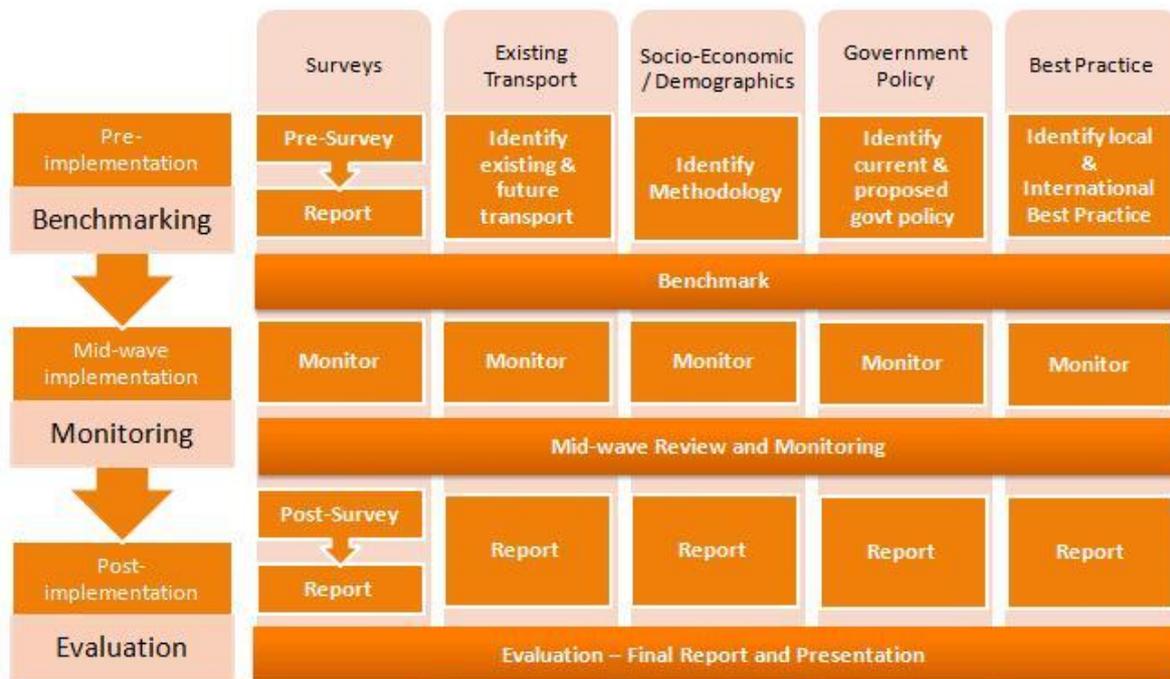


Figure 1 Evaluation Structure

4.3 External Factors

To effectively monitor and assess a social marketing program and understand the extent to which behavioural change can be attributed to this program we must first understand the current mindset and behaviours of individuals involved.

The six principles of persuasion and their application in the delivery of travel behaviour change, as outlined by R. Seethaler & G Rose⁵ underline the importance of social proof (where the attitudes and actions of others are used as standards for one’s own beliefs, attitudes and behaviours) and authority (where advice is taken from a respected and knowledgeable source). For the purposes of the evaluation (including segmentation of householders through telephone surveys) we have applied the following ‘stages of change’ model (*below*), which defines the stages people go through as they move from a position of ignorance or indifference to becoming committed to a particular type of new behaviour:

Figure 2: Stages of Behaviour Change



Identifying why travel behaviour has changed also needs to be measured against factors outside of the direct influence of the travel behaviour program such as increasing fuel prices, better provision of public transport services, increasing awareness of the impacts of climate change or the introduction of more local work opportunities. To account for this we have established a series of control groups across the study areas, which will allow us to better assess why behaviour has changed and whether the project itself was the primary driver.

External factors were assessed through extensive research by the evaluation team. This included data from the South East Queensland Travel Survey and the Australian Bureau of Statistics Journey to Work survey as well as the 2001 Census⁶, enriched by policy, legislation, infrastructure and service improvement information emanating from regional, state and federal government departments. Our methods for mapping this data are covered in section 4.5 *below*.

WorleyParsons will assess the implementation methodologies adopted by the delivery teams by reviewing presentations submitted by the teams as well as participating in regular Working Group meetings in each project area. The reports that the implementation teams provide to TMR are evaluated in order to assess project outputs. This data is essential in order to provide a robust and accurate assessment of the implementation methodologies and how they impact on project results.

⁵ R. Seethaler & G Rose (2005) Using the six principles of persuasion to promote travel behaviour change: Findings of a TravelSmart pilot test

⁶ www.oesr.qld.gov.au/queensland-by-theme/industry/transport-communications/bulletins/census-2001/journey-work-south-east-qld-c01/journey-work-south-east-qld-c01.shtml

4.4 Survey Methodology

4.4.1 Overall Approach

The WorleyParsons evaluation approach was to efficiently collect sufficient information to allow an assessment of what has changed in terms of (quantifying) reduced vehicle trips, increased walking and cycling, reduced travel distances and greater public transport use as well as why changes have or have not occurred in terms of the motivators behind individual travel habits. Benchmark data was collected through the following methods:

- Qualitative insights from 16 focus groups conducted in Brisbane South, Gold Coast and Sunshine Coast
- Detailed travel diary data from over 9,000 households via the South East Queensland Travel Survey (SEQTS)
- Follow-up telephone survey of attitudes and general behaviours

The survey adopts a longitudinal design, with the same respondents contacted again soon after TravelSmart interventions and after completion of the program in 2011. Repeated travel diaries allow comparison of key travel changes, particularly in terms of transport mode share and vehicle kilometres travelled, whilst follow-up telephone surveys will allow comparisons of change in more general travel attitudes and behaviours.

4.4.2 Focus Groups

By using interviews and focus groups as well as reviewing the transport network provision and government policy shifts before, during and after implementation, a more objective evaluation can be achieved. The pre-implementation focus groups were also used to help inform the content of the questionnaires used in the benchmark surveys.

In all, 16 focus groups were conducted with an average of 8 people in each. These were split into 8 groups of 'regular car users' and 8 of 'regular mixed mode users', with a further subdivision made to obtain groups of both younger (17 – 39 years) and older (40+) residents. Four key areas of discussion were covered: general issues; transport mode perceptions; motivators / barriers to uptake; and visions for the future.

The specific aim of this phase of research was to:

- Develop an in-depth understanding of travel behaviours and attitudes of a cross-section of residents
- Explore key motivators and barriers to travel choices - specifically public transport, cycling, walking and car pooling.

4.4.3 Travel Diaries

The methodology for the 2009 SEQTS survey is based on a self-completion questionnaire, which is hand-delivered to, and hand-collected from, the survey households. This process is also supplemented by telephone motivational calls, telephone and postal reminders, and telephone clarification calls. It was designed as a single cross-sectional survey, running for ten consecutive weeks from 20 April through 28 June 2009 and covered:

- A random sample representative of all occupied private residential households within a Study Area defined by the 2008 Brisbane Statistical Division
- All persons (including visitors) staying at these households on the night preceding the household's Travel Day;
- Travel made by persons aged 5+ years on all days of the week during survey period

The SEQTS methodology collects detailed travel diary information about every member of the selected households on one pre-selected travel day. This covers all modes of transport, travel time / distance and purpose as well as socio-demographic factors such as household composition, age, gender, income and number of vehicles in each household. This data was enhanced using the telephone surveys, as described below.

4.4.4 Telephone Surveys

SEQTS householders were asked if they would mind being called again for a more in depth survey and 69% took part in the follow-up telephone interviews, which collected further details on current travel attitudes, perceptions and behaviours such as frequency of mode use and travel purpose, barriers to using sustainable forms of transport, and key liveability and wellbeing indicators. The data have been weighted and expanded to the profile of the population of the entire study area according to SEQTS weighting procedures.

4.4.5 Data Provision

The delivery schedule in each project area is tracked to enable post-implementation surveys and assessment to be timed correctly. We have therefore requested data from the implementation teams to allow as full an exploration as possible into the nature of how the TravelSmart interventions impact on individual and household travel patterns. The household location, date of intervention (time of year), household structure and composition are all monitored and the week when first contact was made must be identified to allow the mid-wave survey to be administered a suitable number of weeks after interventions.

4.5 Mapping of data

To tie all of this data together, we have developed a GIS-based system to overlay different types of data onto maps of the project areas to allow a pictorial representation of the information we have gathered. This allows us, for example, to track the public transport accessibility levels in different suburb areas to gauge the potential to shift usage from the private car onto buses or trains. Socio-economic and demographic trends are also mapped out, along with future infrastructure projects that could impact on future travel behaviour.

As we receive contact / delivery information from the three implementation teams, we can build up layers of mapped data covering attitudes, behaviour, TravelSmart interventions and changes in travel choices. This mapping of qualitative and quantitative household data will give us an idea of the underlying trends within each study area as well as how TravelSmart has influenced behaviour, resulting in a complete multi-thematic graphic representation of the real and perceived reasons behind travel choices across South East Queensland.

4.6 Alternative Methodologies

Consideration was given to other approaches to evaluation, such as the iTrace system used to track travel plans in London, UK (an online GIS-based database tracking modal split) and the GIS vehicle tracking as used in the Households in the West TravelSmart Communities project in Adelaide⁷ but there is insufficient funding available for these measures at this time.

5. Initial Results

5.1 Scope of results

As of the end of May 2010, we have complete benchmark data for the Brisbane South / Ipswich project area. The following results are therefore based on this, the largest of the three treatment areas. Results for the remaining two treatment areas – the Gold Coast and Sunshine Coast – will be available shortly. The final evaluation report will include a review of the three different methodologies used (see below), along with the identification of a series of Critical Success Factors that we deem to be instrumental in achieving the best possible results in TravelSmart Communities projects.

5.2 External Influences

5.2.1 Implementation Methodologies

As mentioned previously, the TravelSmart Communities project is being delivered in three different areas using three different implementation teams, each with a different approach. The first two project areas owe much of their approach to the Indimark® and Travel Blending methodologies, as described in the UK Smarter Choices report⁸.

A full comparison of these methodologies will be undertaken at the end of the project, as they will be refined and improved throughout the implementation period, but the key differences are set out in Table 3 below.

Table 3: Comparison of Implementation Methodologies

Brisbane South / Ipswich	Gold Coast	Sunshine Coast
Traditional household contact approach, focussing on provision of 'free' incentives as a means of engaging householders Low-tech approach to collection and treatment of data	Conversational style of engagement, encouraging householders to identify any issues they may have with current journeys. Householders only receive items they directly request.	Basic household contact augmented by awareness raising activities and community events, with on-site segmentation and treatment of householders. High-tech approach to management of engagement process and collection of data

⁷ www.transport.sa.gov.au/environment/travelsmartsa/communities.asp

⁸ Travel Blending evolved into Living Neighbourhoods and then Living Change – Cairns, S et al (2004) Smarter Choices, DfT (UK)

5.2.2 Transport provision and accessibility

From the extensive baseline analysis conducted on the project areas, one key factor that could impact the results of the project is the availability of quality alternatives to private car use. Whilst services and infrastructure are consistently improving, some parts of the study area still have limited public transport options and even in the areas that are well served, perception has not yet caught up with reality. Accessibility to services has been mapped using GIS technology to pinpoint which parts of the project area have the best opportunity to switch modes and which would be least likely to view public transport as a realistic alternative to private car use.

In addition, changes to public transport fares that came into force in January 2010, including increased ticket prices and the removal of certain discounts and season tickets, would have had an impact on travel choice. Whilst these factors can be assumed to have an immediate negative impact on public transport use, the revenue from this fare rise is being invested in an additional 300,000 seats each week on public transport services across South East Queensland⁹, which can be expected to have a positive impact in the long term.

High profile infrastructure projects such as the Clem7 Tunnel have received considerable media exposure during the implementation period, and whilst there are public transport benefits from this new route the overall impact is likely to increase car journeys.

5.2.3 Socio-economic and demographic influences

Socio-economic and demographic characteristics were profiled in sub-areas, setting out key indicators such as age of residents, levels of car ownership, household type / size and tenure. Trends indicate that householders in the Brisbane South / Ipswich area have high levels of both car ownership and usage. This is reinforced by the qualitative and quantitative research, which suggest that householders enjoy the freedom and flexibility that driving their car affords, and show that 78.7% of journeys are done by car. There are also indications that there is potential for mode shift away from single occupancy car use. Research suggests that there is a poor perception of public transport service levels, and this is something that could be addressed by the provision of up to date, accurate information.

5.2.4 Lessons from best practice

A full review of national and international travel behaviour change initiatives has been undertaken. Critical to this review were previous texts on the subject such as The RED Report (2005), and The Effects of Smarter Choice Programmes in the Sustainable Travel Towns (2010). Consideration was also given to the range of TravelSmart Communities projects already implemented in Queensland¹⁰ and across Australia¹¹ as well as across Europe through the European Commission's CIVITAS program¹², the UK Sustainable Travel Demonstration Towns program¹³.

⁹ www.translink.com.au

¹⁰ www.travelsmart.qld.gov.au

¹¹ www.travelsmart.gov.au

¹² www.civitas-initiative.org

¹³ www.dft.gov.uk/pgr/sustainable/demonstrationtowns

This experience shows that a reduction in car use is achievable in the right circumstances, although there are two factors that are particularly pertinent to note:

1. Many household-orientated travel behaviour change projects – particularly those in Europe¹⁴ – are accompanied by complementary measures such as workplace / school travel plans and awareness raising activities such as events and marketing campaigns, which help reinforce a change in travel habits
2. Improvements to services and infrastructure, or at least the presence of high quality alternatives to car use such as good public transport services and walking / cycling routes, are necessary in order to provide a viable substitute for the private car

This is not part of the implementation process in South East Queensland and the increase in public transport fares coupled with major road improvements may have a negative impact on results. With most independently evaluated schemes achieving reductions in car use of no more than 10%, this would suggest that given the conditions in Brisbane South / Ipswich a 10% reduction in VKT may be an optimistic target.

The methodologies employed by the implementation teams in the Gold Coast and particularly the Sunshine Coast have more in common with the best practice identified above, but there are limitations associated with the lack of sustainable travel choices that are available to householders.

In addition, an analysis of best practice also suggests that any implementation should be accompanied by an appropriate level of dissemination, to both increase the knowledge and capacity of industry professionals and to improve the quality and effectiveness of measures being implemented. There is therefore the opportunity to instigate any number of different forms of dissemination activities off the back of the TravelSmart Communities project.

It is also interesting to note the approach taken in The Mayor of London's Transport Strategy (2001) with regard to congestion / traffic reduction targets – it was acknowledged that there was an underlying trend of increasing VKT, therefore targets ranged from a reduction in *growth* in outer London by a third, from 7.5% to 5%, to an *absolute reduction* in weekday traffic of 15% in central London

5.3 Key Research Findings

5.3.1 Qualitative Data

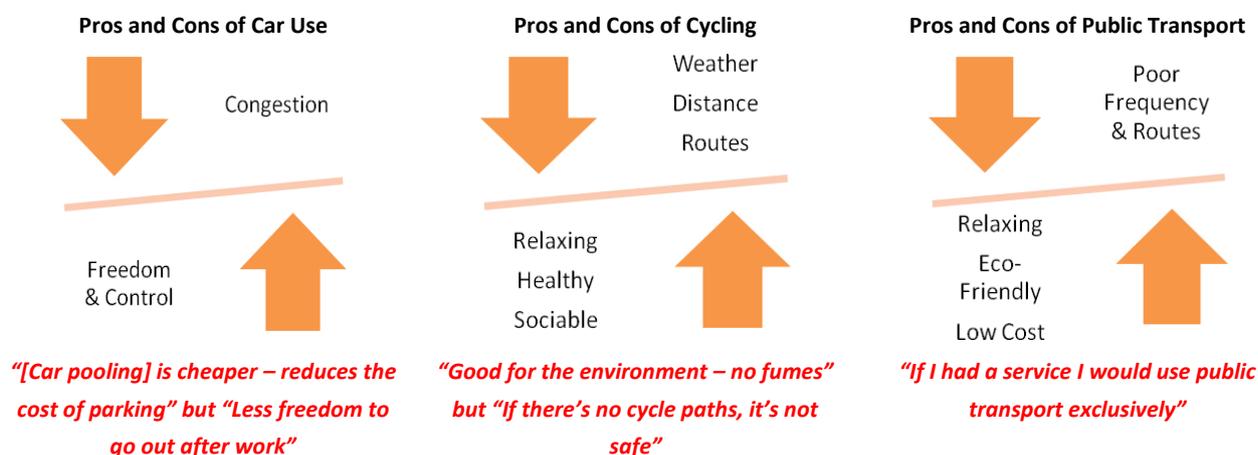
Even without knowing that the discussion topic was transportation, focus group participants cited public transport and traffic congestion as issues of concern. The main problems were a lack of public transport routes and services, as well as a lack of infrastructure to cope with congestion. The main barrier preventing public transport use was an actual or perceived lack of access, both in terms of routes and local stops / stations.

Walking and cycling were widely recognized as having health, social and relaxation benefits but there was resistance to using these modes as a form of transport (rather than as a leisure activity) due to weather, geography or journey distance.

¹⁴ www.eltis.org

Initial findings suggest that public perception of transport options did not match actual provision, therefore an improved knowledge of routes / facilities could increase usage. The status and freedom that cars perceived to offer will, however, present a considerable behavioural trait to overcome.

Figure 3: Attitudes to Transport Modes



5.3.2 Quantitative Data

For the Brisbane South / Ipswich area, Table 4 below shows that cars dominate mode share, representing almost 79% of trips compared with just under 9% for public transport. Similarly, less time is spent travelling by public transport, with each person spending an average 5½ minutes on buses and 7 minutes on trains each day, compared with 15½ minutes travelling as a car passenger and 34 minutes as a car driver.

Table 4: Mode share, trip distance and time by mode of travel

Mode	Mode share based on trips (%)	Total Daily Travel Distance (million km)		Daily Travel Distance per Person (km)		Daily Travel Time Per Person (mins)	
Vehicle Driver	52.8	11.3	52.1%	17.2	52.0%	33.9	48.4%
Vehicle Passenger	25.9	5.5	25.3%	8.3	25.1%	15.6	22.3%
Motorcycle	0.3	0.1	0.5%	0.2	0.6%	0.3	0.4%
Walking	10.7	0.2	0.9%	0.3	0.9%	4.7	6.7%
Bicycle	1.5	0.1	0.5%	0.1	0.3%	0.9	1.3%
Taxi	0.4	0.1	0.5%	0.1	0.3%	0.3	0.4%
Train	3.7	1.2	5.5%	1.9	5.7%	7.0	10.0%
Ferry	0.4	0.2	0.9%	0.2	0.6%	1.0	1.4%
School Bus	0.7	0.1	0.5%	0.1	0.3%	0.7	1.0%
Public Bus	3.5	0.7	3.2%	1.1	3.3%	5.5	7.8%
Other *	0.1	2.3	10.6%	3.5	10.6%	0.2	0.3%
Total		21.7		33.1		70.1	

Note: Mode has been classified according to the “priority”, or main, mode of transport used in each trip. ‘Other’ includes air travel, hence the high share of ‘distance travelled’ afforded to this mode.

While full comparative data is not yet available for the Gold Coast and Sunshine Coast areas, at this stage we are able to compare headline mode share figures for each of these areas, based on trips per day. This is shown in Table 5 below (Note – this is not directly comparable to Table 4, which has mode share figures based on km travelled by each mode):

Table 5: Mode share by Number of Trips for each project area

Mode	Brisbane South		Gold Coast		Sunshine Coast	
	Total kms	Mode share	Total kms	Mode share	Total kms	Mode share
Car	4,544,000	82%	1,332,000	87%	863,000	85%
PT	429,000	7.7%	51,000	3.4%	33,000	3.3%
Walking	509,000	9%	113,000	7%	86,000	8.6%
Bicycle	64,000	1.2%	23,000	1.5%	19,000	1.9%
Other	45,000	0.8%	9,000	0.6%	4,000	0.4%

5.3.3 Barriers to sustainable transport use

When asked about what would prevent them from using an alternative form of transport other than their own car, the following points summarise our findings:

- Buses - The most common barrier regarding bus use was the length of time the journey took (19%), but many respondents also cited a lack of service or lack of access to services as an issue, One in eight respondents (12%) stated that they merely preferred the use of their own car over bus use.
- Trains – four out of the top six reasons for not using trains more were related to the absence of a train service nearby or the lack of a service to the required destination, leading us to conclude that (1) a high proportion of residents would not be able to switch modes from car to train and / or (2) the level of knowledge regarding train services is poor, therefore this barrier could be overcome by the provision of additional information.
- Cycling – Apart from the more common response, which was that the respondent did not have a bicycle (24%), one in five respondents (20%) stated that safety was the main reason that they did not cycle more.
- Walking – As can be expected, most respondents (66%) stated that their journeys as taking too long or their destinations being too far away to be able to walk.
- Car pooling – The majority of respondents (60%) stated that the reason they did not carpool more was that they did not have or know anyone with similar journey patterns to share with. Following this, 17% stated that the lack of flexibility afforded by carpooling, in terms of matching arrival / departure times, was a key barrier.

5.3.4 Headline statistics

The following points set out some key headline characteristics of travel behaviour and attitudes in the Brisbane South / Ipswich study area:

- **78.7%** of all trips were undertaken in the car
- **70 minutes** – average time per day spent travelling by residents in study area
- **68%** of users that thought driving their car was an important part of daily life
- **46%** classified public transport as a convenient way of getting around
- **42%** of car drivers stated there was no other way to get to work
- **17.2km** – average length per trip undertaken by car drivers in study area
- **10.7%** of trips were taken on foot
- **9.7km** – average length per trip undertaken by residents in study area
- **1.5%** of trips were by bicycle

These statistics, alongside other information collected through the benchmarking process, can give us an insight into the reasons behind travel choices within the project area. There is a strong bond between residents and their cars, meaning that there must be a strong motivator in place to convince them to change their behaviour.

Perception of services does not always match actual provision, implying that the provision of information and incentives would raise knowledge of services and open up new opportunities for travel choice. This is highlighted by the fact that 42% of car drivers thought that they had no other way of getting to work, other than driving on their own. Whilst car ownership and usage is high, there are positive indicators that there is the potential for behaviour to change.

6. Summary and conclusions

6.1 Challenges to success

As part of the evaluation methodology, a series of risks were identified and suggestions were made as to how to manage them. Managing expectations, understanding the potential for change and ensuring the collation of accurate data is instrumental to the success of the evaluation.

One of the key issues that we have come up against is the balance between data privacy (including personal data protection, intellectual property rights and confidential company processes) and a transparent, accurate evaluation of proceedings. This issue is ongoing in the project, and, like other identified risks, recommendations of how to overcome this are being made. A full investigation of risks and how to negate them will be available as part of the final project report.

6.2 Current and future transport provision

Public transport provision has been improving consistently in recent years, as have the facilities for walking and cycling in South East Queensland. Whilst the network still needs considerable improvement, and many areas do not have the quality alternatives to car use that would promote travel behaviour change, our research suggests that perception of services is far worse than reality. Global case studies have shown the effectiveness of matching infrastructure or service improvements with awareness raising and marketing campaigns, and this could have a substantial impact on individual travel habits.

With the forecasted population increase in South East Queensland, there will be an increasing burden on the existing transport network and considerable improvements will need to be made to account for this. As well as improved services and infrastructure, considered demand management techniques need to be employed to influence behaviour and make the most efficient use of each of the transport modes available.

The final results of the evaluation study will help identify further gaps in service provision as well as where demand for services exists. The use of GIS mapping systems will provide an invaluable geographical evidence base that can inform future planning and policy decisions.

6.3 Potential for change

Attitudinal data has shown a distinct gap between perception and reality in terms of transport provision. This is a key area that can be exploited, with TravelSmart's approach being an ideal way of supplying the information and incentives that can help address this lack of knowledge.

The level of understanding that came through the qualitative research, in terms of the benefits of active travel, in terms of personal health, cost / time savings and the impact on the environment, also show that there is an appreciation of wider issues surrounding travel choice. The tendency to assume that other people should change behaviour, so that you do not have to, is still prevalent however, and there is a need to underline the importance of accepting responsibility for individual actions.

6.4 Future opportunities for TravelSmart

Queensland Transport has developed a groundbreaking series of travel behaviour change projects. From the first pilot project in 2001, results and conclusions of this and other initiatives have formed the basis of what has become the world's largest travel behaviour change project. The results of this evaluation will be able to further improve and refine this approach and set the standards for future initiatives.

There is a particular opportunity here to establish a comprehensive GIS based monitoring system to understand and track household travel behaviour. There is a certain amount of scope to develop mapped data within the existing project, but budgetary constraints ultimately limit the amount of information that can be collected and mapped.

The evaluation methodology employed here will provide a robust model for future projects. Of particular note will be the evaluation of the three implementation methodologies, which will be the first time such work has been undertaken. The evidence base and methodological recommendations supplied will help inform policy decisions and project design to make efficient, effective travel behaviour change interventions.

The review of international best practice also highlighted the opportunity to develop the dissemination processes surrounding TravelSmart and travel behaviour change initiatives. The importance of disseminating best practice and the provision of networks, training and resources in the area of travel behaviour change can be seen through existing practices in Europe and America (such as the Association for Commuter Transport¹⁵ in the USA, EPOMM¹⁶ in Europe and ACT TravelWise in the UK¹⁷) and the introduction of similar activities in Australia could be of significant value, both in terms of increasing knowledge and improving quality of actions.

6.5 Next Steps

The evaluation process is a long term project, and it will be some time before the final report is available for publication. In the meantime, however, there will be significant outputs from the project in terms of travel habits and attitudes covering all three project areas. In addition, broader recommendations will be made in terms of the most effective way of implementing and evaluation travel behaviour change projects.

We hope to further develop some of the opportunities outlined above, to create an unparalleled resource to inform and influence future decisions.

¹⁵ www.actweb.org

¹⁶ www.epomm.eu

¹⁷ www.acttravelwise.org

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