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Engaging Perth workplaces for sustainable transport: an evaluation of the TravelSmart Workplace program

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Abstract

Engaging workplaces in managing trips by their employees and visitors can advance efforts for balanced, sustainable transport in our communities. The TravelSmart Workplace program supports employers and site managers in Perth to develop and implement workplace travel plans.

Travel plans are based on an assessment of travel behaviour and workplace accessibility and identify actions that an organisation will take to reduce car use. In their travel plans Perth employers have committed to actions such as providing information on travel options, holding promotional activities, improving bicycle facilities, offering incentives to use travel alternatives and rethinking car parking practice.

The TravelSmart Workplace program provides a framework and practical assistance for employers to prepare and enact travel plans to bring about a supportive work environment and change in individual travel behaviour. This support includes information materials, audit and survey tools and stakeholder involvement.

An evaluation of the program was undertaken in 2011 to assess its impact and inform its evolution. The evaluation included stakeholder interviews, analysis of travel survey data and modelling costs and benefits, based on workplaces involved over the previous five years.

Key findings of the evaluation included:

- Workplace representatives valued the assistance provided through the program
- Average solo car commuting to participating workplaces was reduced by a net 5 per cent
- Each \$1 spent returned \$4.50 in community benefit, with net annual benefits of \$2.4M.

The evaluation identified ways to enhance the program to optimise workplace engagement and travel behaviour change and to better capture workplace and program level impact. As a result, a number of innovations have been made including trialling different levels of workplace involvement and directing resources based on organisational commitment. These and other measures will extend the scale of workplace activity and so the benefits of less car-dependent work travel in a growing city.

1. Introduction

As with many other cities, Perth is experiencing the impacts of car use including increasing traffic congestion as the city's population grows. Work-related trips are significant here as they are predominantly made by car, they account for about 20 per cent of all trips and 40 per cent of vehicle kilometers travelled and many occur at common times so generate congestion on the road network (Data Analysis Australia 2008). Emissions from motor vehicles and physical inactivity along with congestion are the rationale for a program that engages workplaces to reduce the car trips they generate – the TravelSmart Workplace program.

TravelSmart Workplace is a joint program of the Department of Environment and Conservation (DEC) and Department of Transport (DoT). It originated as a response to air pollution in Perth from motor vehicle use and now also contributes to the State Government's efforts to address traffic congestion and promote physical activity.

TravelSmart Workplace supports organisations to take action in their workplaces to reduce solo car trips and enable greater use of travel alternatives by employees and clients/visitors. These alternatives include carpooling, public transport, cycling, walking and teleaccess (i.e. teleworking, teleconferencing).

The program is premised on employers/site managers making changes to workplace policy, culture and facilities to influence the behaviour of their employees and clients/visitors towards sustainable travel modes. The program assists organisations to develop and implement workplace travel plans – a tailored package of actions to manage travel generated by a workplace using the 'levers' available to the organisation. Workplace travel plans have been used in other places to manage trips generated by workplaces, including other Australian capital cities and parts of New Zealand and the United Kingdom (RED3 2005, Rye 2002).

Travel plans typically include actions such as improving cycle facilities, providing information on travel options, holding promotional events like cycling and walking challenges, offering incentives to use travel alternatives and changing workplace policy, such as limiting staff car parking or encouraging teleworking.

TravelSmart Workplace program staff support participating organisations to develop and implement travel plans to support the use of travel alternatives. This assistance includes:

- providing tools and resources (e.g. fact sheets, online survey tool) to aid data gathering, action planning and evaluation
- assisting with conducting travel surveys and analysing data and consulting stakeholders
- offering promotional materials and workshops to inform employees of travel options
- providing advice and training for workplace travel plan teams including networking/training forums and offering advice/coaching.

A simple logic for the program is illustrated below.

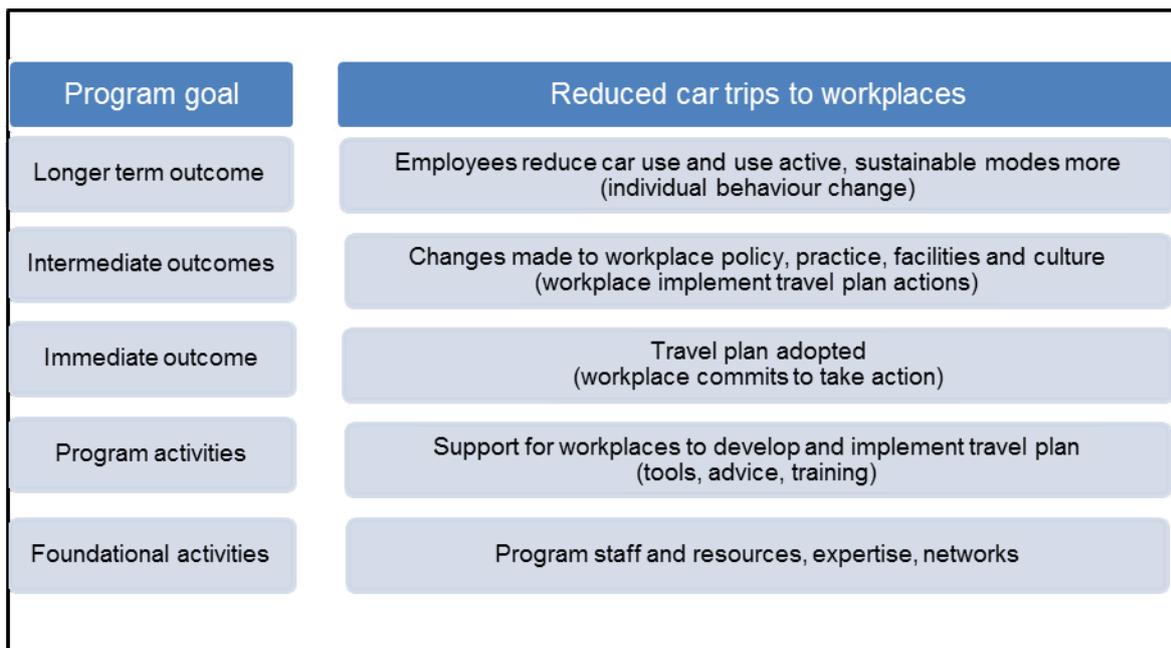


Figure 1. Program logic

Since 2000 the program has supported 45 organisations in metropolitan Perth and Mandurah to prepare workplace travel plans. Together, these plans covered 78 workplaces and over 29,000 employees. The participating organisations have included local councils, state government agencies, hospitals, universities and businesses.

There is little in the literature about the evaluation of workplace travel plans and even less of programs that support them (Wake, Thom and Cummings 2010). This paper reports on the evaluation of one such program.

2. Evaluation scope and methods

An evaluation of the TravelSmart Workplace program was commissioned by the DoT to assess the impact and inform the development of the program. An evaluation of the TravelSmart Local Government program was undertaken at the same time. Many local councils have participated in both programs - a separate paper summarises the evaluation of the local government program (Murphy 2012). An evaluation was seen as timely as no external evaluation had been undertaken of the workplace program whereas the TravelSmart to School program had recently been reviewed and external evaluation is an ongoing part of the larger and externally funded TravelSmart Household projects. The evaluation was seen as an opportunity to take stock of the program.

The evaluation was undertaken by Marsden Jacob Associates, an economic and financial consultancy. The objectives of the evaluation were to:

- Understand the effectiveness and stakeholder perceptions of the program;
- Develop a monitoring, evaluation and reporting plan for the program; and
- Model the economic and financial benefits of the program.

The evaluation considered the performance of the program between 2005 and 2010. This timeframe was chosen to make the most of the limited resources for the evaluation and as an internal review of the program was conducted in 2005. Program effectiveness was assessed against these four criteria:

- The level of car use reduction attributed to the program
- Actions that participating workplaces took as a result of developing a travel plan
- Impact on organisational culture in participating workplaces
- Participating workplaces' perceptions of the program.

The changes the program seeks to deliver are enacted by the participating workplaces so workplace representatives were key stakeholders for the evaluation. Interviews were held with the people preparing or implementing travel plans for their organisation and/or a relevant manager. A stakeholder workshop included these people to draw on their experience of the program and seek their input to defining ongoing monitoring and evaluation needs.

Travel surveys are undertaken when developing a travel plan for a workplace participating in the program to understand travel behaviour including commute mode choice and distance. Workplaces are encouraged to participate in travel surveys after adoption of a travel plan so that change in travel behaviour can be assessed. Within the evaluation timeframe before and after survey data were available for 15 workplaces. These data were collated and changes in the proportion of commute trips made solo by car were calculated. Census data about journeys to work in the Perth region in 1996, 2001 and 2006 were used to establish the background trend in car commuting and then estimate the net impact of the program on travel behaviour.

To quantify what the program delivered to the community and the State Government the evaluation included the modelling of financial and economic benefits. The modeling considered analyses of the costs and benefits of active and sustainable transport initiatives, including health benefits, reduced vehicle operating costs, benefits from reduced traffic congestion and reduced vehicle emissions. A set of cost and benefit values derived from earlier studies were applied to the program based on estimated reduction in vehicle kilometres travelled in participating workplaces. This provided an indication of the economic cost and benefit of the program and its financial impact on the State Government.

The evaluation methods for each objective are summarized below. The consultants drew on the assessment of the program's effectiveness and analysis of economic and financial impact to develop recommendations for improving program performance and monitoring and evaluation activities.

Table 1. Evaluation methods

Objective	Methods used
Understand the effectiveness and stakeholder perceptions of the program	<ul style="list-style-type: none"> • Review of travel plan literature • Synthesis of empirical data including travel survey results from 12 organisations (15 workplaces) • Interviews with representatives of 19 participating organisations • Stakeholder workshop • Assessment against evaluation criteria
Develop a monitoring, evaluation and reporting plan for the program	<ul style="list-style-type: none"> • Review of travel plan literature • Stakeholder workshop with workplace representatives and program staff • Definition of monitoring and evaluation needs and performance indicators
Model the economic and financial benefits of the program	<ul style="list-style-type: none"> • Review of models covering travel behaviour change • Gathering data to quantify costs and benefits

3. Evaluation findings

The results of the evaluation are outlined below under each objective, drawing from the consultants' report (Marsden Jacob Associates 2011).

3.1 Effectiveness

In the process of developing a travel plan for a workplace an employee travel survey is undertaken to understand current travel behavior including mode split for commute trips. For universities a student travel survey is also conducted. Travel surveys are repeated after a travel plan is adopted and some actions implemented to gauge change in travel behaviour.

Data from travel surveys undertaken before and after adoption of a workplace travel plan were available for 12 of the organisations that participated in the TravelSmart Workplace program in the last five years. The average mode share for solo car commuting in the baseline surveys was 73 per cent and for evaluation surveys it was 67 per cent. Journey to work data from the Census in 1996, 2001 and 2006 were used to establish a baseline and shows a small decline in solo car commuting in metropolitan Perth. Taking this into account, a net average reduction in solo car commuting of 4.9 per cent can be attributed to the program.

In interviews the representatives of workplaces involved in the program provided positive feedback on the support provided by program staff. In particular the program's assistance with engaging employees, preparing travel plans and undertaking travel surveys were reported as valued elements. Offering greater support for the implementation of travel plans was suggested as a way the program could further assist workplaces.

The consultants used four criteria to assess the effectiveness of the program based on available evidence and stakeholder responses. Findings against these criteria are summarised below (in Table 2). Overall, the evaluation found that the program is achieving significant results but that there is scope for improvement. The consultants also noted that having more participating organisations run regular travel surveys would provide a more complete picture of the program's impact on travel behaviour.

Table 2. Assessment against evaluation criteria

Criterion	Assessment
Level of car use reduction attributed to the program	Reported reductions in car use across the workplaces that conducted before and after surveys are high compared with the baseline suggesting that travel plans have been effective.
Actions taken as a result of developing a travel plan under the program	Some organisations are clearly undertaking substantial actions under the program, whereas as others are not undertaking ongoing actions following the completion of travel plans.
Impact on organisational culture in participating workplaces	Organisations report varying levels of impact on organisational culture with greatest effect where there is both management support and external drivers for change.
Perceptions of the program	Organisations provided positive feedback on the supported provided through the program; the program is well regarded by participating organisations.

Source: Marsden Jacob Associates, 2011.

3.2 Monitoring and evaluation framework

To date travel surveys have provided the primary measure of the program's effectiveness – with before and after data on commute mode split used to gauge change in employee travel behaviour. There have been periodic (but not regular) reviews of travel plan implementation based on interviews or surveys of representatives of participating workplaces.

The consultants proposed a monitor-evaluate-report-improve framework (Australian Government 2009) be used to develop a more comprehensive approach to program monitoring and evaluation. Following this framework would mean better integrating monitoring and evaluation into the program cycle. The consultants suggested that designing an appropriate set of common measures would allow data to aggregate up from workplace travel plans to program level to paint a regional picture of changes in organisational practice and individual travel behaviour.

Drawing on the literature review and stakeholder consultation the consultants proposed a framework for ongoing monitoring and evaluation of the TravelSmart Workplace program. The framework suggested:

- Business-as-usual analysis – analyse trends and influences affecting travel behaviour to determine what would have happened without the program
- Program logic – establish logical links between program activities and planned outcomes in the immediate, intermediate and long terms
- Efficiency and effectiveness – drawing on program experience and the literature, consider how best to deliver the program to meet its targets and minimise costs using effective interventions
- Build in monitoring and evaluation – establish data needs and incorporate collection into the program cycle to enable ongoing improvement and evidence-based evaluation.

The collection of key data depends on the participating workplaces and it is important to consider the burden on travel plan coordinators in these workplaces when developing performance indicators. The consultants proposed a set of performance indicators for the program that covered:

- Travel plan implementation including whether actions have been implemented and what changes have been made to workplace policy, physical infrastructure, fleet, promotion and incentives
- Organisational support for the travel plan including whether it is recognized in the corporate plan or business reporting
- Change in travel behaviour including change in mode share and vehicle kilometres traveled after a travel plan has been adopted.

Collecting data against the indicators annually and compiling them in a database would allow trends to be tracked across the duration of the program. Data collection could include employee travel surveys and seeking travel plan information from workplace coordinators.

3.3 Financial and economic benefits

The consultants established indicative estimates of benefits attributable to the TravelSmart Workplace program using program data and previous modelling of benefits from travel behaviour change. The stream of economic benefits included reduced vehicle operating costs and decongestion benefits from reduced car commuting and health benefits from increased physical activity and reduced air pollution. Financial benefits included public transport revenue from additional boardings, health system benefits from improved health and avoided road capital expenditure. Conservative assumptions were used in specifying benefits to the program.

The unit benefits were applied to the program using recorded change in travel mode share. Workplace travel surveys provided the basis for estimating reduction in car travel and an average commute distance of 11km was used for working days. An annual reduction in car kilometres travelled of nearly 10M km was estimated for 2010-11. The modelling indicated a net economic benefit from the program of \$2.8M for 2010-11, primarily from reduced vehicle operating and congestion costs. For this year costs of about \$0.8M were estimated, including public transport system costs (associated with additional boardings) and the direct costs of delivering the program. A benefit-cost ratio of 4.50 was estimated for the TravelSmart Workplace program. Annual net financial benefits from the program were estimated at about \$0.78M.

The consultants found that both the TravelSmart local government and workplace programs yielded a strong benefit-cost ratio. On this basis the evaluation report states: “the potential for large economic benefits for relatively small budgetary outlays confirms our general conclusion that the programs warrant continuation,” (Marsden Jacob Associates 2011 p83).

3.4 Recommendations

The consultants made ten recommendations, drawing on their findings about the effectiveness of the program and the feedback from stakeholders they consulted to propose ways by which the program could be improved. These recommendations and the key rationale for each are summarized in the table below.

Table 3. Recommendations from program evaluation

Recommendation	Rationale
1. Investigate the most appropriate baseline for measuring change in mode share and VKT	Census journey to work data and Perth and Regional Travel Survey data are available, however both have limitations
2. Increase the number of participating workplaces undertaking regular travel surveys and continue improving survey practice, including response rates	Before and after travel survey data is essential for evaluating the program. Fewer than half the participating workplaces had survey data from after travel plan adoption.
3. Develop guidance for workplaces on effective interventions to influence travel behaviour based on best practice examples and monitoring and evaluation findings	Workplace consideration of travel plan measures should be informed by program experience and evidence from other jurisdictions
4. Involve a greater number of private sector employers over the next few years to test the merits of the program outside the public and not-for-profit sectors	Most participating organisations to date have been in the public and not-for-profit sectors.
5. Articulate the value of local governments receiving TravelSmart Officer seed funding completing a workplace travel plan	Some local government TravelSmart Officers, or their managers, do not see a travel plan as an effective use of their time
6. Consider making before and after travel surveys as well as completion of travel plans key performance indicators for the program	The completion of travel plans is a key measure of the program’s performance. Having more workplaces undertake surveys after adopting a travel plan would build the evidence base for program evaluation.

Recommendation	Rationale
7. Investigate ways to enhance support within organisations to adopt, implement and extend workplace travel plans including greater focus on business case analysis, dialogue with management and capacity building	The level of support for TravelSmart and the travel plan may be lower than desirable in some participating workplaces
8. Consider further the option of charging for services provided in developing workplace travel plans	There was limited support amongst participating workplaces for the potential of paying for the services the program, however it could be considered further
9. Prioritise program efforts to organisations considered likely to deliver sustained action and greatest behavioural impact	In the past all interested organisations were offered support by the program. Efforts could be better targeted to those workplaces likely to deliver sustained action and greatest behavioral impact.
10. Using the framework provided, develop and implement a monitoring and evaluation plan and build the capacity of travel plan coordinators to assist with implementation	The level of monitoring and evaluation activities for the program can be significantly enhanced

Source: Marsden Jacob Associates, 2011.

4. Discussion

4.1 Program effectiveness and impact

The evaluation of the TravelSmart Workplace program provided an independent review of its effectiveness. The consultants indicated that the program was engaging employers to make changes in their workplace and that this translated into change in employee travel behaviour in the desired direction, i.e. it reduced solo car commuting and increased use of active, sustainable travel alternatives. The evaluation provides external verification of the program's positive impact in tackling work-related car travel in metropolitan Perth.

The evaluation also quantified the program's impact by modelling the economic and financial benefits that follow from the travel behaviour changes measured. The benefit-cost ratio of 4.5:1 calculated for TravelSmart Workplace shows the positive outcomes of engaging employers in reducing their transport impacts. Most benefit derives from reduced congestion costs and reduced vehicle operating costs as people in the participating workplaces use travel alternatives more. The evaluation put the benefits of the program in monetary terms to show the tangible benefits to the community and to the State Government.

The evaluation noted that most of the organisations that have participated in the program were from the public and not-for-profit sectors and that more private sector employers should be involved to test the applicability of the program to them. The number of public and non-profit employers involved may reflect their interest in community benefit of reducing their transport impact and response to government policy. Relevant policy included the State Sustainability Strategy (Government of WA, 2003) under which agencies were expected to promote travel alternatives to their staff as part of efforts to reduce the environmental impact of their operations.

Many of the local government authorities that have participated in the program received seed funding from the DoT to support employment of a TravelSmart Officer to promote active, sustainable transport in their communities. Under seed funding agreements the recipient councils were required to develop a travel plan for their organisation and participation in TravelSmart Workplace provided assistance to do this. The evaluation noted that some TravelSmart Officers or their managers did not see this as a relevant activity because they could better focus on local residents or because achieving mode shift in suburban locations was difficult. It can be argued that if councils develop and implement travel plans for their workplaces they can lead by example in enabling active, sustainable travel. Further, this should build the capacity of TravelSmart Officers to work with local employers. Reducing car commuting in suburban workplaces is a challenge, however a number of participants in TravelSmart Workplace have done this (including the City of Joondalup where a 13 per cent reduction was observed).

The TravelSmart Workplace program assists organisations to better manage the travel they generate with travel plans used as a tool to engage people - through the process of developing and implementing the plan. A travel plan is a plan for changing organisational practice as well as individual travel behaviour. The ideal outcome would be for organisational practices that enable and encourage the use of active, sustainable travel (and moderate car use) to become standard practice. For many of the organisations participating in the program the use of the car for commute and business trips is a long-standing norm, as it is in the wider community. Challenging this way of thinking and aligning corporate policy and culture with the goal of active, sustainable transport will take time. Organisations can be positioned on a spectrum between low cost travel plan actions and low commitment to change to higher commitment where sustainable travel is seen as delivering business benefit and it has become embedded practice (Rye 2002, Wake 2004).

As the consultants noted the level of workplace activity and the report change in organisational culture varied. The adoption of 'TravelSmart' was stronger where there was demonstrable corporate commitment and/or external drivers to change practice. For many participating organisations their travel plan activity was largely about providing information. Raising awareness is important but local and international experience suggests that by itself it will not achieve much shift from driving solo to travel alternatives (Rye 2002). Improving and enabling the use of travel alternatives is fundamental, which at the workplace level may mean, for example, installing secure bicycle parking, providing and training staff to use web-conferencing tools or having public transport passes available for business trips. Parking restraint and/or incentives to use alternatives can bring about larger mode shifts, but greater organisational commitment for these travel plan actions to be agreed to and implemented (Newson 2002). Engaging with management in participating organisations, demonstrating potential business benefits of travel plans and building the capacity of workplace coordinators and teams (who develop and implement travel plans for their workplaces) are areas for attention to enhance organisational support in TravelSmart workplaces.

4.2 Monitoring and evaluation

The consultants provided direction for ongoing monitoring and evaluation in the program. Program staff and participating workplaces were involved in the process, including data gathering and workshops. At the conclusion of the evaluation a stakeholder workshop was held to present and discuss the findings and how they could be implemented, facilitated by an independent peer reviewer. This provided a shared learning opportunity and a good basis for further work on monitoring and evaluation.

An important consideration for monitoring and evaluation is the capacity building approach used in the program. TravelSmart assists organisations to change practice and thereby positively influence the travel behaviour of their employees and visitors. The changes the program aims to achieve could be affected by multiple factors shaping organisational culture and individual travel choices. How organisations have participated in the program and their perceptions of the support it has offered needs to be considered too. This is the level of change most directly attributable to program activities.

A monitoring and evaluation plan for the TravelSmart Workplace program is in preparation (Clear Horizon in prep.). Key elements of this plan include:

- Definition of key evaluation questions based on the needs of program staff, participating workplaces and those funding the program; these questions guide the detailed monitoring and evaluation questions and methods
- Delineation of a package of quantitative and qualitative methods to capture the effectiveness, impact and appropriateness of the program, covering:
 - a) change in organisational practices including surveying workplace coordinators annually about implementation of workplace travel plans,
 - b) change in employee (and clients/visitors where relevant) attitudes and behaviour regarding work-related travel through regular surveys and
 - c) participants' experience of the program including the support and tools provided to workplaces
- Building monitoring, evaluation, report and improvement into the program cycle so that data collection and interpretation becomes regular activity at both workplace and program levels and using this data to inform improvements in program delivery and direction as well as meeting formal reporting needs.

This framework incorporates thoughts for travel plan monitoring and evaluation raised by Wake, Cummings and Thom (2010). By expanding evaluation from a focus on outcomes only to consider the process by which they came about a more comprehensive picture of workplace travel plans and the program supporting them can be built.

4.3 Engaging workplaces for sustainable transport

The evaluation identified ways to enhance the program to optimise workplace engagement and travel behaviour change and to better capture the impact at workplace and program scales. As a result, a number of innovations have been made including trialling different levels of workplace involvement and directing resources based on organisational commitment.

The TravelSmart Workplace program offers three levels of involvement: ad hoc advice on workplace action, limited support for a workplace campaign to promote travel options to employees and assistance to develop and implement a workplace travel plan. The idea is that workplaces can determine how they want to engage based on their needs and program resources are directed where there are most prospects for changing behaviour. An expression of interest process is now used to recruit workplaces into the program (to run a campaign or develop a plan) and program staff select according to organisational commitment (e.g. whether the employer has a sustainability officer or committee or employee health or environment policy in place) and location (e.g. proximity to public transport). The opportunity to participate is promoted through relevant networks to reach a range of employers, including those in the private sector.

The processes and tools used to develop travel plans are being enhanced. There is a balance to be made between capitalizing on an organisation's interest in taking action and building support so that a travel plan is well supported. The aim is to expedite the preparation of a travel plan while engaging internal stakeholders including management in the process. Work is proposed to better demonstrate business benefits including using the experience of participating workplaces to encourage others to join in. This can be a way of normalizing workplace action to promote active, sustainable travel (in a city where car use is the norm for work-related travel). More tools will become available to workplace coordinators, drawing on knowledge about behaviour change and local case studies to inform and inspire their efforts.

The TravelSmart Workplace program will be able to engage a greater number and range of workplaces through the Healthy Workers Initiative. The initiative seeks to address chronic disease in working population by promoting healthy lifestyles through workplaces (Council of Australian Governments 2008). Over the next three years the Department of Health, with funding from the Australian Government under the National Partnership Agreement on Preventative Health, will fund additional activity through TravelSmart Workplace to promote active travel. This will increase the number of organisations that can be assisted to create workplaces supportive of healthy travel choices. It also links a travel demand management program with a major preventative health initiative (underscoring the co-benefits possible from transport measures).

The evaluation of the TravelSmart Workplace program has provided fertile ground for promoting the program and informed innovation to enhance its positive impact. Engaging workplaces in reducing reliance on the car and enabling use of active, sustainable travel alternatives is a strategy with much potential. Future evaluation will measure the program's success in extending this work in Perth and beyond.

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