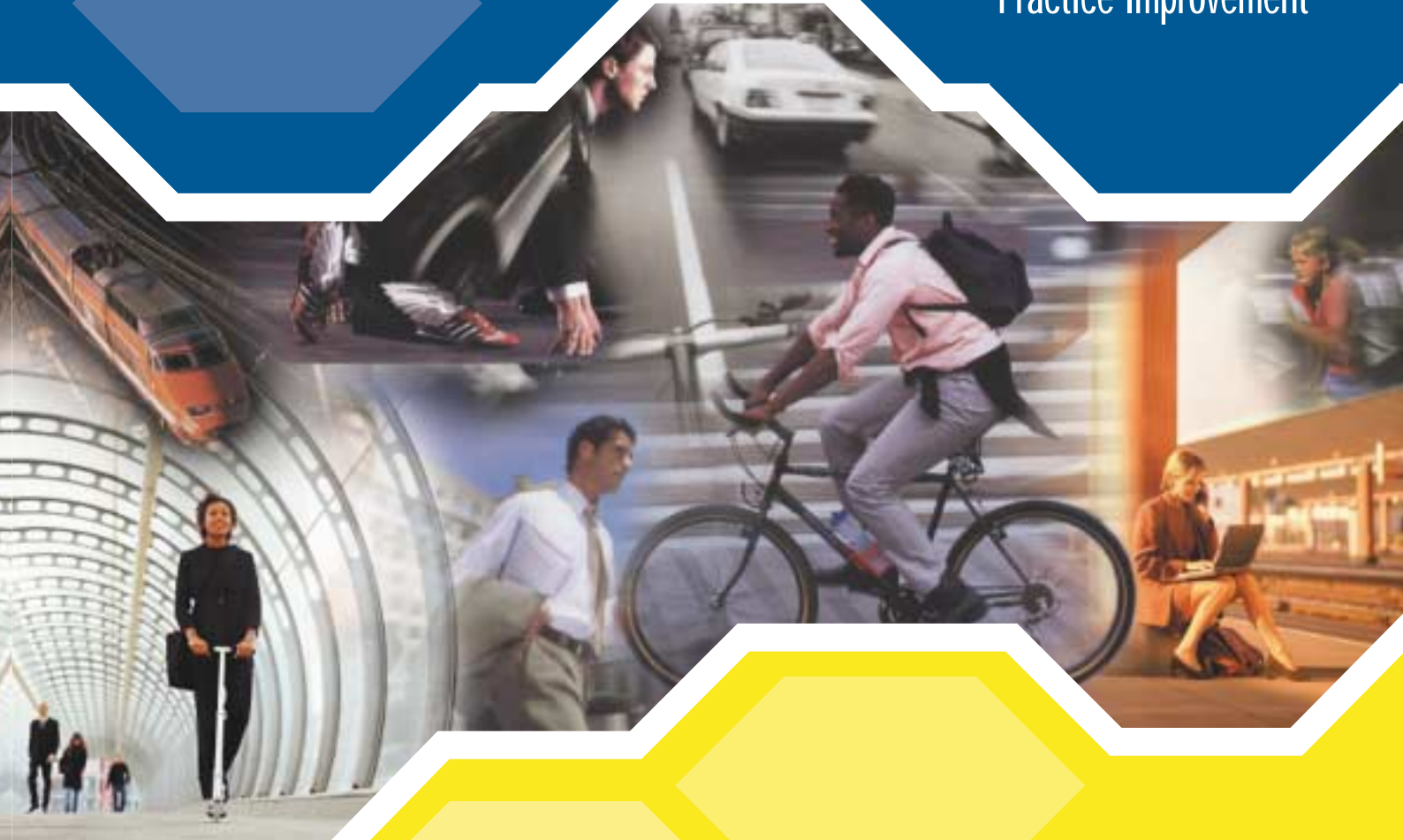


Public Health Planning and
Practice Improvement



PROMOTING ACTIVE TRANSPORT

An Intervention Portfolio
To Increase Physical Activity
As A Means Of Transport



Planning Framework - Case Study

Public Health Planning and Practice Improvement

PROMOTING ACTIVE TRANSPORT:
**An intervention portfolio to increase
physical activity as a means of transport**



Planning Framework – Case Study

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The work of Associate Professor Alan Shiell is acknowledged as the basis for the decision-making process used in the pilot. For a description of this method refer to the publication *Deciding and Specifying an Intervention Portfolio*, NPHP 2000 (2).

Further copies

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GLOSSARY OF TERMS

Benefits: Used here to refer to the desired effects or outcomes of an intervention. The range of benefits to be considered is determined by the decision-making group.

Criteria for selecting interventions: The final list of portfolio goals (see below) that the decision-making group has agreed will inform its final decision on the interventions to be included in the portfolio. Criteria may include how effective the intervention is and for whom it is effective, as well as how acceptable and how timely it is.

Decision-making group: The portfolio process seeks consensus over what might otherwise be disputed territory. It is important therefore that the portfolio selection is made by a decision-making group that has responsibility and is accountable for the decisions it will make, has representation and therefore ownership of the problem being addressed, and can provide diverse views and perspectives on that problem.

The group must also be able to make decisions over resource use and so ideally should involve those who have budgetary responsibility or influence. Other stakeholders may be consulted and may even participate in the process as long as this does not distract from the decision-makers' ultimate responsibility to make decisions.

Determinant: The causes of good or ill health. Determinants can be characterised by the type of causal link they demonstrate (proximate or contributory), their level (social and environmental or specific) and their effect (protective/promotive or hazards/risks).

Proximate determinants are those that are immediate, while contributory determinants are those that create the conditions for, or increase the effect of the proximate determinant.

Social and environmental determinants are the broader, 'upstream' factors external to the individual that may have a proximate or contributory effect. They can have either a hazardous or protective effect on health.

Specific determinants are the 'downstream' factors that are more closely associated with individual causes of health and encompass both behavioural and biomedical factors. These also can have a proximate or contributory effect.

The determinants are defined in more detail in the publication *A Planning Framework for Public Health Practice* (available from the NPHP secretariat).

Domain: Area of public health. Examples include nutrition, environmental health.

Intervention: A (public health) intervention describes an activity undertaken in order to improve the public's health.

Planning framework: A method for assessing the impact and analysing the causes of public health issues, defining interventions, implementing them, and evaluating the results. It comprises a cycle of six steps that are described in the publication *A Planning Framework for Public Health Practice*.

Portfolio: A mix of interventions that have related objectives. It represents the best sub-set of all possible interventions, where best is defined in terms of meeting specified needs subject to a resource constraint.

Portfolio goals: Goals consistent with the portfolio management objectives and specifying in more detail what the portfolio is trying to achieve. They reflect the real decision-making context and therefore the range of values and priorities of the decision-making group. Portfolio goals can help narrow the long-list of interventions to those the decision-making group will consider for the final portfolio.

Portfolio management objectives: Objectives defining the broad purpose of the portfolio and helping guide the initial search for interventions – the long-list, in the terminology employed in this document. These are based on an epidemiological analysis of the dimensions and causes of the problem. As such, they do not reflect further considerations stemming from a real-life decision-making context.

Weights: Numerical values denoting the relative importance of goals to be achieved by the portfolio. A goal with a mean weight of 4 is deemed to be twice as important as one weighted at 2.

Weighted score: the weighted score for an intervention is obtained by summing across all criteria the product of the mean score given to that intervention by the decision-making group for each criterion and the mean weight of that criterion.

With acknowledgement to Dr Alan Sheill.

OVERVIEW OF THE PORTFOLIO PILOT

Introduction

The National Public Health Partnership (NPHP) has defined a portfolio approach to public health planning, which is described in the document *A Planning Framework for Public Health Practice*.^{1*} The portfolio approach has been successfully piloted in the area of nutrition.³

The Strategic Inter-Governmental forum on Physical Activity and Health (SIGPAH)[†] has identified the area of transport as a high-priority setting to promote physical activity. SIGPAH agreed to pilot the framework approach to develop a portfolio of interventions to address this issue.

This report is a case study in applying the portfolio approach. The project involved collaboration between the NPHP and SIGPAH to define interventions likely to be effective in promoting 'active transport'.

The project had the following three specific objectives:

- to develop a portfolio of interventions that has the potential to be applied;
- to document the steps taken in the portfolio exercise; and
- to recommend improvements to the portfolio approach.

Key definitions

Active transport

The term 'active transport' relates to physical activity undertaken as a means of transport. This includes travel by foot, bicycle and other non-motorised vehicles. Use of public transport is also included in the definition as it often involves some walking or cycling to pick-up and from drop-off points.

Active transport does not include walking, cycling or other physical activity that is undertaken for recreation.

Means of transport

The term 'means of transport' relates to all aspects of the domain of moving people from one place to another for specific purposes such as going to and from work or school, visiting friends, shopping or posting a letter.

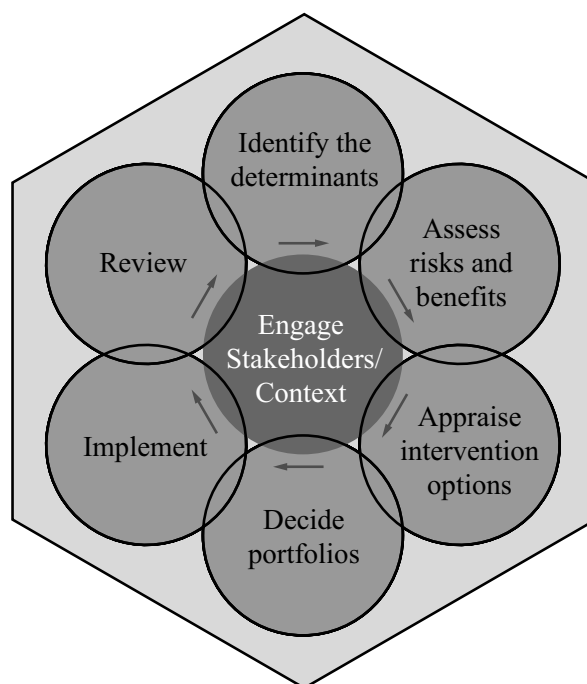
* Superscript numerals refer to the References on page 39.

† SIGPAH is a subsidiary of the NPHP that provides national leadership for government action in physical activity and health issues across Australia. SIGPAH comprises representation from all State and Territory Health Departments, the Commonwealth Department of Health and Aged Care, Active Australia through the Australian Sports Commission, and the Australian Institute of Health and Welfare.

The Planning Framework

The planning approach used is described in the document *A Planning Framework for Public Health Practice*.¹ The Framework process involves a planning cycle of six steps as summarised in Figure 1.

Figure 1: A Planning Framework for Public Health Practice



The pilot involved the first four steps of the Framework, as follows:

- identify the determinants;
- assess the risks and benefits posed by these determinants;
- appraise the intervention options; and
- decide the intervention portfolio.

Process and methods

The portfolio decision-making process (step 4) to determine the mix of interventions to comprise the portfolio followed the steps outlined in the NPHP publication *Deciding and Specifying an Intervention Portfolio*.²

A physical activity content consultant and a process consultant worked with a decision-making group to implement the pilot. A Steering Group (Appendix 1) oversaw the project, with representatives from the NPHP and SIGPAH.

The content consultant identified, compiled and analysed current information, both published and unpublished, on

the determinants linking active transport and health as well as evidence of the effectiveness of interventions to increase participation in active transport.

The process consultant guided the decision-making process, reported on the process and made recommendations that may improve the process and assist other areas of public health to apply the process.

Consultation

Stakeholder analysis was conducted as an essential first step (Appendix 7). Aside from the health sector that initiated the process, the major stakeholder sectors were transport, urban design and environment. Each sector included interests from Commonwealth, State and local government, non-government and professional organisations, private enterprise organisations, and academia.

A decision-making group was established consisting of 14 experts and stakeholders in active transport (Appendix 2). The group was responsible for selecting the interventions for the portfolio based on their knowledge and experience and the information provided to them.

The group participated in two workshops three months apart and two mailed scoring exercises as part of the process to identify determinants and criteria and to define the final portfolio.

The key focus of the first workshop was to obtain input from all interest areas and to identify relevant current and planned activities in these areas. The second workshop focused on selecting the interventions for the portfolio.

The evidence and information considered

The domain of active transport is an emerging area for health promotion. There has been limited empirical research investigating either the determinants or the effects of environmental and policy influences on active transport. There is also limited information related to the effectiveness of many active transport interventions. Consequently, the published literature was supplemented with 'grey literature' (i.e. unpublished papers, reports, strategy documents etc.) and with information from experienced people working in the field. This approach to gathering evidence on the effectiveness of interventions would be relevant to other public health areas where published studies are limited but where practical experience in the field is emerging and expanding.

The intervention portfolio

The portfolio defined in this pilot using the Planning Framework approach represents the mix of interventions considered by experts, on the basis of the best available evidence, to have the most potential to be effective.

Stakeholders at the first workshop gave unanimous support to defining best practice in increasing active transport and for an inter-sectoral, multi-level approach to planning and implementing interventions. There was also agreement that the portfolio should contain a mix of short-term (achievable within two years), medium-term (achievable within the next five years) and long-term (achievable in longer than five years) interventions. Strong arguments were put for not imposing budgetary constraints on portfolio planning.

The overall aims of the portfolio as defined by the decision-making group were to:

- increase the proportion of people travelling by foot, bicycle, non-motorised or public transport for a sustainable environment and better health; and
- increase the number of trips by foot, bicycle, non-motorised or public transport for a sustainable environment and better health.

The key determinants of active transport identified from the literature and the input of the decision-making group related to:

- the existence of a social milieu that accepted active transport as a normal and safe part of life;
- urban planning that facilitates active transport between homes, workplaces, recreational and shopping facilities;
- the provision of facilities that support active transport including use of public transport; and
- the need for an inter-sectoral approach to increase the use of active transport.

Determinants were grouped to reflect domains for intervention. These were: demographic characteristics; attitudes; knowledge; skills; physical environment; and policy environment. Portfolio management objectives were then defined for each of the determinants.

To ensure a systematic and comprehensive approach to identifying interventions, potential interventions were considered for a range of specific settings and were grouped by either policy, program or infrastructure support. Nine settings for potential action were identified. These were:

- schools
- universities
- workplace
- shopping
- health services
- government (both Commonwealth & state)
- local government
- transport
- media.

Assessment of the intervention options for inclusion in the portfolio required the selection, weighting and application of a set of selection criteria. Participants initially identified a large number (28) and broad range of potential selection criteria. These were reduced to six through a scoring process and further discussion. The decision-making group assigned weightings to the criteria to reflect their relative importance in the selection of interventions as follows:

- (the potential for) effectiveness (1.79);
- evidence-based, measurable (1.79);
- capacity building, partnerships (1.62);
- sustainability (1.47);
- acceptability (1.17); and
- synergistic, utilises infrastructure (1).

The selection criteria (Appendix 3) were then applied by the decision-making group to each of the potential interventions. The final scores for each intervention are shown in Appendix 4. The five top-scoring interventions within each setting were selected for the final portfolio (see Table 1 on the following page). There was little difference in scores for the top five interventions across settings, confirming the importance of a comprehensive approach to portfolio planning. There was a greater variation in scores within some settings, which provides useful guidance for selecting interventions to practitioners working within a defined setting.

Interventions with high scores across many sectors included provision of safe, reliable and adequate public transport; production and promotion of active transport access guides for locations and institutions; provision of facilities such as showers, safe storage and bike paths to facilitate active transport; institutional and government policies and planning to facilitate active transport; and collection of baseline and monitoring data. The intervention strategies in the final portfolio will need to be supported by appropriate data and research to evaluate and monitor their effectiveness.

Report outline

The remainder of this report is arranged into three parts:

- Part 1 details each step of the portfolio decision-making process;
- Part 2 documents the findings of the literature review; and
- Part 3 contains the appendices relevant to specific steps in the process.

Table 1: Active Transport Portfolio of Interventions*

Setting	Intervention [†]	Score [‡]
Shopping	Pedestrian friendly environments – safe, pleasant, direct routes to shopping	31.99
	Public transport facilities that are safe, reliable and adequate	29.83
	Data collection of all transport modes – baseline and monitoring data	29.02
	Planning guidelines for facility placement, parking policies for all retail development	28.27
	Tailored active transport information to specific shopping destinations	28.26
Government	Shower and change facilities provided in government facilities and workplaces	31.92
	Linking research and existing data sets from the various sectors	31.91
	Implement programs from a whole-of-government approach – include all sectors with an interest	31.63
	Data collection of all transport modes – baseline and monitoring data	30.75
	Development of urban planning guidelines – address issues such as permeability, safety, land use	30.60
School	TravelSmart Schools program[†]	31.81
	Provision of safe, reliable and adequate public transport facilities to and from school	30.57
	School policies that link active transport to wider physical activity goals and policies	29.67
	Provision of safe routes to school	29.66
	Health impact assessment of school location in relation to other facilities – e.g. placement of major roads in relation to schools	29.15
Local Government	Provision of paths – including shared, cycle, walking	31.20
	Incorporate a cross government approach (SEPA)[†]	30.47
	Active transport included in all strategic plans at the policy level	30.34
	Development and implementation of guidelines for pedestrian and bike-friendly environments applicable to individual communities	30.26
	Disability access – pedestrian access mobility plans for all areas	29.78
Health Services	Education – awareness raising of active transport as physical activity	30.89
	Public transport facilities that are safe, adequate and reliable	30.06
	Data collection of all transport modes – baseline and monitoring data	28.98
	Advice – use of active prescriptions and other opportunities to promote active transport	27.72
	Advocacy for active transport modes	27.01
Transport	Data collection of all transport modes – baseline, monitoring	30.47
	Public transport facilities that are safe, reliable and adequate	29.78
	Active transport access guides	26.36
	Data on the impact on use of fees/taxes/subsidised public transport	26.16
	Planning guidelines for facility placement, parking policies	25.45
University	Training of professionals in sectors that influence active transport use – e.g. urban design, transport planning, health professionals	29.94
	Public transport facilities that are safe, reliable and adequate	29.27
	Data collection of all transport modes – baseline and monitoring data	29.09
	Provision of information regarding active transport options to and from universities	28.27
	Provision of adequate bike parking facilities	27.00
Workplace	Safe, reliable and adequate public transport facilities	28.45
	Data collection of all transport modes – baseline and monitoring data	27.14
	Provision of adequate bike parking facilities	25.26
	Shower and change facilities provided	24.92
	Active transport access guides for workplaces	24.82
Media [#]	Data collection of all transport modes – baseline and monitoring data	27.02
	Advocacy for active transport modes	26.11
	Frame messages to suit target audience	23.64

* See Appendix 4, Table 13 for grouping of interventions as either policy, program or infrastructure.

[†] A more detailed description of the interventions is provided in Appendix 5.

[‡] Average scores as determined by the decision-making group following workshop 2.

[#] Only the top 3 interventions are included for this setting as only 4 interventions were proposed in the scoring process.

Bolded = interventions that scored 30 or more.

PART 1: STEPS TO DEFINE AN INTERVENTION PORTFOLIO

STEP 1: IDENTIFY THE DETERMINANTS

Summary

There are demonstrated health benefits from as little as 30 minutes per day of moderate levels of physical activity. This activity can be accumulated in 10-minute bouts, so increases in active transport are likely to have significant direct health benefits. Indirect health benefits may also accrue from reduced environmental pollution and increased community cohesion through increasing physical activity and use of public transport.

The experience of stakeholders and ‘grey literature’ supplemented the published literature in defining the range of determinants of active transport. Overall, the main social and environmental determinants were: social factors that promote active transport as a normal part of life; urban planning issues that affect design of communities; and transport-related issues that affect ease of use of active transport. The determinants were grouped to reflect domains for intervention. These domains were demographic characteristics, attitudes, knowledge, skills, physical environment and policy environment. The portfolio management objectives were defined for each of the determinants and, although the management objectives were not quantified or prioritised due to lack of objective information, the direction of change was specified.

Physical activity as a determinant of health

There is consistent epidemiological evidence that demonstrates the role that physical activity plays as a major modifiable risk factor in the reduction of mortality and morbidity from many chronic diseases.⁴⁻⁷ These diseases include cardiovascular disease, several cancers, Type 2 diabetes, mental health and the risk of falls and injuries in the elderly.⁴⁻⁷

In recent years the focus of physical activity interventions and research has moved away from vigorous physical activity to moderate-intensity activities, including activities such as using stairs and walking or cycling for transport. This has resulted from the epidemiological evidence that regular moderate-intensity activity can provide similar health benefits as vigorous activity.⁷⁻⁹ This move is reflected in the recent physical activity guidelines that recommend that adults accumulate, on most days, 30 minutes or more of moderate-intensity physical activity (such as brisk walking) that can be accumulated in bouts of approximately 10 minutes.^{6,7,9,10}

As in many other industrialised nations, the level of physical activity among Australians is insufficient. It has been estimated that approximately one-half of the

Australian adult population are inadequately active in their leisure time.^{5,11-15} Due to the low rates of activity levels in Australia, it is suggested that no one group is more ‘at risk’ from inactivity and that the whole community should be targeted, as there is a need to increase physical activity levels across most groups.⁶

Active Transport as a determinant of health

Current levels and specific determinants of Active Transport

In addition to the numerous health benefits that active transport provides by increasing physical activity, other potential public health benefits of alternative forms of transport are: environmental, by decreasing air and noise pollution and the use of fossil fuels^{16,17}; enhancement of environmental awareness¹⁸; promotion of community cohesion and a sense of neighbourhood^{17,18}; and providing protection against neighbourhood crime¹⁷⁻¹⁹.

Table 2 provides an overview of the Australian research from both the health and transport sectors in relation to active transport participation levels. Table 3 presents the current evidence of the specific determinants for active transport. Data on the frequency of active transport have not been collected in a systematic manner by the health sector and are limited. The majority of the physical activity questionnaires have not asked specific information related to active transport. Rather, in these questionnaires, ‘walking for transport’ most often relates to a combination of walking for recreation or exercise and walking to get to or from a place. In addition, cycling is usually included in the vigorous activity category and not as a separate form of activity for transport. As a result, there are limited data on transport related to walking or cycling. In a telephone survey of 1200 adults aged 40–60 years, Bauman et al. found that 42% of respondents had undertaken walking to get to or from places in the previous two weeks.²⁰ A community survey by Corti of 1803 healthy workers in sedentary jobs and homemakers aged 18–59 years found that 83% had walked in the previous two weeks and, of these, 71% had walked for transport.²¹ Furthermore, 7% of respondents reported that the *only* physical activity they had undertaken in the previous two weeks was walking for transport and that only 14% of these transport walkers did sufficient exercise to be classified as ‘exercising as recommended’. More recently, Bull and colleagues reported the results of a statewide telephone survey of the physical activity levels of Western Australian adults. Walking for transport was the third most frequently reported activity overall (25%) and this activity was more common among people aged under 30 years and women aged over 60 years.¹¹ In contrast, cycling for transport was one of the least frequent activities (4%) and this

activity was more common in males compared with females and for males aged less than 30 years (8%).¹¹

Surveys conducted by the transport sector more often include questions related to both walking and cycling for transport. The car is the most dominant form of transport in Australia with nearly one quarter of annual travel using this mode being to and from work.²² The majority of Australians travel to work or study as a single occupant of a vehicle. The average distance travelled is less than 7km, and one-third of all car trips are estimated to be 3km or less.²² When assessed in terms of alternative forms of transport, less than 3% of Australians cycle to work and only 7% travel by bus. A recent survey of 1510 Perth residents, the Perth Travel Survey, reported similar rates, with 21% of respondents having walked and 2% having cycled to local facilities, while 4% had walked and 1% had cycled to work.^{23,24} When asked about public transport use, 8% reported using this mode to travel to work and 3% used public transport to get to local facilities. Of those who used public transport to get to work, 55% walked for 15 mins or more as part of their trip.^{23,24} Demographic factors found to influence walking included age (66% of people aged between 21 and 50 years of age do not walk for transport), income (people with a lower income were more likely to walk for transport with 42% of those with a household income of less than \$20,000 walking all or most of the time compared with 21% of those with a household income of more than \$70,000), and gender (43% of females and 38% of males walked more than half the time to local facilities).²³

The Perth Travel Survey also explored travel modes to school.^{23,24} It found that, although 60% of primary school students in Perth live less than a 20-minute walk to school, the main travel mode to school for 60% of these students is in a car while 25% walk either alone or with a friend or an adult and 10% cycle. In contrast, 68% of secondary school students live more than a 20-minute walk to school. The main mode of travel for these students is as a car passenger (38%), while 29% use public transport, 21% walk either alone or with a friend or an adult, and 8% cycle. The main barriers for not walking included: school was too far (49% primary, 71% secondary), fear of being attacked (10% primary), too young (10% primary), traffic safety (5% primary), too lazy (8% secondary), and having too much to carry (4% secondary).

The Perth Travel Survey found that 95% of respondents believed that walking (and less driving) would improve the environment and 51% of these said that this factor was an encouragement for walking.²⁴ In addition, 59% agreed that better facilities (well-lit, safe footpaths, shady trees, and interesting environments) would encourage them to walk more. When asked for reasons why people

walked to local destinations in their area, the main reason was for exercise and health.

Previous reviews of physical activity determinants and interventions have included transport within the community setting rather than as a separate setting, and the information related to active transport from a health perspective is limited. Therefore, the analysis to elucidate the determinants of physical activity are based on policies and planning strategies from non-health sectors and on qualitative research related to walking and cycling in general. As this is an emerging area, more information related to active transport is being generated. Evidence generated since February 2000 is not included in this pilot and would need to be considered in future reviews of the area.

Social and environmental determinants

Physical activity determinants discussed here have been selected on the basis of consensus in research papers and policy documents. The key social and environmental determinants for active transport, together with the supportive evidence, are outlined in Table 4. In summary, three overall areas appear to be critical:

- Social factors that are related to the creation of a milieu in which use of alternative forms of transport are seen as a normal part of life. These include supportive government policies, positive media messages and promotional campaigns, positive community attitudes toward the use of active transport, and family members, friends and peers that support the use of alternative modes.
- Urban planning issues that are related to the design of communities, including the design of streets and walking and cycling facilities, and the design of neighbourhoods that encourage homes, workplaces and facilities to be in close proximity.
- Transport issues that are related to the ease and cost of using active transport modes compared with other modes, the provision of active transport facilities that are safe and well-maintained, provision of information related to the use of active transport modes such as timetables, and aspects of the safe use of all facilities, including walking and cycling routes, and adequate lighting provision.

Table 2: Summary of Active Transport Participation Levels

Study	Design	Sample	Results
Health:			
Bauman et al. ²⁰	Telephone	1200 adults 40–60 years	<ul style="list-style-type: none"> 42% had walked to get to or from places in the previous 2 weeks
Corti ²¹	Interview	1803 healthy workers in sedentary jobs or homemakers 18–59 years	<ul style="list-style-type: none"> 83% had walked in previous 2 weeks & 71% of these had walked for transport 7% only physical activity in previous 2 weeks was walking for transport & 14% of these did sufficient exercise to be classed as ‘exercising as recommended’
Bull et al. ¹¹	Telephone	3178 Western Australian adults	<ul style="list-style-type: none"> 25% had walked for transport – more common for people under 30 years & for women over 60 years 4% had cycled for transport – more common for males than females & for males under 30 years
Transport:			
Trewin ²²	Australian Bureau of Statistics household survey	Not known	<ul style="list-style-type: none"> Less than 3% cycle to work & 7% travel by bus 1/4 of annual travel is by car to and from work & majority of travel to work or study is as single occupant Average distance travelled is less than 7km & 1/3 of all car trips are 3km or less
Seaton ^{23,24}	Unsure	1510 Perth residents	<ul style="list-style-type: none"> 21% walked, 2% cycled & 3% used public transport to local facilities 4% walked, 1% cycled & 8% used public transport to work Of those who used public transport to get to work, 55% walked 15 minutes or more as part of the trip <p><i>Demographic factors:</i></p> <ul style="list-style-type: none"> Age – 66% people aged between 21 & 50 do not walk for transport Income – 42% of people with lower income & 21% higher income walk all or most of the time Gender – 43% of females & 38% of males walked more than 1/2 the time to local facilities <p><i>Travel mode to school:</i></p> <ul style="list-style-type: none"> 60% of primary school students live less than 20-minute walk from school – 60% travel by car, 25% walk & 10% cycle to school 68% of secondary school students live more than 20-minute walk from school – 38% travel by car, 29% use public transport, 21% walk & 8% cycle to school. Main barriers – school too far, fear of attack, too young, traffic safety, too lazy, have too much to carry. <p><i>Issues related to walking:</i></p> <ul style="list-style-type: none"> 95% believed walking would improve environment & 51% of these saw this factor was encouragement for walking 59% agreed that better facilities would encourage them to walk more Main reason for walking to local destinations was for exercise & health

Table 3: Summary of Active Transport Specific Determinants

Behaviour	Determinant	Evidence
Walking for transport – those more likely to walk	<ul style="list-style-type: none"> Age: people <30 years, women >60 years Gender: females 	Bull et al. ¹¹
	<ul style="list-style-type: none"> Age: people aged between 21 & 50 years do not walk Income level: low income walk more than high 	Seaton et al. ^{23,24}
Cycling for transport – those more likely to cycle	<ul style="list-style-type: none"> Age: males <30years 	Bull et al. ¹¹
Travel to school	<ul style="list-style-type: none"> Primary age – more than 1/2 travel by car, 1/4 walk, 1/10 cycle Secondary age – 1/5 walk, less than 1/3 use public transport, less than 1 in 10 cycle 	Seaton et al. ^{23,24}

Table 4: Social and Environmental Determinants of Active Transport

Social & Environmental determinants	Evidence – interventions & their evaluation
Attitude toward the benefits of moderate-intensity physical activity.	<i>Evidence remains to be determined.</i>
Attitude of the community, media, government toward pedestrian oriented transport and urban planning approaches.	Need to conduct promotional campaigns that portray positive images of walkers and cyclists, emphasise the benefits of walking and cycling, inform the public of the issues associated with over-reliance on motorised transport and their contribution toward the creation of a sustainable society, and decrease the status of the car. ^{25,26} The Perth Travel Survey found that 95% of respondents believe that walking (and less driving) improves the environment and 51% of these said that this factor was an encouragement for walking. ²⁴ Target those trips that are made on a regular basis (work, schools) – these offer a great potential for change and allow intervention at an early age. ²⁶
Attitude of the community, media, government toward using transport facilities – bus, train, bicycle, walking. Knowledge of alternative forms of transport.	There is the need to promote alternative transport through education and promotion. ²⁷ Suggested activities that are designed to encourage walking and cycling include: sponsorship of promotions and events; encourage local activities aimed at increasing awareness of cycling and walking opportunities; sponsored awards that recognise communities, businesses and individuals that encourage safe walking and cycling; production of walking and cycling maps. ²⁷ The creation of priority walking and cycling routes for frequently used routes (e.g. home to shops, home to school) with signs with distance and time included. ²⁷ Promote specific journey types such as ‘walk to school’ or ‘safe routes to school’. The inclusion of safe walking and cycling routes, traffic calming in school vicinity, use of ‘walking bus’ or similar. ^{27,28} It was reported in the Perth Travel Survey that more than one-half of children are driven to school (52%), while only 14% use public transport, 23% walk and 9% cycle. ²⁴
Affordability of transport facilities – cost of using the facilities compared to driving (parking, fuel, registration).	Reduce the attractiveness of driving through expensive and limited car parking facilities; high petrol prices and vehicle registration fees; and imposing a congestion charge and a workplace parking levy, so more people will walk or use alternative forms of transport. ^{17,25,26,28} Incentive and reward programs to promote non-motorised commuting such as provision of bus/train passes for employees, reimbursement of trips made by cycling or walking, use of company vehicle for emergency or longer trips during the day, compensation for not using car parking spaces. ^{25,27}
Availability of appropriate facilities – those that are convenient, safe, well-maintained. Presence of appropriate facilities – timetables, bus stops (provide shelter, shade & rest), showers at destinations.	Problems with public transport include: ‘poor quality’, infrequent and unreliable service; lack of accessible, direct routes that are linked to walking routes; and over-crowding. ^{17,27} Provision of bus shelters that display accurate information about routes, schedules and fares. ²⁹ Other factors suggested to encourage walking and cycling include safe and secure bicycle parking at destinations, ³⁰ showers and changing rooms; work schedules that allow commuters to walk or ride in daylight hours; a relaxed dress code. ²⁵
Availability of safe environments that are conducive to physical activity – including urban design features, personal and traffic safety factors, destination features and aesthetically pleasing environments.	The Perth Travel Survey found that 59% of respondents agreed that they would walk more if there were better facilities including well-lit and safe footpaths, shady trees and interesting environments. ²⁴ Need to ensure that different amenities are within walking distance and introduce home delivery services. ²⁶ Improve conditions in relation to: ^{25–29} Walking conditions: design and width of footpath; maintenance level of the footpath; footpaths that have no obstructions; safe and convenient crossings; Cycling conditions: separate bicycle lanes on roads and those without lanes have slower, lighter traffic. Road safety: appropriate traffic speed; traffic calming measures; proximity of vehicles to pedestrians; provision of crossing facilities. Walking and personal security: reduce fear of crime at public transport stops through better-designed and maintained facilities; better designed lighting in both neighbourhoods and transport stops. Improve the attitudes of other road users – campaigns aimed at increasing road users’ awareness of each other. ²⁶

continues

Table 4: Social and Environmental Determinants of Active Transport (cont.)

Social & Environmental determinants	Evidence – interventions & their evaluation
Quality of the physical environment for walking and cycling – topography, climate, natural features	<i>Evidence remains to be determined.</i>
Acceptable and affordable housing that is convenient to workplaces/acceptable workplaces that are near to home	The introduction of policies that regulate land use planning and the separation of uses: has lead to an increase in distance between places where people work, shop and live. There is the need to encourage mixed-use development policies that allow for high densities, with employment and housing development combined. ²⁵ Land use and development planning: minimising the need to travel and maximising the opportunities to make journeys on foot; make travel to and between developments easy, safe and convenient. ²⁸
Co-ordination of planning and implementation of facilities and policies among agencies responsible for land use, transport planning	Integration of alternative transport issues into all transport, road safety, environment, land use planning, and health policies through: Professional training and promotion – placing a high priority on walking and cycling when consulting and advising others, the inclusion of these issues in all training programs. Partnerships – the integration of planning and provision needs to take place at a national and local level between a range of groups including government departments; health, education, and environment organisations; business and interest groups; and users. ^{28,31}

Summary of determinants of active transport

The determinants of physical activity in this section were based on the type and level of the causal link between physical activity and health. To assist in the identification of determinants in the Australian context, information from the expert presentations and the participants at the first workshop were considered (see Table 14, Appendix 6). Those issues that were raised as a result of this discussion that were not identified in the literature review included:

- demographics – issues additional to gender and age such as socio-economic status, employment status and marital status;
- attitudes – societal attitudes toward progress, comfort when using various forms of transport;
- knowledge – local knowledge of what is available and what is needed;
- environment – issues related to pollution;
- skills – self-efficacy; and
- policy environment – putting physical activity on the transport policy agenda.

These determinants were added to the list already identified by the review of literature.

A summary of all the determinants identified is provided in Table 5. The specific proximate determinant of physical activity is the regular participation in active transport, while the contributory determinants are those related to demographic characteristics; perceptions of the benefits to health that active transport can convey and what types and levels of activity benefit health; both knowledge of and personal skills in accessing facilities; and the perception of personal competence in undertaking active transport behaviour. The social and

environmental determinants are the broader factors that affect behaviour. Several social determinants were identified including the attitude of the community, government and media toward the use of alternative modes as a legitimate form of travel behaviour and their attitude toward moderate-intensity activity as beneficial for health. The environmental determinants were those that were associated with structural changes, such as the presence of active transport infrastructure that is safe, affordable, appropriate and convenient; and the use of urban design features that create neighbourhoods conducive for active transport – for instance by creating mixed zoning where services or destinations (e.g. shops, schools, public transport etc.) are within walking or cycling distance, and by designing environments that are safe for people to travel in. These determinants were used to develop the portfolio management objectives in Step 2.

Assess the possible returns from investing

The direct health care costs that are attributable to physical inactivity in Australia have been estimated at approximately \$377 million annually. If indirect costs are added, including costs associated with time off work and social costs of inactivity, this figure would more than double.⁴ In addition, it is estimated that physical inactivity contributed to more than 8,000 deaths in Australia each year⁴ and it is estimated that gross savings of up to eight million dollars in health care costs might be achieved for every one per cent gain in the proportion of the population who were sufficiently active.⁴ The recent Australian Institute of Health and Welfare burden of disease report identified physical inactivity as the second-ranked hazard for the general population behind

Table 5: Summary of Determinants Identified in Literature Review and Workshop 1

Determinant Type	Determinant
Specific proximate	Regular physical activity for transport
Specific contributory	Demographic characteristics Perceptions of personal competence in performing behaviour Perceptions of benefits of physical activity for transport Personal skills in accessing facilities Knowledge of the levels and types of physical activity for health benefits Knowledge of accessible facilities – transport stops, shower facilities Level of self-efficacy to improve physical activity
Social & environmental	Availability of transport infrastructure – safe, convenient Attitudes toward using transport facilities – bus, train, train, cycling – by community, government, media Affordability of facilities – cost of using public transport compared to driving (parking costs, fuel) Quality of facilities – timetables, bus stops (rest, shelter), showers Attitudes of community and media toward moderate-intensity physical activity as beneficial Availability of neighbourhoods that are conducive for physical activity for transport – urban design, safety factors (traffic, personal), destinations, aesthetics, climate Acceptable & affordable housing near work/acceptable workplaces near home

tobacco, although it is the first-ranked hazard for women, and it was estimated to be responsible for approximately eight per cent of the total burden of disease in Australia.³²

Given the demonstrated health benefits from as little as 30 minutes per day of moderate levels of physical activity (that can be accumulated in 10 minute bouts) and the time that Australians spend in transit, increases in active transport are likely to have significant direct health benefits. Indirect health benefits may also accrue from reduced environmental pollution.

Participants in the pilot project identified the need for research data on the potential economic impact of investment in this area.

Engage stakeholders and put the problem into context

Portfolio development requires that stakeholders and the roles that they may play in any intervention be identified. The outcomes of the stakeholder analysis are summarised in Appendix 7. Besides the health sector, the major stakeholder sectors were transport, urban design, local government and environment.

The Framework process (Figure 1) requires the engagement of stakeholders in each step. In this active transport pilot, a wide range of stakeholders from each of the major sectors was consulted before and during the first workshop to help identify determinants and interventions. A smaller group of stakeholders, mainly from the health and transport sectors, was involved in the criteria-setting and decision-making stages of the portfolio development. This group included representatives from SIGPAH, state and federal transport departments, and environmental health.

There was unanimous support from participants in the first workshop for defining best practice in increasing active transport and for an inter-sectoral, multi-level approach to planning and implementing interventions. There was also agreement that the portfolio should contain a mix of short-term (achievable within two years), medium-term (achievable within the next five years) and long-term (achievable in longer than five years) interventions. Strong arguments were put for not imposing budgetary constraints on portfolio planning.

There were differing views, ranging from broad to specific, on the overall goal of the portfolio. The big-picture goal that received general support was to create sustainable environments that encourage walking, cycling and use of public transport. A more specific goal was to increase the proportion of short trips that are walking or cycling trips. The decision-making group settled on the following overall goals/objectives for the portfolio:

- to increase the proportion of people travelling by foot, bicycle, non-motorised or public transport for a sustainable environment and better health; and
- to increase the number of trips by foot, bicycle, non-motorised or public transport for a sustainable environment and better health.

Define custodianship for the portfolio

In the planning process, a custodian is a group with the responsibility to develop, specify, document and evaluate efforts to address a specific health issue at either the national, state or local level. The range of stakeholders and their type of involvement in increasing active transport are identified in Appendix 7.

There are multiple agencies that will benefit from the implementation of the interventions and can be seen as key stakeholders. The health sector is a stakeholder since the promotion of active transport is an important strategy to increase the level of physical activity in the community, as well as being an important determinant of a number of major diseases. Agencies with an interest in increasing physical activity, such as National and State Health departments as representatives of SIGPAH, are the logical key custodians. Other special interest groups, such as National Heart Foundation, Diabetes Australia, Cancer Councils and Foundations, and Health Promotion Foundations, would make key contributions to the planning and implementation of the portfolio.

Several other sectors are vitally important for the development and implementation of interventions within the portfolio. These include transport, urban planning, environment, local government, and special user groups such as the Bike Council of Australia and the Pedestrian Council of Australia. The regulations, policies and practices of these sectors directly influence active transport participation in various ways, including facility provision, zoning regulations, and the design and placement of major roads.

It was agreed at the first workshop, and confirmed at the second, that the focus of the portfolio would be on multi-level, inter-sectoral interventions. The health sector, specifically SIGPAH, should act as an advocate for the portfolio but not necessarily be the implementer of the interventions. SIGPAH has a mandate to promote physical activity to improve health and also has an established infrastructure for collaboration between national, state and local levels. The work of the other sectors is less co-ordinated and not specifically focused on active transport. It will be important to establish mechanisms to coordinate the various sectors and to work across the various sectors to implement the portfolio.

Given the three-tiered nature of government in Australia and the implications for service delivery in government,

non-government and private sectors, a multi-level approach to custodianship within all the sectors is most likely to function effectively. There is a need to ensure that there are integrated national, state- and local-level approaches to implementing the portfolio and that the desired outcomes, key stakeholders, key strategies, and roles and responsibilities are identified at each level.

STEP 2: ASSESS THE RISKS AND BENEFITS TO IDENTIFY PORTFOLIO MANAGEMENT OBJECTIVES

Summary

Portfolio management objectives for each of the determinants were identified in Step 2, although these were not quantified due to the uncertainty about strategic details such as resources and time frames. The challenge in this step was to prioritise and simplify the portfolio management objectives initially identified. This was made easier through defining the overall goals for the portfolio. In this portfolio, the goal was to increase both the proportion of people travelling and the number of trips taken by foot, bicycle, and other non-motorised or public transport. No time frame or level of increase was attached to this goal. The portfolio management objectives (Table 6) addressed the barriers to achieving this goal.

Assess the risks and benefits posed by determinants

To make an effective decision on whether a health determinant should be acted upon, the potential harm or benefit posed and how likely the event is to occur need to be considered. Specific considerations include:

- the likelihood of the health risk or benefit;
- which individuals or groups are most at risk or will derive the most benefit;
- the severity of the anticipated adverse impacts or the size of the expected benefit;
- the potential to prevent the effects or to succeed in providing the benefits;
- the nature and strength of evidence which supports the conclusion about the nature and magnitude of the risk or benefit;
- the range of informed views and confidence about this;
- other sources causing the same type of risk;
- the distribution of the risk or potential benefit in relation to other risks and benefits in the population; and
- impacts besides those on health, such as social or cultural consequences.

There is international evidence that active transport is an effective and feasible means of providing health benefits, provided the duration and frequency of these activities are maintained (this has been termed Health Enhancing Physical Activity (HEPA)).³³ HEPA levels are suggested to be activity of moderate intensity, accumulating to at least 30 minutes per day and undertaken at least five days per week.^{33,34} To effectively contribute to the HEPA dose it has been estimated that a person needs to walk at five or six kilometres per hour and cycle at about 16 kilometres per hour.³³

The risks of adverse effects of increasing active transport appear to be minimal. Such effects might include an increase in the number of injuries related to walking and cycling caused by accidents in hazardous situations or by overuse.

There is the possibility that increasing active transport will have technological, economic, social and cultural impacts. Some of the issues may include an increased demand for public transport facilities; improvements to facilities for walking, cycling and public transport such as the provision of adequate lighting, showering and changing facilities, and flexible working hours; a move in the focus and level of funding spent in the transport area; and a move toward an active transport culture rather than a car culture for society.

Develop portfolio management objectives

Portfolio management objectives were defined for each of the determinants (Table 6). These were neither quantified nor prioritised, but the direction of desired change (i.e. increase or decrease) was specified. Determinants are grouped in the table to reflect domains for intervention, e.g. demographic characteristics, attitudes, knowledge, skills, physical environment and policy environment.

Table 6: Determinants and Portfolio Management Objectives

Determinant	Portfolio Management Objectives
Demographic	
Age	Establish evidence base for policy making through analysis of existing data sets and pilot projects
Gender	Establish evidence base for policy making through analysis of existing data sets and pilot projects
Socio-economic status	Establish evidence base for policy making through analysis of existing data sets and pilot projects
Work status	Establish evidence base for policy making through analysis of existing data sets and pilot projects
Marital status	Establish evidence base for policy making through analysis of existing data sets and pilot projects
Attitude toward	
Use of alternative forms of transport	Increase the support for positive attitudes toward active transport modes
Other road/path users	Increase the awareness of existing laws & regulations related to the use of facilities by pedestrians & cyclists Increase the promotion of the safe use of shared facilities to reduce conflicts
Knowledge/awareness of	
Health benefits of walking/cycling for transport	Increase the proportion of the population with knowledge of active transport as form of health-enhancing physical activity
Links between vehicle use & environment issues	Increase awareness of the link between active transport and health – including effects of pollution, community cohesion, crime reduction
Walking/cycling/public transport facilities available	Increase the proportion of the population with knowledge of the facilities that are available Increase the promotion of existing laws & regulations related to the use of facilities by pedestrians & cyclists Increase the promotion of the safe use of shared facilities to reduce conflicts
Skills in	
Use of facilities	Increase the proportion of the population who are confident in the use of active transport facilities Increase the proportion of the population who use active transport facilities
Planning travel behaviour	Increase the promotion of active transport modes as forms of transport Increase awareness of the active transport modes that are available within the community Increase the proportion of the population who are confident in the use of active transport modes Increase the proportion of the population who use active transport facilities
Environment/facilities	
Availability of appropriate walking/cycling/public transport facilities that are safe, well maintained, easy to use	Develop and promote standards for all active transport infrastructure Increase the promotion of the available active transport facilities Increase awareness of the active transport facilities available within the community Increase the proportion of the population who are confident in the use of active transport facilities Increase the proportion of the population who use active transport facilities
Policy environment	
Policies that encourage active transport across sectors – health, transport, urban planning, local government, environment	Develop and promote activities that will encourage and nurture collaborative efforts across sectors and jurisdictions
National strategies for walking & cycling	Develop and promote national strategies for all active transport modes
Funding policies	Develop and promote funding policies that encourage active transport modes to be provided with equitable funding
Urban design policies	Develop and promote standards for urban design and planning that enhances active transport options
Status of walking/cycling as alternative forms of transport	Increase the promotion of active transport modes as forms of transport

STEP 3: APPRAISE INTERVENTION OPTIONS

Summary

The identification of the range of potential interventions relied on expert opinion and evidence from 'grey literature'. To ensure a systematic and comprehensive approach to identification, potential interventions were considered for a range of specific settings and were grouped as policy, program or infrastructure support interventions.

Identify options

Four main sources were used to identify intervention options. These were:

- a literature review of published reports of interventions and their evaluation;
- policy and review documents;
- informal reports and presentations from key informants in the field; and
- a brainstorming exercise with the decision-making group in workshop 2.

The interventions that have been evaluated are discussed in the literature review and are listed in Table 7 against the relevant risk management objective. There were significantly more policy documents than evaluated reports of interventions. Detailed information of the interventions that are recommended in policy documents are summarised in Table 10. Detailed descriptions of the interventions are given in Appendix 5.

The brainstorming exercise with the decision-making group was held after participants had been informed by the literature and policy document reviews, presentations from Australian and international experts and general discussion amongst the group about the effectiveness of interventions in active transport and other domains, such as smoking and nutrition.

Table 7: Potential Interventions for Active Transport

Determinants	Risk management objective	Interventions*	Evidence†
Demographic 1. Age 2. Gender 3. Socio-economic status 4. Work status 5. Marital status	Increase the proportion of people who regularly participate in active transport		Based on current research, the level of active transport is low and the data available for individual groups are limited. Therefore, it will be important to determine whether to target the whole population or segments of the population.
Attitude 1. Toward the use of alternative forms of transport 2. Toward the use of motor vehicles – comfort, convenience, time 3. Of other road/path users – such as cars toward cyclists & cyclists toward pedestrians	1. Promote positive attitudes toward alternative modes of transport such as walking & cycling 2. Promote walking & cycling as convenient, efficient & environmentally friendly transport modes 3. Promote existing laws & regulations related to the use of facilities by pedestrians & cyclists	1a. Promote increased awareness of alternative forms of transport using a variety of communication avenues – publications, community newspapers, flyers, posters, school newsletters 1b. Promote the concepts of active transport in school curriculum through poster contests, walk-to-school &/or bike-to-school days 2a. Promote the link between vehicle use & urban transport problems using a communication strategy 2b. Incorporate active transport as a theme in the school curriculum 3a. Provide information related to the laws & regulations related to the use of facilities by pedestrians & cyclists – communication strategy, in workplaces, schools and the community 3b. Provide information related to the shared use of the road and shared paths – communication strategy, in workplaces, schools and the community	1a. Information kits & tailored feedback led to an increase in awareness of motor vehicle use & the effects on the environment, and a reduction in car use ³⁵ 1b. No evidence reported for active transport 2a. Increased awareness of motor vehicle use & environmental consequences – a decrease in car use ³⁵ 2b. No evidence reported for active transport 3a. No evidence reported for active transport 3b. No evidence reported for active transport
Knowledge/awareness 1. Of the health benefits of walking & cycling as alternative forms of transport	1. Promote walking & cycling as forms of physical activity to enhance health	1a. Promote increased knowledge & awareness of the health benefits of active transport using a variety of communication avenues – publications, community newspapers & radio, flyers, posters, school newsletters, media, workplace 1b. Within the school curriculum, promote the link between active transport & health through poster contests, walk-to-school &/or bike-to-school days	1a. Promoting the health benefits of cycling through publicity and information materials led to heightened concern or awareness about the effects on personal health ³⁶ 1b. No evidence reported for active transport

* The interventions outlined in this table form part of a comprehensive approach rather than implementation as separate strategies.

† There is limited evidence for some of the suggested interventions.

continues

Table 7: Potential Interventions for Active Transport (cont.)

Determinants	Risk management objective	Interventions	Evidence
Knowledge/awareness (cont.)			
2. Of the link between vehicle use & environmental issues	2. Increase awareness of how individuals can contribute toward the creation of a sustainable society through alternative modes of transport	2a. Promote the link between vehicle use & urban transport problems through the use of a communication strategy 2b. Incorporate active transport as a theme in the school curriculum	2a. Information kits & tailored feedback led to an increase in awareness of motor vehicle use & the effects on the environment, and a reduction in car use ³⁵ 2b. No evidence reported for active transport
3. Of the walking, cycling, public transport (PT) facilities that are available	3. Promote the walking, cycling & PT facilities that are present	3. Provide easy-to-understand information in various forms such as bus timetables and local access maps for walking, cycling, PT routes, facilities, and local destinations – communication strategy, in workplaces, schools and the community.	3. The distribution of bus timetables, & local access maps of walking, cycling & PT routes, facilities & local destinations led to an increase in the number of bus & walking trips ³⁷
Skills			
1. In the use of facilities	1. Promote the use of walking, cycling & public transport facilities	1. Provide opportunities to practice new skills and behaviours in workplaces, schools, the community: Conduct demonstrations in use of public transport Provide opportunities to try behaviour – walk-to-work, walk-to-school, bike-to-work, and bike-to-school promotional days Encourage role models to demonstrate behaviour	1. Information & training in the use of local facilities led to an increase in number of bus & walking trips ³⁷ Environmental prompts to increase use of cycle path showed an impact only when other interventions were present (contest, lottery) ³⁸
2. In planning travel behaviour	2. Promote personal skills that foster an increase in physical activity	2a. Encourage workplaces or schools as a community to set a work- or school-wide goal and individual goals for a specified time 2b. Encourage role models to demonstrate behaviour	2a. Encouragement with setting goals for travel behaviour, as part of a larger program – reduced car use among the households ³⁵ 2b. No evidence reported for active transport
Environment/facilities			
1. Availability of appropriate walking, cycling & PT facilities that are safe, well maintained, easy to use	1. Establish and maintain an infrastructure that is suitable for walking, cycling & PT. Ensure that there are appropriate footpaths & cycle facilities Provide bike parking facilities, shower & change facilities Decrease the number of car-parking facilities Create walking & cycling friendly urban design – mixed use, high density, inter-connected, various destinations, areas that are safe & pleasant Provide & maintain adequate lighting in public areas	1. Establish and maintain a physical environment that is supportive of active transport: 1a. Provision of showers, change rooms, safe & secure bike-parking facilities in both schools & workplaces 1b. Provision of information and walking and cycling maps to commuting routes with measured distances. Ensure that problematic traffic areas are noted on the maps. Ensure these are available for all areas in the community including routes to schools, workplaces and other important destinations 1c. Ensure that schools/workplaces and nearby residential areas are connected by walking and cycling paths	1a. Provision of showers & change facilities, bike parking facilities in workplaces as part of a comprehensive strategy led to an increase in the level of commuting cycling ^{36,39} 1b. Local access maps of walking, cycling and public transport routes, facilities & local destinations included as part of project – walking & public transport trips increased ³⁷ 1c. No evidence reported for active transport

Table 7: Potential Interventions for Active Transport (cont.)

Determinants	Risk management objective	Interventions	Evidence
Policy environment			
1. Policies that encourage the use of alternative forms of transport across a range of sectors – including health, transport, urban planning, local government, environment	1. Establish support for the promotion and implementation of alternative forms of transport at all levels – local, state & national	1a. Establish coalitions across range of sectors interested in the area – health, transport, environment, urban design, local government agencies – through such activities as joint projects, conferences, task force 1b. Link with professional organisations – such as engineers, planners, local government – to place physical activity on the agenda & to put alternative transport policies into practice	1a. No evidence reported for active transport 1b. No evidence reported for active transport
2. National strategies for walking & cycling	2. Develop partnerships with professionals in a range of sectors that influence the use of alternative forms of transport	2. Develop a consensus statement among partners that can be used to promote policies, regulations & laws that are supportive of alternative forms of transport throughout the community	2. No evidence reported for active transport
3. Funding policies	3. Develop national strategies for alternative forms of transport, including walking & cycling Encourage greater allocation of funding for walking & cycling facilities Introduce 'green tax' to subsidise interventions & change strategies	3a. Advocate for a proportion of transport/road funding to be set aside for the construction of bike paths and footpaths, & to promote walking & cycling 3b. Use 'green tax' revenue to promote & support environmental changes for walking, cycling & other forms of alternative transport	3a. No evidence reported for active transport 3b. No evidence reported for active transport
4. Urban design policies	4. Encourage the development & implementation of urban design policies that will encourage & support the use of alternative forms of transport	4. Advocate & support urban design policies that will provide a physical environment conducive to alternative forms of transport. This includes: traffic calming measures, reduced number of vehicle parking spaces, presence of adequate street lighting, inclusion of footpaths & cycle paths	4. No evidence reported for active transport
5. The status of walking & cycling as alternate forms of transport	5. Elevate the status of walking & cycling in the policy environment	5. Raise awareness of walking & cycling as alternative forms of transport through consensus conferences and workshops. Target key policy makers to ensure that walking & cycling are included in all policies	5. No evidence reported for active transport

Appraise intervention options

It was agreed that a settings approach was useful for progressing the brainstorming task. The settings approach acknowledges the practicalities of targeting and implementing interventions, which are often setting-based. Nine settings were identified and all the potential interventions were assigned to a setting. When an intervention crossed over into more than one setting, it was included in all applicable settings. The settings considered were:

- schools – including students, teachers, support staff, parents and the community;
- workplace – including staff and the family members of the staff;
- shopping – including shoppers, staff and the family members of the staff;
- universities – including urban design students and lecturers, transport planning students and lecturers, and other students and staff;
- local government – including service providers, community and staff;
- government – including service providers, community and staff;
- transport – including service providers, community and staff; and
- media – including community, journalists, and presenters.

As a prompt to ensure that a comprehensive mix of intervention types was considered, potential policy, program and infrastructure support interventions were considered within each defined setting. There were no constraints applied to the potential interventions. The results of the brainstorming exercise are shown in Table 8.

Table 8: Range of Possible Interventions for Active Transport by Setting and Intervention Type

Setting	Policy/legislation*	Program †	Infrastructure‡
Schools	<ul style="list-style-type: none"> Health impact assessments Policy links to Health Promoting Schools and Active Australia Schools network Parking and drop-off policies Planning for accessibility School policy to reduce need to carry heavy items 	<ul style="list-style-type: none"> Walking school bus Walk safely to school day Safe routes to school promotion Bike Ed – skills training TravelSmart Schools – training resources that are required Active transport access guides Advocacy program Green transport plan 	<ul style="list-style-type: none"> Safe routes to school Provision of bike racks, helmet storage Secure storage facilities for skateboards, scooters Teacher & parent training Provision of adequate public transport facilities to schools Data collection
Workplace	<ul style="list-style-type: none"> Tax policy review – e.g. company car & FBT Planning guidelines for facilities, parking policies Venue choice guideline policies – active transport options available Provision of information regarding active transport options Relaxed dress codes 	<ul style="list-style-type: none"> Incentives for active transport use Company bicycle & funded public transport tickets Education – awareness raising Active transport access guides Walk-to-work & ride-to-work competitions Awards for active transport workplaces 	<ul style="list-style-type: none"> Shower & change facilities Provision of adequate bike parking facilities Public transport facilities that are safe, adequate Baseline data collection Monitoring data
Media	<ul style="list-style-type: none"> Favourable policy for media Frame messages Advocacy 	<ul style="list-style-type: none"> Awareness raising programs 	<ul style="list-style-type: none"> Training of spokespeople
Shopping	<ul style="list-style-type: none"> Development controls Planning policies on the placement of shops Tax on parking facilities Health impact statement 	<ul style="list-style-type: none"> Awareness raising programs Active transport access guides Tailored active transport information Home delivery available only for personal shoppers Accreditation for shops based on transport accessibility rating 	<ul style="list-style-type: none"> Pedestrian friendly environment Provision of adequate bike parking facilities Public transport facilities that are safe, adequate
Transport	<ul style="list-style-type: none"> Parking fees Fuel prices Subsidised public transport 	<ul style="list-style-type: none"> Data on impacts of fees/taxes/subsidised public transport 	

* Policy/legislation includes regulation and enforcement, public policy, standards.

† Programs includes social marketing, community development, identification and surveillance of determinants.

‡ Infrastructure includes research, management, information systems.

continues

Table 8: Range of Possible Interventions for Active Transport by Setting and Intervention Type

Setting	Policy/legislation	Program	Infrastructure
Health Services	<ul style="list-style-type: none"> • Planning policies on the placement of health services • Health system policy • Tax policy review – e.g. company car & FBT • Planning guidelines for facilities, parking policies • Venue choice guideline policies – active transport options available • Provision of information regarding active transport options • Relaxed dress codes 	<ul style="list-style-type: none"> • Active transport access guides • Education – awareness raising • Advocacy • Advice – use of active prescriptions & other opportunities • Staff training of advice regarding physical activity options – active transport as an activity 	<ul style="list-style-type: none"> • Provision of adequate bike parking facilities • Public transport facilities that are safe, adequate • Data collection & analysis – trip generation
Government – state & local	<ul style="list-style-type: none"> • Charter on transport & health • Quantifiable targets for walking & cycling • Links with policies of other non-health sectors • Planning guidelines – permeability • National Transport secretariat • State Government leadership in program delivery 	<ul style="list-style-type: none"> • Active Transport conference • Whole-of-government programs – e.g. national greenhouse program 	<ul style="list-style-type: none"> • Data monitoring & surveillance of active transport behaviour & interventions • Linkage of research & data sets from different sectors • Partnership group – national, high level e.g. AHMAC & equivalents • Cost benefit analysis • Outcomes – for advocacy with other groups
Local Government	<ul style="list-style-type: none"> • Health impact review to include active transport • Local government strategic plan at policy level • Disability plans – pedestrian access mobility plans • Parking policies • Dog control policies • Planning amendment reviews • Event transport policy – ensure active transport available 	<ul style="list-style-type: none"> • Education/awareness of councillors & staff • Local Government guidelines – Active Australia demonstration projects • Park and ride & park and walk • Active Australia local government network • Maps & guides • Local government awards • Guides for health promoters to access & work with local government • Active Australia Day • Twinning of cities – e.g. between Australian & US cities 	<ul style="list-style-type: none"> • Bikeways & walking paths • Adequate lighting • Community bus • Bus stops & shelters that are safe & appropriate • Pedestrian and bike-friendly traffic lights • Pedestrian & bike-friendly environments • TravelSmart officer program • Bike & pedestrian officer program • Road safety officer training program • SEPA – cross government approach • Policing at community level • Geographical Information System research
Universities	<ul style="list-style-type: none"> • Training of professionals in a range of sectors that influence active transport use 		
Individuals			<ul style="list-style-type: none"> • Data on barriers, behaviours for specific groups – e.g. Aboriginal, elderly, urban/rural/remote

STEP 4: DECIDE THE INTERVENTION PORTFOLIO

Summary

Assessment of the intervention options for inclusion in the portfolio required the selection, weighting and application of a set of selection criteria. The decision-making progressed through several stages and the criteria were identified and modified at each stage.

Establish criteria for selecting interventions

Assessment of the intervention options for inclusion in the portfolio required the selection, weighting and application of a set of selection criteria using the methods described in the NPHP publication *Deciding and Specifying an Intervention Portfolio*.² The specific method applied in this pilot is summarised below and described in more detail in Appendix 8 (and Appendix 9, which provides more detail on workshop 2).

Participants in the first workshop identified a large number²⁸ and broad range of selection criteria. A list of definitions and scoring instructions were circulated to participants after the workshop (see Appendix 10). Fifty per cent of participants returned usable scoring sheets. The process consultant collated the results. The top ten criteria using this process were:

- effectiveness;
- social acceptability;
- evidence-based;
- sustainability;
- political acceptability;
- utilisation;
- synergistic;
- cost;
- measurable; and
- partnerships.

During the second workshop, the decision-making group undertook a further scoring exercise with the top ten criteria and combined some that were similar (see Appendix 10). The final six criteria were:

- (the potential for) effectiveness;
- evidence-based, measurable;
- capacity building, partnerships;
- sustainability;
- acceptability; and
- synergistic, utilises infrastructure.

These criteria were then weighted by the decision-making group to reflect their relative importance in the selection of interventions. The weighting process required each member of the group to assign ten points across the

criteria to reflect their relative importance. Points were tallied across the group for each criterion. The criterion with the lowest score was assigned the weight of 1 and the others were weighted as multiples of the lowest score, e.g. score 1 = 17, weight = 1; score 2 = 27.5, weight = $27.5 \div 17 = 1.62$.

Decide portfolio

The final criteria were tested on some sample interventions to allow the decision-making group to practise the process. Application of the criteria by the decision-making group to each of the potential interventions was undertaken by email following workshop 2. Detailed instructions were provided to members of the group who responded by mail or email (see Appendix 11). The return rate was 10 out of the 13 that were sent. Not all settings were scored by all members, so appropriate adjustments were made to the final scores.

The consultants tallied the scores and applied the weightings for each criterion. The final scores for each intervention are shown in Appendix 4 where the interventions are listed in order of the scores within each setting and the type of intervention (policy, program, and infrastructure). The consultants used the five top-scoring interventions within each setting to define the final portfolio (Table 9).

There was little difference in scores for the top five interventions across settings, confirming the importance of a comprehensive approach to portfolio planning. There was a greater variation in scores within some settings, which provides useful guidance for selecting interventions to practitioners working within a defined setting.

Interventions with high scores across many sectors included provision of safe, reliable and adequate public transport; production and promotion of active transport access guides for locations and institutions; provision of facilities such as showers, safe storage and bike paths to facilitate active transport; institutional and government policies and planning to facilitate active transport; and collection of baseline and monitoring data.

The portfolio defined in this pilot using the Planning Framework approach represents the mix of interventions considered by experts to have the most potential to be effective. Lack of empirical evidence of effectiveness of many interventions in the active transport domain restricted the identification of a comprehensive evidence-based mix. As this is an evolving area, active transport interventions are presently under evaluation and this evidence needs to be considered when assessing the effectiveness of the interventions reviewed in this pilot.

Table 9: Active Transport Portfolio of Interventions*

Setting	Intervention [†]	Score [‡]
Shopping	Pedestrian friendly environments – safe, pleasant, direct routes to shopping	31.99
	Public transport facilities that are safe, reliable and adequate	29.83
	Data collection of all transport modes – baseline and monitoring data	29.02
	Planning guidelines for facility placement, parking policies for all retail development	28.27
	Tailored active transport information to specific shopping destinations	28.26
Government	Shower and change facilities provided in government facilities and workplaces	31.92
	Linking research and existing data sets from the various sectors	31.91
	Implement programs from a whole-of-government approach – include all sectors with an interest	31.63
	Data collection of all transport modes – baseline and monitoring data	30.75
	Development of urban planning guidelines – address issues such as permeability, safety, land use	30.60
School	TravelSmart Schools program[†]	31.81
	Provision of safe, reliable and adequate public transport facilities to and from school	30.57
	School policies that link active transport to wider physical activity goals and policies	29.67
	Provision of safe routes to school	29.66
	Health impact assessment of school location in relation to other facilities – e.g. placement of major roads in relation to schools	29.15
Local Government	Provision of paths – including shared, cycle, walking	31.20
	Incorporate a cross government approach (SEPA)[†]	30.47
	Active transport included in all strategic plans at the policy level	30.34
	Development and implementation of guidelines for pedestrian and bike-friendly environments applicable to individual communities	30.26
	Disability access – pedestrian access mobility plans for all areas	29.78
Health Services	Education – awareness raising of active transport as physical activity	30.89
	Public transport facilities that are safe, adequate and reliable	30.06
	Data collection of all transport modes – baseline and monitoring data	28.98
	Advice – use of active prescriptions and other opportunities to promote active transport	27.72
	Advocacy for active transport modes	27.01
Transport	Data collection of all transport modes – baseline, monitoring	30.47
	Public transport facilities that are safe, reliable and adequate	29.78
	Active transport access guides	26.36
	Data on the impact on use of fees/taxes/subsidised public transport	26.16
	Planning guidelines for facility placement, parking policies	25.45
University	Training of professionals in sectors that influence active transport use – e.g. urban design, transport planning, health professionals	29.94
	Public transport facilities that are safe, reliable and adequate	29.27
	Data collection of all transport modes – baseline and monitoring data	29.09
	Provision of information regarding active transport options to and from universities	28.27
	Provision of adequate bike parking facilities	27.00
Workplace	Safe, reliable and adequate public transport facilities	28.45
	Data collection of all transport modes – baseline and monitoring data	27.14
	Provision of adequate bike parking facilities	25.26
	Shower and change facilities provided	24.92
	Active transport access guides for workplaces	24.82
Media [#]	Data collection of all transport modes – baseline and monitoring data	27.02
	Advocacy for active transport modes	26.11
	Frame messages to suit target audience	23.64

* See Appendix 4, Table 13 for grouping of interventions as either policy, program or infrastructure.

[†] A more detailed description of the interventions is provided in Appendix 5.

[‡] Average scores as determined by the decision-making group following workshop 2.

[#] Only the top 3 interventions are included for this setting as only 4 interventions were proposed in the scoring process.

Bolded = interventions that scored 30 or more.

STEP 5: IMPLEMENT THE PORTFOLIO

The implementation of the interventions as outlined in Step 5 of the Framework was not required as part of the pilot, but the decision-making group did consider the steps that would be required for the next phase.

The implementation of the portfolio interventions requires the development of both strategy and action plans in different contexts (national, state and local level) and sectors. The progression from defining to implementing a portfolio needs to include the consideration of interactions and time sequencing of each portfolio intervention as well as the infrastructure and coordination that is required. The roles and relationships between the different stakeholders at the national, state and local level need to be considered for each portfolio intervention.

The decision-making group identified that it was essential to specify realistic time frames for the goals. Three levels were discussed and defined:

1. short-term interventions – those that are achievable within 2 years, such as coalition development, and placing physical activity on the agenda of policy decision-makers;
2. medium-term interventions – those that are achievable within 5 years, such as behavioural change research and improving walking and cycling facilities; and
3. long-term interventions – those that are achievable in more than 5 years, such as changes in land use patterns. In addition, there may be short or medium term actions that need to be taken to move toward the long-term interventions.

The pilot highlighted the need and interest of various sectors to further explore opportunities for information sharing, collaboration and joint initiatives between sectors and jurisdictions. Participants stressed the importance of maintaining the momentum created by the portfolio planning process. Suggestions for the short term included an inter-sectoral workshop as well as an inter-sectoral working group.

The need was recognised for strong advocacy in the sphere of active transport. Although there are health and environmental imperatives for promoting active transport, there may be some conflicts in terms of current transport policy, attitudes and behaviours.

STEP 6: REVIEW THE PORTFOLIO

Step 6 of the Framework requires the evaluation of the implementation of the portfolio. This was not undertaken as part of the pilot, although there are provisions in the infrastructure components of the portfolio to evaluate the progress toward the objectives of the portfolio. There was an expectation by the decision-making group that research and evaluation would be an integral part of the implementation of individual interventions. The pilot highlighted the need to define and monitor indicator data related to all the decision-making criteria as well as the need to work with other sectors that may be collecting relevant data and implementing related interventions.

PART 2: LITERATURE REVIEW

SUMMARY

The range of determinants was established from those defined in the published literature, supplemented by the experience of stakeholders and the 'grey literature'. Overall, the review of the published sources found that strategies need to be comprehensive and long-term, and they need to focus on individual, policy and both the social and physical environment to obtain lasting behavioural change.

PUBLISHED LITERATURE

The aim of most of the interventions reviewed was to increase the use of environmentally friendly modes of transport rather than to increase the level of active transport. A summary of the interventions that have been evaluated is provided in Table 10. The main components of these interventions included:

- providing information about and opportunities to use alternative forms of transport;
- providing workplace facilities (such as showers, bicycle parking);
- promotional events (such as ride-to-work events);
- encouraging policy changes within workplaces (such as the use of 'pool' bicycles, interest-free loans to purchase bicycles); and
- providing information related to alternative modes of transport, health and the environment.

The two main findings from these interventions were that:

- comprehensive, long-term strategies are essential when attempting to change transport modes across all settings; and
- to achieve behaviour change there is the need to focus on policy and environmental changes in addition to individual change strategies.

The reviews also emphasised the need to focus on altering the social and physical environment to obtain lasting behavioural change.

Table 10: Active Transport Interventions: Published Literature Reviewed

Author	Country/state	Study design	Study population	Outcome measures	Intervention components	Major findings reported
TravelSmart ³⁷	Western Australia – South Perth pilot	Individualised (dialogue) marketing component. Duration of pilot – 3 years Other components that have not been evaluated include local government action plans, TravelSmart school	Residents of South Perth	Increase in frequency of trips taken by environmentally friendly modes	For respondents who requested information – provision of easy-to-understand information (bus timetable, local access map of walking, cycling & public transport routes, facilities & local destinations)	<ul style="list-style-type: none"> Travel survey pilot – after 2 years walking trips up 16%, car-as-driver trips down 10%. Electronic ticketing monitoring – overall increase of 27% in all bus boarding and transfers.
	Western Australia	Unknown (TravelSmart workplace)	Unknown	Increase in frequency of trips taken by environmentally friendly modes	Unknown	<p>12 month follow-up:</p> <ul style="list-style-type: none"> 6% reduction in ‘drive-alone’ car trips – increase in car pooling 5% increase in public transport 53% increase in bike trips Slight decline in walking trips
Baudains et al. ⁴⁰	Western Australia	TravelSmart workplace	6 workplaces – 316 participants	Increase in frequency of trips taken by environmentally friendly modes	Green transport promotion – guest speakers, posters, publications, supportive volunteer ‘environmental leader’	<ul style="list-style-type: none"> Walking trips increased by 1.4%
Commonwealth Department of Health and Aged Care ⁴¹	Australia	Pre- and post-campaign surveys	General population	National awareness campaign	Photo opportunities with celebrity athletes, promotional give-aways (caps, t-shirts), media releases, alerts, kits and interviews, community service announcements Partners include: Pedestrian Council of Australia, state Heart Foundations, Active Australia, Department of Health and Aged Care, NRMA, State & Territory health departments, roads & traffic authorities	<ul style="list-style-type: none"> Awareness of National Walk to Work day was 43% post event Knowledge of benefits remained the same Best sources of promotion were radio, television & newspapers Only 6% of respondents (Sydney only) participated in Walk to Work day

Table 10: Active Transport Interventions: Published Literature Reviewed (cont.)

Author	Country/state	Study design	Study population	Outcome measures	Intervention components	Major findings reported
Rose et al. ³⁵	Pilot – Sydney Trial – Adelaide	Travel Blending Program – 2 one-week travel diaries, tailored feedback, supporting information. Participating households are sent series of 4 kits containing information booklets & travel diaries, over a nine-week period	Pilot – 50 individuals Trial – 100 households comprising an invited random sample from 4 government departments	Reduction in vehicle use	Kit 1 – booklet outlining the link between vehicle use & urban transport problems, & why these problems will continue if action is not taken. Travel diary & rationale for completing diary Kit 2 – feedback sheets summarising the travel information & tailored travel tips. Information related to thinking about travel & Travel Blending goal setting Kit 3 – travel diary Kit 4 – summary of changes between 1st & 2nd diary. Summary of total travel time, number of trips per mode	<ul style="list-style-type: none"> Pilot – increased awareness of use of motor vehicle & associated environmental consequences. Trial – car use was reduced across all measures: number of car trips by 3 per week; kilometres by 31km per week; total hours in car by 2 hours per week.
Oja et al. ³⁹	Finland	Controlled intervention Duration – 6 months	Large industrial plant workers – located in city centre	Commuting to work by walking and cycling would be seen as acceptable, effective and feasible after 6 months	Information (bulletins, leaflets, company newsletters); physical activity diaries; lottery incentives; fitness testing; improvements to cycle parking, showering and changing clothes. Production of route safety maps indicating commuting routes & problematic traffic sites.	<ul style="list-style-type: none"> Time was insufficient – only 6 months. Impact – program was positively received and was seen as important. 7% indicated that they had increased commuting to work. Traffic safety consideration was increased – in particular among drivers.
Mayer & Geller ³⁸	US	Quasi-experimental – baseline, ‘contest’, baseline. Duration – baseline 3 weeks; intervention 3 weeks; withdrawal 3 weeks	All individuals walking or cycling on 2 bikeways that linked the university with the community – mainly university students & faculty	Frequency of bike use	Systematic application of interventions (contests, lotteries) along with environmental prompts to increase use of cycle path	<ul style="list-style-type: none"> Community-based reward program – showed a beneficial impact only when the behavioural intervention was in effect.

continues

Table 10: Active Transport Interventions: Published Literature Reviewed (cont.)

Author	Country/state	Study design	Study population	Outcome measures	Intervention components	Major findings reported
Cleary et al. ³⁶	Nottingham, UK	Funding provided from Department of Transport for 2 years to support schemes that promote & facilitate cycling for local journeys – to work, the shops, school & for social visits. Emphasis on new initiatives rather than on extending existing facilities or projects	8 large employers in Greater Nottingham area	Increase the extent to which people cycle for commuting journeys & official work trips	<p>Introduction of workplace measures to facilitate cycling. Each workplace implemented a package of incentives tailored to their individual needs and constraints.</p> <p>The variety of incentives to facilitate cycling among employees included a combination of:</p> <ul style="list-style-type: none"> • Workplace showers & changing facilities • Secure cycle parking at workplace • Cycle mileage allowances for short journeys on official business • Interest-free loans for purchase of bikes & equipment • Purchase of company ‘pool bikes’ • Publicity & information material – endorsing the personal & environmental health benefits of cycling, as well as the accessibility & appropriateness of bikes as a means of transport for local journeys • Promotional events – e.g. bikers’ breakfast, bike-to-work days 	<ul style="list-style-type: none"> • Workplace pro-cycling measures took considerably longer to introduce than originally envisaged • There were some implementation problems in some cases – e.g. conversion of car parking spaces into bike parking tended to be contentious • 42% of cycling respondents indicated that their level of commuting cycling had increased during the project (no indication of pre-program commuting). Three key reasons were: provision of workplace cycle facilities; house or job move; heightened concern or awareness about personal health • Worksite measures to encourage cycle commuting need to be complemented by a more cycle-friendly road environment

REVIEW AND POLICY DOCUMENTS

Several active transport review and policy documents were appraised as part of the pilot. These documents are summarised in Table 11 and the key information is discussed below.

Based on the review of these documents, there appear to be four key areas that are suggested to be critical in increasing the use of active transport modes in the community. These include:

1. Social factors that are related to the creation of a milieu in which the use of active transport modes is seen as normal part of life. This can include such issues as the creation of positive images of people who walk, cycle or who use other active transport modes; and the reduction in the attractiveness of using motor vehicles in terms of the costs and taxes associated with driving compared with the use of alternative modes. Also included in social factors are issues related to the effects that transport policy may have on social exclusion and inequalities in health.
2. Urban planning issues that are related to the design of communities and the design of buildings that encourage the use of active transport modes. This includes issues associated with minimising car dependency through the development of mixed use in neighbourhood areas, the promotion of medium- and high-density housing, and the clustering of public facilities (such as shops) that can provide a focus for walking.
3. Transport-related issues that are concerned with the ease of using active transport modes. This includes issues related to: the design of streets; the design of walking and cycling facilities; and safety. Also included in this area are transport facilities that are attractive, convenient and accessible, and the provision of easily understood information related to the use of active transport modes (such as timetables and access maps).
4. The need for an inter-sectoral approach to increase active transport use. This includes such issues as land use management and control in conjunction with transport practices to ensure that effective and efficient active transport policies are developed.

Table 11: Active Transport Review and Policy Documents

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
Matthew ⁵²	United Kingdom	Review – Cycling as everyday mode of transport	Not applicable	Not applicable	<ul style="list-style-type: none"> • Successful cycling planning involves action across wide range of agencies – transport, environment, leisure, health, land use planning, education, law enforcement. • Most successful cycle policies are those which are part of a broader, sustainable transport policies. • Cycle route networks – comprehensive, safe, direct, attractive. • Promotional campaigns – speed, utility & health benefits of cycling. • Reduce traffic speed – traffic calming. • Improve links between cycling & public transport.
Greenbaum ²⁸	US	Review of policies related to traffic & health	Not applicable	Not applicable	<p><i>Lessons learnt from the policies implemented in the Boston metro area:</i></p> <ul style="list-style-type: none"> • Urban health and social well-being considerations can be a significant contributor to shaping transport policy, though it is unlikely that they are sufficient in and of themselves, World oil prices, for example, would be a factor. • Transport policy cannot effectively address problems of congestion and health impacts unless accompanied by a strong and effective program of regional land use management and control. • Transport and land use policies, if focused primarily on addressing issues of congestion and health in the urban core, can inadvertently hasten the development of land use patterns that significantly worsen regional traffic congestion and health problems. • The price of transportation (e.g. fuel costs, parking etc.) can be an effective deterrent to rapidly increasing traffic and associated health effects, but that effectiveness may be due more to perceived changes in that price, rather than to the absolute level. • The personal freedom offered by the car is intensely attractive, and once land use patterns which assume the availability of that personal freedom begin to emerge, it is very difficult to gain support to alter or contain them to address issues of urban health and traffic congestion.
Moving People Transport WA ⁴³	Western Australia	Policy	Not applicable	Not applicable	<p><i>Four elements necessary to encourage public transport:</i></p> <ul style="list-style-type: none"> • Hardware – attractive & comfortable vehicles, priority bus lanes & railways, safe walkways, convenient park-and-ride facilities, easy access stations and functional shelters. • Software – reliable & customer-oriented public transport service standards, easily understood timetable information & effective awareness campaigns. • Transport & parking policies that promote an appropriate mix of private & public transport. • Land use policies that support public transport.

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
Moving People Transport WA ⁴³ (cont.)					<p><i>Measures to promote walking:</i></p> <ul style="list-style-type: none"> • Provide safe & pleasant footways. • Encourage local mixed use neighbourhood areas that focus on walking & cycling; promote medium and high density housing in & near regional & district centres & near public transport stations. • Develop town planning & design guidelines for footpaths & walking environments in new & existing neighbourhoods & business areas. • Cluster public facilities such as libraries, leisure facilities & civic buildings in regional & district centres to provide foci for walk access. • Develop a focus for the role of walk access in a balanced transport system to ensure the promotion & provision of facilities & information related to walking.
ADONIS ²⁶	European Union	Best practice catalogue – chosen because they are comfortable, stimulating, cost-effective and increase safety.	Behavioural study – 354 persons from 3 cities (Amsterdam, Barcelona & Copenhagen). Questionnaire based on Theory of Planned Behaviour (attitudes, social norms, perceived control, habit). Travel diary.	Technical & non-technical measures included.	<ul style="list-style-type: none"> • Do not implement new measures until you have considered the existing level of cycling and walking. • Walking is a relaxing mode of transport, increases sense of freedom and helps with health and fitness. • Disincentives for walking – having a lot to carry, being in a hurry, and darkness. <p><i>How to affect level of walking:</i></p> <ul style="list-style-type: none"> • Ensure that different amenities can easily be reached on foot. • People who are not regular walkers regard the interactions between pedestrians & cars as especially stressful. Introduce traffic calming in areas with mixed traffic; increase number of car-free areas. • Provide & maintain adequate lighting in public areas. • Improve home delivery services. <p><i>Attitudes toward cycling depend on level of cycling, thus different strategies need to be used:</i></p> <ol style="list-style-type: none"> 1. Low level cycling: <ul style="list-style-type: none"> • Develop road infrastructure that gives higher priority to cyclists. • Change image of cycling and develop educational programs to promote cycling as a convenient, efficient and environmentally friendly mode of transport. • ‘Cyclists’ were very committed to cycling & would use it in most circumstances. In general, people with no real experience of using a bike also resisted the use of the same – a resistance that would probably remain despite the better provision for cyclists. 2. Medium or high level cycling: <ul style="list-style-type: none"> • Provide bicycles at places of work. • Provide city bicycles free of charge. • Introduce ‘call a car’ schemes – make renting of cars easier. • Improve home delivery services.

continues

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
ADONIS ²⁶ (cont.)					<p>3. All levels of cycling:</p> <ul style="list-style-type: none"> • Provide cycle racks and storage. • Introduce bicycle registration programs. • Make it possible to insure bicycles. <p><i>How to discourage driving:</i></p> <ul style="list-style-type: none"> • Make driving less comfortable & more time-consuming. Give non-motorised forms of transport higher priority. • Increase the number of parking places for bikes & decrease the number of parking places for cars. • Make people more aware of their own capability to contribute towards the creation of a sustainable society. • Use the media to decrease the status of the car. • Two target groups – one to change & one to keep doing what they are doing. <p><i>Behavioural factors influencing modal choice:</i></p> <ul style="list-style-type: none"> • Habit was the most important element in the prediction of modal choice followed by perceived behavioural control, subjective norm and attitude.
University of North Carolina ²⁷	United States	Policy	Unknown	No evaluation of programs	<p><i>Activities designed to encourage cycling and walking as viable transportation options:</i></p> <ul style="list-style-type: none"> • Sponsor statewide promotions & events & encourage local activities aimed at increasing awareness of cycling and walking opportunities – development and promotion of bike events have generated interest in cycling and fostered new riders. Similar pedestrian promotion activities to be undertaken. Sponsored an awards program that recognises communities, businesses & individuals that have excelled in the encouragement of safe cycling. • Production of bicycle touring map. • Develop, implement & promote bicycle & pedestrian commuter incentive programs at the State, Regional, County & Local levels. A number of bike promotional efforts have helped increase interest in cycling, but none have emphasised commuting. • A variety of incentives can be used to promote non-motorised commuting – reimbursement for trips made by cycling or walking, providing bus passes for employees, arranging ways that emergency or longer trips during the day (even for personal reasons) can be made by company vehicle.
Vermont Agency of Transportation ⁴⁹	United States	Policy – overall guidance for policy & program development for improving access & mobility for cyclists & pedestrians	Not applicable	Not applicable	<p><i>Objectives of the bike & ped program are the development of:</i></p> <ul style="list-style-type: none"> • On-road & off-road facilities. • Pedestrian facilities. • Educational & promotional programs. • Facility maintenance. • Consideration of bike & pedestrian needs within transport programs.

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
Charlier Associates ⁴⁸	United States	Policy – increase pedestrian activity in the City of Boulder	Not applicable	Not applicable	<p><i>To encourage more walking:</i></p> <ul style="list-style-type: none"> • Provide a continuous network. • Provide a safe walking environment. • Ensure pedestrian-oriented urban design. • Provide routine enforcement – conflicts between motorists & pedestrians. <p><i>Focus group suggestions regarding areas of improving the pedestrian environment:</i></p> <ol style="list-style-type: none"> 1. General: <ul style="list-style-type: none"> • Implement barriers between pedestrians & traffic. • Increase number of signals. • Improve circulation by reducing distances between crossings. • Improve lighting. • Improve sidewalk cleaning. • Place greater emphasis on education & enforcement. 2. Education & enforcement: <ul style="list-style-type: none"> • Education programs in schools • Use media to inform & educate public about laws & alternative mode facilities. • Amend the penalty rate structure.
Burrington ²⁹	United States	Policy – streets for walking, cycling & transit	Not applicable	Not applicable	<ul style="list-style-type: none"> • Better streets for pedestrians – wider sidewalks that are clear from obstructions, pedestrian-friendly traffic lights, ‘good’ (marked, highly visible) crosswalks, safe corners. • Better streets for bicycles – bike lanes, those without lanes should have slower, lighter traffic, bike-friendly traffic lights. • Better streets for transit riders – improvements to make public transport operate more swiftly & reliably, & to make stops safer & more user-friendly. Traffic light priority to public transport, exclusive bus lanes, decent bus shelters with accurate information about routes, schedules & fares. • Conventional traffic engineering philosophy presumes driving is the ‘normal’ & treats all vehicles alike – whether they are carrying one or 50 people.
DETR ⁵⁰	United Kingdom	Policy document	Not applicable	Not applicable	<p><i>Measures suggested to reverse the decline in walking:</i></p> <ul style="list-style-type: none"> • National and local transport policies to promote walking. • Promote alternatives to car-dependent life styles – explain & promote alternative travel preferences. • Create urban forms that minimise car dependency. • Improve personal security. • Improve conditions for walking to public transport – offer high quality service that is readily accessible; make walking routes direct, attractive & convenient. • Pro-pedestrian transport engineering – highway design, traffic management, pedestrian priority zones. • Reduce physical barriers to walking – footpath issues; pedestrian crossings & traffic calming.

continues

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
DETR ⁵⁰ (cont.)					<ul style="list-style-type: none"> • Routes & signs for pedestrians – priority walking routes for frequently used routes (e.g. home to shops); signs with distance & walking time included. • Lighting for pedestrians – better designed to direct light where it is wanted. • Promote walking to schools – safe walking & cycling routes, traffic calming in school vicinity; walking bus or something similar. • Road safety – speed reduction through traffic calming. • Highway & traffic law & enforcement – new laws to enhance pedestrian protection; enforcement of these laws. • Well designed vehicles.
DETR ¹⁹	United Kingdom	Policy document	Not applicable	Not applicable	<p><i>Integrating walking into transport and land use planning:</i></p> <ul style="list-style-type: none"> • Land use and development planning: minimise need to travel & maximise opportunities to make journeys on foot; make travel to and between developments easy, safe and convenient for pedestrians. • Professional training and promotion: place high priority on walking when consulting and advising others; include provision for walking in training programs. • Partnership: integration of planning & provision needs to take place at national & local level between a range of groups – government departments; health, education, environment organisations; business; interest groups; users. <p><i>Improve conditions for walking:</i></p> <ul style="list-style-type: none"> • Improve infrastructure: pavements of adequate width, well-designed, in good repair; pavement parking policy is appropriate; safe & convenient crossings; walking environment as pleasant as possible. • Road safety: improve walking safety & convenience through tackling problems of inappropriate speed, close proximity of vehicles, poor crossing provision & implementation. • Walking & personal security: reduce fear of crime at transport interchanges through better design & maintenance; appropriate lighting. • Action on specific journey types: e.g. Safe Routes to School. • Funding: congestion charging & workplace parking levy; reallocation of existing money as a result of the greater emphasis on pedestrian provision.
London Walking Forum ⁵¹	London, England	Policy document	Not applicable	Not applicable	<p>Review of pedestrian criteria should include: directness; connectedness; width; obstructions/misuse; crossings; surfaces; personal security; attractiveness; conspicuousness/signing, suitability.</p>
Oregon Department of Transportation ²⁵	United States	Policy document	Not applicable	Not applicable	<ul style="list-style-type: none"> • Construction of facilities – safe & convenient facilities. • Promotional campaigns – positive image of walkers & cyclists, emphasise benefits of walking & cycling, inform public of the drawbacks associated with over-reliance on the car. • Incentives & rewards suggested that will encourage walking & cycling: <ul style="list-style-type: none"> – Financial incentives – e.g. tax breaks or compensation for not using car parking spaces.

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
Oregon Department of Transportation ²⁵ (cont.)					<ul style="list-style-type: none"> - Facilities such as secure bike parking, showers, changing rooms. - Work schedules that allow commuters to ride or walk in daylight hours. - Relaxed dress codes. - ‘Guaranteed Ride Home’ by taxi for emergencies when walking & cycling are not practical. - Awards & other forms of recognition. • Reduce the attractiveness of driving – high petrol prices, vehicle registration fees & parking rates; low availability of parking; restricted driving in high pedestrian use areas. • Land use – zoning for high densities of employment, housing & mixed-use development. • Other factors: weather, connecting streets, street crossings, intersections, access management, public transport, building orientation, traffic noise & perception of danger, lighting, topography. • Includes strategies to be implemented.
WHO Regional Office for Europe ⁴²	United Kingdom	Unknown	4 schools	<p>Change attitude & behaviour toward motorised travel.</p> <p>Reduce traffic congestion & pollution outside schools.</p> <p>Encourage positive attitude toward walking to school as means of routine exercise.</p>	<p>‘Wide interest in the topic’ – no other evaluation measures.</p> <p>Media coverage of campaign; production of literature, stickers, display, board game, newsletters.</p>
Pucher ⁵³	The Netherlands & Germany with the US	Comparative study of 3 countries	Not applicable	<p>Policies & programs that have successfully improved traffic safety</p>	<ol style="list-style-type: none"> 1. In 1995, 22% of Germans and 17% of Dutch made walking trips compared with 6% of Americans; 27% of Dutch and 12% of Germans cycled compared with 1% of Americans. 2. Bikes are more than twice as likely to be used for work trips in The Netherlands & Germany than in the US (24% & 20% of bike trips vs only 9%). Over two-thirds of bike trips in the US are for recreation. 3. Neglect of pedestrian & cycling safety in US compared with Germany & The Netherlands: <ul style="list-style-type: none"> • More & better facilities for walking & cycling. • Urban design oriented toward people not cars. • Traffic calming for residential streets. • Restrictions on motor vehicle use. • Better traffic education of both motorists and non-motorists. • Stricter enforcement of traffic regulations protecting pedestrians & cyclists.

continues

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
Bauman ²⁰	NSW	Questionnaire – physical activity	1200 adults aged 40–60	Physical activity levels	42% walked to get to or from places (walking for transport).
Joshi et al. ⁵⁴	Oxford, UK	Questionnaire – modes of travel	Workforce at Oxford Brooks University	Regular and preferred modes of travel to work & the reasons for regular mode. Of those who did not walk or cycle, what factors would persuade them to change	63% response rate. All modes of travel rated as convenient. 16% usually walked to work; 17% cycled; 8% used public transport. <ul style="list-style-type: none"> Distance perceived as key barrier for both walking and cycling. Time was key barrier for walking only. Need car at work – not frequent but important issue. Perceived risk of assault deterrent to walking for young women. Provision of facilities (showers, lockers, bike parking) for cyclists more likely to continue to cycle if facilities are provided. Having a bicycle or a better bicycle was a priority – suggest interest-free loans to purchase.
Perth Walking ⁵⁵	Western Australia	Questionnaire – walking	1510 adults	Walking	Perth Travel Survey: <ul style="list-style-type: none"> 21% walk to local facilities, 4% walk to work. 2% cycle to local facilities, 1% cycle to work. 8% take public transport to work, 3% use public transport to get to local facilities. 56% who use public transport to get to work walk for 15 mins or more as part of their trip. 95% believe that walking (& less driving) improves the environment; 51% of these said that this factor was an encouragement for walking. 59% agreed that better facilities (well-lit, safe footpaths, shady trees, interesting environments) would encourage them to walk more. Main reasons people walk to local destinations in their area are for exercise and health. 52% of children are driven to school; 9% cycle; 14% use public transport; 23% walk.
Owen et al. ⁵⁶	South Australia	Questionnaire – health benefits of exercise, policies, cycling facilities	Health care institutions in Adelaide	Awareness & implementation of policies & facilities to promote cycling to work	<ul style="list-style-type: none"> Lack of awareness of the link between healthy exercise & transport among hospital hierarchy. Policies & plans generally overlook access & facilities for cyclists and pedestrians.
Corti ²¹	Western Australia	Questionnaire – physical activity	1803 sedentary workers & homemakers aged 18–59 years	Physical activity levels	<ul style="list-style-type: none"> Walking for transport was the only physical activity in the previous 2 weeks for 7.4% of the sample. Only 13.6% of transport walkers did sufficient exercise to be classified as ‘exercising as recommended’. Disadvantaged respondents appeared to be more likely to walk for transport than advantaged.

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
Vuori et al. ³³	Finland	Survey	1200 adults aged 40–60	Demonstration project – 4 studies 2014 large urban industrial plant employees random control trial – 68 inactive men & women	<ul style="list-style-type: none"> Prevalence of physical activity commuting to work (PACW) & factors influencing or hindering it Prevalence of walking to work – 18% in fall, 21% in winter, 14% in summer; cycling 6%, 2% & 18%. A higher proportion of women than men commuted using these commuting modes. The proportion of walkers increased with age. Reasons for PACW: desire for fresh air, exercise & fitness; inexpensive & convenient way of transport, poor connection to public transport; commuting to or from bus stop. Hindering or limiting PACW: bad weather; lack of interest; lack of time; lack of or poor condition of pedestrian & cycle routes; walking & cycling perceived as unsafe modes.
Bull et al. ¹¹	Western Australia	Telephone survey	3178 adults state-wide	Physical activity levels	<ul style="list-style-type: none"> Walking for transport was third most frequently reported activity overall (25%) & this activity was more common among people aged under 30 years & women over 60 years of age. Cycling for transport was one of the least frequent activities (4%) & this activity was more common in males compared with females & for males aged under 30 years (8%).
Hawthorne ¹⁷	Canada – 3 urban areas	Telephone survey	321 adults	Walking habits	<ul style="list-style-type: none"> When parking is expensive & limited more people walk to work. 'Hassles with public transport' include infrequent service, lack of direct route, crowding & unreliability.
Scottish Needs Assessment Programme ⁴⁴	Scotland	Health Impact Assessment – 3 possible transport scenarios dependent on funding amount & how each scenario would impact locally & what population parts would be likely to bear the impacts	2 main groups – middle class/affluent/ predominantly car owning, and disadvantaged/pre dominantly non car owning Sub groups were also identified	The main health impacts of transport	<ul style="list-style-type: none"> The effect of transport policy on social exclusion & inequalities in health need to be recognised. Integrate public health targets on exercise with transport policy. Transport awareness plans should be developed that promote: <ul style="list-style-type: none"> Needs & rights of pedestrians. Health benefits of moderate exercise. Need to reduce conflicts between cyclists & pedestrians. Rights of children.
Beaitley ⁴⁵	Europe	Discussion	Not applicable	Comparison of European cities to others	Public transport is seen as a strong public good, an essential public service fundamental to the broader public welfare.
Garbrecht ⁴⁶	Germany	Discussion	Not applicable	Not applicable	<ul style="list-style-type: none"> Provide a safe, comfortable & pleasant walkway system. Provide an efficient & comfortable public transportation system. Provide safe & pleasant connections between the 2 systems – transit stops. Welcoming & convenient transit stops.

continues

Table 11: Active Transport Review and Policy Documents (cont.)

Reference	Country/state	Study design	Study population	Outcome measures	Major findings reported
Hanna ⁴⁷	United Kingdom	Discussion	Not applicable	Not applicable	<ul style="list-style-type: none"> Highlights the need for self-enforcing engineering measures to control speeds & restrain traffic. Reallocation of road space from traffic to pedestrians & cyclists.
Mason ¹⁶	Australia	Discussion	Not applicable	Not applicable	<ul style="list-style-type: none"> Doctors, medical administrators and health advocates can encourage the use of 'active transport' (walking, cycling &/or using public transport rather than cars) & influence community-based programs & policy development regarding land use planning and travel demand management. Creating neighbourhoods & communities that are less dependent on cars requires a denser pattern of development, with residential areas and services (shops, schools, sports facilities, libraries) located together (mixed-use neighbourhoods), and good public transport infrastructure linking the communities with employment opportunities. Promote principles of 'active transport'.
Parker ³¹	Australia	Discussion	Not applicable	Not applicable	Need better co-ordination & integration of policies on transport, road safety, environment & health.

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APPENDIX 1: STEERING GROUP

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APPENDIX 3: DECISION-MAKING CRITERIA

Table 12: Decision-making Criteria

Criterion	Definition
1. Effectiveness	To what extent will the intervention achieve portfolio objectives?
2. Evidence-based	What is the strength of evidence of effectiveness of the intervention in achieving portfolio objectives?
3. Other benefits	Is the intervention likely to achieve benefits other than the primary objective?
4. Sustainability	To what extent is the intervention likely to continue being effective after initial resources are withdrawn?
5. Capacity-building	To what extent will the intervention increase the capacity to respond to problems in future?
6. Selectivity	To what extent does the intervention reach high-priority population sub-groups?
7. Distribution	Does the intervention affect a few people a great deal or a lot of people only slightly?
8. Cost	How expensive (per unit of outcome) is the intervention likely to be?
9. Affordability	Can the intervention be accommodated within existing budgets?
10. Scale	What is the relationship between unit costs and the scale of the intervention? Are there (dis)economies of scale? What is the minimum investment required to achieve the desired effect?
11. Feasibility	Are the necessary human skills and other resources available?
12. Political acceptability	Ease with which intervention can be implemented given local political circumstances.
13. Social acceptability	Extent to which intervention will be acceptable to local community.
14. Timing (effects)	How soon will the benefits be realised?
15. Fertilisation	Will intervention now provide a basis to build on?
16. Uncertainty	What is the extent to which benefits are 'guaranteed' versus uncertain (how good is the evidence that the program will achieve X effect? What is the likely variation around X?)
17. Flexibility	What is the extent to which design or scale of intervention can be changed quickly should circumstances change?
18. Consistency	Is the intervention consistent with national/local priorities?
19. Attraction	Is the intervention likely to attract the interest (and money) of at least three partners within 6 months?
20. Revenue	Is the intervention likely to generate a revenue stream?
21. Synergistic	Is the intervention complementary with other interventions and agencies? Does it add value to other interventions?
22. Utilisation	Does the intervention promote better use of existing infrastructure (e.g. footpaths) and services? Does it match services with people?
23. Demand	Does the intervention create manageable demand? Can the system cope with increased demand?
24. Measurable	Are there measurable benefits of the intervention (e.g. air quality, morbidity, running costs of cars)?
25. Evaluable	Is the intervention able to be evaluated?
26. Transferability	How transferable is the intervention from one location/setting/organisation to another?
27. Partnerships	To what extent does the intervention support capacity building among partners?
28. Environmental sustainability	To what extent does the intervention promote sustained environment?

APPENDIX 4: RESULTS OF SCORING INTERVENTIONS IN DIFFERENT SETTINGS

Table 13: Results of Scoring Interventions in Different Settings

Setting	Policy	Score*	Intervention Program	Score	Infrastructure	Score	
Shopping	Planning guidelines for facility placement, parking policies	28.27	Tailored active transport information/Active transport access guides/information regarding active transport options	27.53/ 25.54/ 24.92	Pedestrian friendly environments Public transport facilities that are safe, adequate	31.99 29.83	
	shop placement	28.26	Education – awareness raising of active transport/Awareness raising programs	23.13/ 22.03	Data collection, baseline and monitoring Provision of adequate bike parking facilities	29.02 23.27	
	Health impact statement of shop location	25.35	Awards for active transport workplaces	21.74	Shower & change facilities	21.68	
	Tax on parking facilities to be paid by shoppers	19.65	Shops accreditation based on transport accessibility rating	20.04			
	Use of company bicycle & provision of funding for public transport	18.93	Walk-to-work & ride-to-work competitions	19.30			
	Review of the tax policy in relation to use of transport	18.87	Incentives to encourage workers to use active transport modes	17.34			
	Home delivery only available for personal shoppers	16.64					
	Relaxed dress codes to allow casual wear	12.37					
	Government – State & local	Implement programs from a whole-of-government approach	31.63	Program outcomes important for advocacy	27.69	Shower & change facilities	31.92
		Development of planning guidelines	30.60	Active transport access guides/Provision of information regarding active transport options/Education – awareness raising of active transport	27.04/ 24.04/ 23.11	Linking research & data sets Monitoring & surveillance – baseline, monitoring	31.91 30.75
Linking with policies of other non-health sectors		28.96	Planning for an Active Transport Conference	24.57	Public transport facilities that are safe, adequate	29.52	
Development of a Charter on Transport & Health		28.39	Awards for active transport workplaces	21.60	Conduct a cost benefit analysis of active transport	28.01	
State Government to provide leadership		28.17	Walk-to-work & ride-to-work competitions	19.96	Development of a partnership group	27.69	
Development of quantifiable targets for walking & cycling		26.15	Incentives to encourage workers to use active transport	16.95	Establishment of a National Transport secretariat	24.51	
Planning guidelines for facility placement, parking policies		26.08			Provision of adequate bike parking facilities	24.16	
Venue choice guideline policies		22.53					
Review of the tax policy in relation to use of transport		21.64					
Use of company bicycle & provision of funding for public transport		20.36					
Relaxed dress codes to allow for casual wear	15.58						

* **Bolded** interventions = those that scored 30 or more.

Table 13: Results of Scoring Interventions in Different Settings (cont.)

Setting	Policy	Score	Intervention Program	Score	Infrastructure	Score
School	School policies that link active transport to wider physical activity goals & policies	29.67	TravelSmart Schools program	31.81	Provision of adequate public transport facilities	30.57
	Planning for accessibility to active transport/ Include as part of health impact assessment	27.68/ 29.15	Walking school bus program/Walk safely to school day	29.02/ 21.97	Provision of safe routes to school	29.66
	Venue choice guideline policies	26.04	Promotion of safe routes to school/Active transport access guides/info on active transport options	26.33/ 25.30/ 24.07	Data collection – baseline, monitoring	26.96
	Green transport plan	25.87	Bike Education – skills training	25.04	Provision of adequate bike parking facilities/ Secure storage facilities for skateboards, scooters	25.64/ 23.03
	Parking & drop off policies	24.55	Teacher & parent training of active transport modes/Education – awareness raising/	23.50/ 22.71/		
	School policy to reduce need to carry heavy items	23.24	Advocacy program for the school community	22.26		
	Relaxed dress codes to allow casual wear	14.90	Awards for active transport schools, workplaces	23.49		
			Walk-to-work & ride-to-work competitions	20.27		
Health services	Health system policy that encourages active transport as physical activity	27.01	Education awareness raising of active transport	30.89	Public transport facilities that are safe, adequate	30.06
	Planning policies & guidelines placement & parking	26.57	Advice – active prescriptions & other opportunities to promote active transport	27.72	Data collection – baseline, monitoring	28.98
	Venue choice guideline policies	22.74	Training of staff to provide advice	26.66	Provision of adequate bike parking facilities	25.67
	Review of the tax policy in relation to use of transport	21.74	Advocacy for active transport modes	26.61	Shower & change facilities	23.64
	Use of company bicycle & provision of funding for public transport	19.92	Active transport access guides/Provision of information regarding active transport options	26.34/ 23.03		
	Relaxed dress codes to allow for casual wear	14.77	Awards for active transport workplaces	20.73		
			Walk-to-work & ride-to-work competitions	19.93		
			Incentives to encourage workers to use active transport modes	18.01		
Transport	Planning guidelines for facility placement, parking policies	25.45	Active transport access guides/Provision of information regarding active transport options	26.36/ 24.32	Data collection – baseline, monitoring/Data on the impact of fees, taxes, subsidised public transport	30.47/ 26.16
	Subsidise public transport to encourage people to use active transport	25.15	Education – awareness raising of active transport	24.01	Public transport facilities that are safe, adequate	29.78
	Increase in parking fee rates	22.17			Provision of adequate bike parking facilities	24.82
	Venue choice guideline policies	22.07			Shower & change facilities	23.73
	Review of the tax policy in relation to use of transport	21.02				
	Increase in fuel prices	20.81				
	Incentives to encourage workers to use active transport	18.34				

Table 13: Results of Scoring Interventions in Different Settings (cont.)

Setting	Policy	Score	Intervention Program	Score	Infrastructure	Score	
Local government	Incorporate a cross government approach (SEPA)	30.47	Park and ride & park and walk programs Implement & adequately fund a TravelSmart officer program	28.75	Provision of bikeways & walking paths Disability access	31.20 29.78	
	Active transport included in plans at the policy level	30.34	Active transport access guides/Maps & guides to local destinations, facilities/Provision of information regarding active transport options	26.59/ 25.71/ 24.30	Data collection – baseline, monitoring adequate Public transport facilities that are safe, adequate	29.67	
	Development and implementation of guidelines	30.26	Develop guides to encourage working together	26.49	Develop & foster links with researchers Provision of adequate lighting in all areas	28.44 27.34	
	Implementation of Local Government guidelines	28.44	Education/awareness of councillors & staff of active transport modes	26.19	Bus stops & shelters Community bus	27.25 26.18	
	Parking policies – number, location of parking facilities	27.88	Local government awards for areas that score high for active transport	25.52	Implement & adequately fund a road safety officer	26.15	
	Event transport policy	27.62	Policing at community level – e.g. foot, bike patrols	22.45	Active Australia local government network	25.89 25.58	
	Planning guidelines for facility placement, parking policies	26.96	Education – awareness raising	22.42	Installation of pedestrian & bike-friendly traffic lights	25.33	
	Planning of amendment reviews	23.55	Encourage the twinning of cities	21.00	Provision of adequate bike parking facilities	25.01	
	Use of company bicycle & provision of funded public transport	21.57	Promote an Active Australia Day as a national event	20.80	Implement & adequately fund a bike & pedestrian officer	24.72	
	Venue choice guideline policies	21.16	Awards for active transport workplaces, community facilities	20.56	Shower & change facilities	23.84	
	Review of the tax policy in relation to use of transport	20.24	Walk-to-work & ride-to-work competitions	17.15			
	Dog control policies	20.01					
	Incentives to encourage workers to use active transport	18.17					
	Relaxed dress codes to allow for casual wear	17.52					
	Universities	Planning policies & guidelines for placement & parking	26.35	Provision of information regarding active transport options/Active transport access guides	27.03/ 26.47	Training of professionals in sectors that influence active transport use	29.94
		Venue choice guideline policies	25.25	Education – awareness raising of active transport	23.39	Public transport facilities that are safe, adequate	29.27
		Review of the tax policy in relation to use of transport	20.57	Awards for active transport workplaces	20.57	Data collection – baseline, monitoring	29.09
Use of company bicycle & provision of funding for public transport		19.79	Walk-to-work & ride-to-work competitions	19.00	Provision of adequate bike parking facilities	27.00	
Relaxed dress codes to allow for casual wear		14.50	Incentives to encourage workers to use active transport	18.76	Shower & change facilities	23.50	

continues

Table 13: Results of Scoring Interventions in Different Settings (cont.)

Setting	Policy	Score	Intervention Program	Score	Infrastructure	Score
Workplace	Planning guidelines for facilities, parking policies	24.74	Active transport access guides	24.86	Public transport facilities that are safe, adequate	28.45
	Review of the tax policy in relation to use of transport	21.93	Education – awareness raising of active transport/Provision of information to workers	22.32/22.24	Data collection – baseline, monitoring	27.14
	Venue choice guideline policies	21.47	Awards for active transport workplaces	20.83	Provision of adequate bike parking facilities	25.26
	Relaxed dress codes to allow for casual wear	17.61	Walk-to-work & ride-to-work competitions	20.18	Shower & change facilities	24.92
			Incentives to encourage workers' use of active transport	16.50	Use of company bicycle & provision of funding for public transport	19.62
Media	Favourable policy for media	22.72	Advocacy	26.11	Data collection – baseline, monitoring	27.02
			Frame messages to suit target audience	23.64		

APPENDIX 5: DETAILED DESCRIPTIONS OF INTERVENTIONS

Active prescription

Active Prescription is an intervention that is designed to be administered by a doctor during a routine consultation, regardless of the patient's presenting condition. Each prescription contains information related to the type, frequency and duration of physical activity that the doctor can recommend for the patient. In addition, it contains information about how to develop a more active lifestyle and a daily diary that can be used to record participation in physical activity. For more information related to Active prescriptions see http://www.health.nsw.gov.au/public-health/health-promotion/improve/physicalactivity/pa_new/gps/gp_pa.htm

Active transport access guides

Access guides promote and facilitate the use of alternative modes of transport to travel to major destinations. They provide information on public transport, walking and cycling routes, public transport timetables, showering facilities and bike parking. These access guides should be available from community settings such as shopping centres, local government facilities and workplaces.

Data collection

A wide range of data can be collected including:

- baseline data of the current levels of active transport participation among all groups in the community;
- monitoring and surveillance data that tracks changes in active transport participation levels;
- the effects of changes in fees, taxes, and subsidising of public transport on active transport participation;
- conducting a cost benefit analysis of increased active transport use;
- the impact of increased use of active transport modes on other areas, such as pollution levels, social impacts, and injury control; and
- the evaluation of active transport interventions.

In addition, it is important to link existing data sets from the various sectors to identify information that has been collected to describe current levels of behaviour and to evaluate interventions that are in place.

Frame messages to suit target audience

The intended audience for the message should be identified and profiled. Media messages are then formulated based on the characteristics and needs of this target audience.

Public transport facilities

The provision of public transport facilities that are safe, secure and adequate for the needs of the community. It includes adequate lighting, current timetables displayed,

provision of shelter, well maintained facilities, facilities that are close to where people live and major destinations, providing a transport system that is reliable, on-time and frequent, easy to use and not crowded.

Safe Routes to Schools

Safe Routes to Schools is a program developed and conducted by RoadWise in Western Australia, exemplifying a whole-of-school-community approach to road safety. The aim of this program is to provide a safer environment for children on their way to and from school and to encourage children to walk and/or cycle to school in order to reduce traffic congestion around schools at peak periods.

This program involves the identification and signage of identified routes around schools, such as the painting footprints on existing footpaths, and an information/marketing program to increase awareness of parents. Further information can be found at http://www.wama.wa.gov.au/transport_roads/roadwise/prgrams/index.html

Supportive Environments for Physical Activity (SEPA)

SEPA is a long-term project aiming for structural change and targeting policy makers. The project is conducted by the Heart Foundation and aims to increase environmental support and opportunities for people to be physically active in their daily life. A fundamental principle underpinning SEPA is inter-sectoral collaboration through the establishment of links between local government, other agencies and the community. The aims of the SEPA project are to:

- Increase awareness of the links between supportive environments and the health of whole populations;
- Work with local government in particular to incorporate SEPA principles into strategic and operational policy/plans by using SEPA guidelines;
- Advocate for effective community participation in all stages of policy development;
- Develop networks and cooperation between various organisations and agencies and other initiatives such as Active Australia; and
- Develop strategic indicators to measure the impact of policy change over time.

Further information related to SEPA can be found at www.heartfoundation.com.au/sepa/index_fr.htm

TravelSmart

The TravelSmart program is a community-based program conducted by Transport WA to encourage more walking, cycling and teleaccess, the use of public transport, and less 'driver-only' journeys. The focus for the TravelSmart

program is to influence people's travel decisions and to bring about voluntary changes in their travel behaviour. TravelSmart is designed to inform and motivate people to use alternative transport modes to the motor car.

There are several components to the overall TravelSmart program including:

- Individualised Marketing, which informs people of their travel choices, provides tailored information related to alternatives modes and encourages self help;
- TravelSmart to School, which involves the use of the Safe Routes to School program and curriculum materials;
- Working with local government and the community through the use of local TravelSmart plans;
- TravelSmart workplace program, which aims to change travel behaviour to and from work through the provision of information, activities, health tests and incentives; and
- TravelSmart major destinations, which focuses on major destinations (such as educational destinations, shopping centres and hospitals), and developing plans to improve the service and facilities for walking, cycling and public transport.

More information on the TravelSmart program can be found at www.travelsmart.transport.wa.gov.au

Urban planning guidelines

The development of urban design guidelines that aim to develop a community where it is easy to use active transport modes. This includes such issues as the provision of neighbourhoods with mixed zoning and uses in order to reduce car dependence for access to employment, retail and community facilities; interconnected street networks that facilitate safe walking and cycling; and safe and direct access to public transport systems.

APPENDIX 6: SUMMARY OF WORKSHOP 1

NOVEMBER 2000

Aims of workshop 1

The specific aims of workshop 1 were to:

1. explain what the portfolio planning process involves;
2. use participants' knowledge to verify and add to the information collected so far on the issues to be addressed and the possible interventions to be considered;
3. develop the objectives for the portfolio to increase incidental physical activity in the transport setting;
4. begin to formulate the criteria that will be used to select the interventions for the final portfolio; and
5. seek to improve the portfolio approach as a planning tool in public health.

Outcomes

Background information

All the invited participants were sent pre-reading material prior to the workshop that included the Summary Review of the Determinants and Interventions Related to Physical Activity in Transport Settings; and A Planning Framework for Public Health Practice.

The workshop began with an introduction to the portfolio framework, which was followed by an overview of the current experience and possibilities for physical activity in transport settings. This overview was presented by key invited speakers including Dr Mike Pratt from the Physical Activity and Health Branch of the Centers for Disease Control and Prevention, Atlanta, Prof. Jim Sallis from the University of San Diego, Prof. Adrian Bauman from the University of New South Wales, Mr Bruce James from the Department of Transport WA, and Ms Cheryl Wright, the National Physical Activity Program Director for the Heart Foundation. Ms Terri Pikora also summarised the review of literature and current practice as presented in the pre-reading materials.

Determinants

A discussion of determinants followed. This attempted to collate the determinants identified in the review and the presentations as well as those identified by the participants as important in the Australian context. The determinants identified are presented in Table 14. Issues that were raised in the discussion included:

1. demographics – issues related to gender, age, socio-economic status, employment status and marital status;
2. attitudes – societal attitudes toward progress, comfort when using various forms of transport;
3. knowledge – local knowledge of what is available and what is needed;

4. environment – issues related to pollution;
5. skills – self-efficacy; and
6. policy environment – putting physical activity on the transport policy agenda.

These determinants will be added to the list already identified by the review of literature.

Context

The context of the portfolio was discussed under the following headings:

- Who is establishing the portfolio?
- For whom?
- Over what range of activities or interventions?
- Time frame for achievement of goals?
- What are the budget and other resources?
- Who is to implement the final set of interventions?
- What is the leverage with these players?

It was agreed that SIGPAH (Strategic Inter-Governmental forum on Physical Activity and Health) was establishing the portfolio and that the focus should be on the development of multi-level inter-sectoral activities that would encourage physical activity in transport settings.

Inter-sectoral leadership at national level was seen as important due to:

1. the lack of both money and capacity at the lower level to undertake interventions.
2. the need for national organisations to encourage and foster partnerships with local communities.
3. opportunities to build upon existing initiatives. The example was given of local government initiatives and ideas that could be developed further in those locations and extended to other locations.

Therefore, the context for the portfolio was in the formation of a coalition across all sectors in the area, including linking to professional organisations such as engineers and architects. The focus for the health sector would be on those areas where skills, such as research and evaluation, advocacy, communication and legislation, have been developed and refined through the anti-tobacco arena.

Interventions

The activities or interventions that may be implemented were briefly discussed. The main focus for these was the development of inter-sectoral activities that would bridge sectors. The activities suggested included the formation of coalitions to promote existing facilities and to improve the walking and cycling infrastructure. There was a focus

on the development of alliances to provide research and information that is relevant across sectors. The key areas for activities included:

1. linking with key organisations, including professional organisations, to foster inter-sectoral activities;
2. developing strategies that improve the walking and cycling infrastructure; and
3. developing marketing strategies to promote alternative forms of transport.

Time frame

The time frame for the portfolio was discussed in terms of realistic time specifications for the goals. Three levels were discussed and defined:

1. short-term – activities that are achievable within 2 years such as coalition development, placing physical activity on the agenda of policy decision-makers;
2. medium-term – activities that are achievable within 5 years such as behavioural change research and improving walking and cycling facilities; and
3. long-term – activities that are achievable in more than 5 years, such as changes in land use patterns. There may be short or medium term actions that need to be taken to move towards these.

Resources

Several resource issues associated with the implementation of the portfolio objectives were discussed. The budget allocation was not defined in terms of amount of money available. Strong arguments were made for not imposing budgetary constraints on portfolio planning. Data are now available to show that low levels of physical activity is one of the leading causes of death in Australia. Several examples were given of substantial allocations of Commonwealth and State government funds to other, comparable projects, and this project could reasonably ask for similar amounts.

Sources of funding were discussed. As the likely interventions would be based on a multisectoral approach, the possibility of matched funding from all of the government sectors was seen as important. It was also seen as highly desirable that funding should be from a permanent source. Costing should be in terms of health and non-health interventions and outcomes.

Additional resources identified by the group were the development of skills associated with working cross-sectorally, such as talking the same language. The need for research data on current expenditures and achievements as well as the economic impact of investment in this area was also highlighted.

It was agreed that partnerships would be needed to plan and implement interventions. Natural lead agencies for implementation would be identified in the process. Each sector would need to identify the roles that it could play. Partnerships should be formed with existing bodies with common goals.

As the instigator of the portfolio planning process, health was assuming an advocacy role. To have leverage with other sectors a top-down approach was needed, with involvement at the highest possible levels of government. Public opinion was identified as a powerful lever in this arena.

Portfolio objectives

Discussion of portfolio objectives ranged from broad to specific:

- The big picture objective or goal that received general support was to:
 - create sustainable environments that encourage walking, cycling and use of public transport.
- A more specific, measurable objective was to:
 - increase the proportion of short trips that are walking or cycling trips.
- Strategic objectives suggested included:
 - data collection on how much cycling and walking is undertaken in Australia
 - the development of a National Pedestrian Strategy similar to the National Bicycle Strategy.

Criteria for Decision-Making

The workshop finished with the group considering the criteria for selecting interventions to be included in the portfolio. A list of potential criteria and their definitions was distributed. Other criteria suggested are listed below. The long-list of criteria was distributed to the decision-making group for scoring prior to the next workshop.

Portfolio criteria

- Comprehensive – breadth, multiple sectors, partners
- Timeframe – includes long- and short-term objectives
- Risk mix – mix of high-risk and low-risk interventions

Intervention criteria

- Attraction – likely to attract interest (and money) of at least three partners within 6 months
- Complementary with other interventions and agencies (adds value to other interventions – synergistic)
- Sustainability of the intervention

- Generates a revenue stream
- Defers need for infrastructure (e.g. roads)
- Promotes better use of existing infrastructure and services
- Matches services with people
- Creates manageable demand – can the system cope with increased demand?
- Uses existing facilities (e.g. footpaths)
- Quantifiable benefits (e.g. air quality, road safety, morbidity, running costs of cars)
- Evaluable – able to be evaluated
- Evidence-based
- Transferability
- Support for capacity building among partners
- Equity – reaching high-priority group
- Acceptability – community and political
- Environmental sustainability

Table 14: Determinants Identified During Workshop 1

Determinants	Description
Demographics	
Gender	Perceived danger for women & children Decision-maker bias – most decision-makers are male
Age	Health is a motivator for older people Older men need reason or destination for walking Safety concerns for children (perceived/actual) Middle-age experience gap – walked, cycled or used public transport as young people but not since
Socio-economic status	Disadvantaged groups more likely to walk for transport and use public transport
Work status	Hours worked Employment status Time factors
Marital status	Married persons perceive less time to walk, cycle, use public transport
Attitudes	
Toward use of alternative modes	Bike not viewed as transport People who use public transport viewed as negative Perception of time associated with public transport and car use Distances greater than 3km perceived as too hard
Toward motor vehicles	Salary packaging including car, also esteem Car industry culture of selling car – promotion of sedentary behaviour Inculcation – culture toward use of car
Toward comfort	Toward comfort – air conditioned car Bike helmet use – ‘helmet hair’ Time convenience
Toward other users of roads/paths	
Societal	Feelings of progress associated with ‘big’ developments Expectation of high mobility
	Car park provision – link to facilities, viability
	World best practice for transport

continues

Table 14: Additional Determinants Identified During Workshop 1 (cont.)

Determinants	Description
Knowledge	
Of access to public transport	Transport access guides – specific Access to public transport
Of costs	Of real costs associated with car use
Of physical activity benefits	What levels are beneficial
Social environment	Local knowledge
Environment	
Planning	Lack spatial planning Urban design – connectedness Urban fabric Urban density, land use mix
Facilities	End-of-trip facilities – bike parking, showers Access to public transport Facilities Availability of car parks Road system – safety, lighting
Pollution	Air quality/dust levels Noise levels Traffic congestion
Climate	Climate change
Societal	Move toward electronic homes/electronic commerce reduces physical activity necessity
Skills	How to get somewhere – self-efficacy
Policy environment	Putting physical activity on the agenda of transport policy makers

APPENDIX 7: STAKEHOLDER ANALYSIS

Table 15: Stakeholder Analysis

Question	Stakeholder	Type of involvement	Outcome desired
Who might be affected by: ... the health issue?	Commonwealth and state health departments, local area health authorities Non-government health organisations in particular National Heart Foundation, Cancer Foundations, Diabetes Australia, Health Promotion Foundations, Consumer health organisations Health insurance companies	Identification of health and consumption issues Policy formulation and recommendations concerning active transport and health outcomes Involvement in planning and implementation of a national strategy to increase active transport participation Commitment of funds and resources	Uniform recommendations concerning required levels of active transport Identification of and commitment to objectives, options, roles and responsibilities in promoting active transport in an integrated national strategy
... the determinant of health?	Commonwealth and state transport, environment, urban planning departments Local government authorities User groups – in particular Australian Bike Council, Pedestrian Council, Public transport providers	Identification of health and consumption issues Review of policies, regulations and practices that affect active transport Involvement in planning and implementation of a national strategy to increase active transport participation Commitment of funds and resources	Identification of and commitment to objectives, options, roles and responsibilities in promoting active transport in an integrated national strategy
... and interventions that may be taken to manage them?	All of the above, Schools, workplaces, media, Shopping centre management	Review the policies, regulations and practices that impact on active transport participation Involvement in planning and implementation of a national strategy to increase active transport participation	Identification of and commitment to objectives, options, roles and responsibilities in promoting active transport in an integrated national strategy
Who has the information and knowledge that might be useful?	Epidemiologists, behavioural scientists Health promotion professionals Transport scientists, urban design/planning scientists	Contribution to analysis of determinants of active transport Development of intervention programs and strategies	Development of an evidence-based implementation strategy which targets key determinants, specifies desired outcomes and uses best practice strategies to achieve increases in active transport levels
Who has been involved in managing similar health issues?	Most Australian health departments Campaigns targeting other risk factors – e.g. smoking, alcohol, drugs	Provision of information and advice concerning determinants and effectiveness of strategies	Identification of key determinants and best practice options
Who might be reasonably annoyed if not involved?	Relevant health non-government organisations Relevant government departments Relevant consumer groups	Identification of level of participation desired and the roles and responsibilities prepared to assume	Support for the strategy Involvement at negotiated level
Who is going to be involved in implementing the intervention?	Health and other organisations at the national, state and regional level whose policies and programs influence participation in and education related to active transport	Identification of and commitment to goals, roles and responsibilities in promoting active transport in an integrated national strategy	Implementation of identified roles and responsibilities to achieve stated objectives
Who is going to oppose the intervention?	Any organisation which may require revision of practices – particularly if these incur costs – or that are opposed to other issues within the transport pilot	Identification of issues, concerns and possible solutions	Resolution of concerns Support for the strategy

APPENDIX 8: RESULTS OF FIRST SCORING OF CRITERIA FOR ASSESSING INTERVENTIONS

Background

Participants in workshop 1 identified 28 criteria that could be used to assess interventions. A list with definitions and scoring instructions was circulated to the 24 participants in the workshop 1. Fourteen responses were received. Twelve had scored the criteria as requested and the results are included in the analysis below. Comments from the others are also discussed.

Ranking procedure

Rank scores were added for each criterion and the mean calculated. When criteria were ranked equally, they were given the same value but the next ranked criteria missed a rank e.g. 6, 6, 8. Some respondents did not rank some criteria. In this case, the mean for the criteria was based on the number who gave a ranking.

Results of scoring

The first ten criteria were:

1. effectiveness
2. social acceptability
3. evidence-based
4. sustainability
5. political acceptability
- =6. utilisation
- =6. synergistic
8. cost
9. measurable
10. partnerships

Table 16 provides the detailed score sheet. A definition of each of the 28 criteria can be found in Appendix 3.

Table 16: Potential Criteria for Assessing Interventions – Score Sheet

Criterion*	Score [†]												Mean	Rank
1. Effectiveness	1	1	1	8	1	1	1	=2	4	1	1	3	2.0	1
2. Evidence based	13	9	2	9	=3	6	2	3	9	14	3	5	6.5	3
3. Other benefits	14	17	12	10	8	28	14	10	6	15	20	26	15.0	18
4. Sustainability	2	5	4	14	2	9	3	=2	8	13	10	12	7.0	4
5. Capacity-building	4	11	19	7	27	22	22	21	7	16	17	27	16.6	20
6. Selectivity	15	18	3	17	=6	8	25	7	10	27	19	2	13.4	=13
7. Distribution	15	28	10	15	5	21	13	1	17	22	5	9	13.4	=13
8. Cost	15	16	6	16	11	20	12	6	5	17	4	8	11.3	8
9. Affordability	15	27	16	24	12	23	16	20	5	18	17	7	16.6	20
10. Scale	15	19	17	25	13	15	15	–	18	21	21	10	13.2	11
11. Feasibility	10	6	28	18	14	7	20	12	1	2	23	20	13.4	13
12. Political acceptability	6	3	8	19	17	3	11	13	2	5	15	11	9.4	5
13. Social acceptability	15	4	9	20	=6	2	7	–	3	4	2	1	6.1	2
14. Timing (effects)	15	26	11	28	15	25	18	18	15	23	22	19	19.3	23
15. Fertilisation	15	25	20	11	16	26	19	17	16	7	14	14	16.7	22
16. Uncertainty	15	10	14	26	=3	14	8	=2	9	20	24	18	13.5	16
17. Flexibility	7	12	23	6	18	12	26	16	11	19	26	21	16.4	19
18. Consistency	15	7	21	12	19	16	17	11	2.5	10	9	22	13.5	15
19. Attraction	15	24	15	5	26	24	27	22	19	26	27	16	20.5	25
20. Revenue	15	15	22	27	20	27	28	25	20	28	28	28	23.6	26
21. Synergistic	11	22	24	3	=9	17	5	14	6	8	8	4	10.9	=6
22. Utilisation	15	13	13	4	21	5	6	15	13	3	6	17	10.9	=6
23. Demand	15	8	27	23	22	19	23	23	12	25	25	23	20.4	24
24. Measurable	8	2	5	1	23	13	9	26	22	6	16	24	12.9	9
25. Evaluable	15	20	7	22	7	4	10	4	23	11	11	25	13.3	12
26. Transferability	12	23	26	21	24	18	4	24	14	9	12	13	16.7	22
27. Partnerships	3	14	25	2	25	10	21	9	6	24	13	6	13.1	10
28. Environmental sustainability	9	21	18	13	=9	11	24	19	21	12	7	15	14.9	17

* For criteria definitions, see Appendix 3.

† The twelve columns under this heading are the rankings of each of the twelve participants who scored the criteria as requested.

One participant did not rank the criteria but provided her Department's priority criteria (not in any order) that would all be seen as crucial in evaluating interventions and priorities (the figures in brackets are the respective group rankings):

- sustainability (4)
- synergistic (6)
- cost (including affordability) (8)
- measurable/evaluable (9,12)
- partnership opportunities (including attraction) (10, 24)
- transferability (21)
- timing or implementability (22)

Another participant who contributed to the scoring exercise also made the following comments:

'Many are similar. The fundamental three are:

1. public value – effectiveness (1), evidence based (3), other benefits (8), sustainability (4), selectivity (13), distribution (13), cost (9), affordability (20), scale (11), timing (22), uncertainty (16), flexibility (=13), revenue (25), synergistic (=6), utilisation (=6), demand (23), measurable (9), evaluable (12), transferability (21) and environmental sustainability (17).

2. capacity (to deliver the project) – capacity-building (20), feasibility (13), fertilisation (16) and partnerships (10).

3. support (community and political) – political acceptability (5), social acceptability (2), consistency (15) and attraction (24).

Without these three, the success of interventions is highly unlikely.'

Table 17: Spread of Responses for Criteria for Assessing Interventions

Criterion	Score range
1. Effectiveness	1–8
2. Evidence-based	2–14
3. Other benefits	3–28
4. Sustainability	2–14
5. Capacity-building	4–27
6. Selectivity	3–27
7. Distribution	1–28
8. Cost	5–20
9. Affordability	5–27
10. Scale	10–21
11. Feasibility	1–28
12. Political acceptability	2–19
13. Social acceptability	2–20
14. Timing (effects)	11–28
15. Fertilisation	7–26
16. Uncertainty	2–26
17. Flexibility	6–26
18. Consistency	7–25
19. Attraction	5–26
20. Revenue	15–28

21. Synergistic	3–24
22. Utilisation	3–21
23. Demand	8–27
24. Measurable	1–26
25. Evaluable	4–25
26. Transferability	4–26
27. Partnerships	2–27
28. Environmental sustainability	9–28

Criteria that were a high priority (range 1–14) for all

- Effectiveness
- Evidence-based
- Sustainability

Criteria that were a high priority for most (8 of 12)

- Political acceptability
- Social acceptability
- Synergistic

Criteria that were a low priority (range 15–28) for all

- Scale
- Timing
- Revenue

Criteria that were a low priority for most (8 of 12)

- Capacity building
- Affordability
- Fertilisation
- Uncertainty
- Consistency
- Attraction
- Demand
- Transferability

The next steps in the scoring process

- Exclude all the low priority for all
- Exclude the low priority for most (with consent from steering group)
- Revisit the high priority for all or most and top 10 – consider any duplication, priority, and the suggestions
- Choose top four to six criteria
- Allocate weightings to the top criteria
- Apply the resulting weightings to the interventions

APPENDIX 9: SUMMARY OF WORKSHOP 2 FEBRUARY 2001

Aims of workshop 2

The specific aims of workshop two were to:

1. decide the context and objectives for the portfolio to increase incidental physical activity in the transport setting;
2. identify the range of possible interventions to increase incidental physical activity in the transport setting;
3. decide the criteria and weightings that will be used to select the interventions for the final portfolio;
4. define the portfolio of interventions;
5. define next steps in implementation of the portfolio, particularly for SIGPAH; and
6. seek to improve the portfolio approach as a planning tool in public health.

Introduction

All of the invited participants were sent pre-reading material prior to the workshop. The pre-reading material consisted of: summary of workshop 1 and presentations by the invited speakers, paper outlining the potential interventions for physical activity in transport settings, review of physical activity in transport settings intervention studies, and a paper presenting the results of first scoring of criteria for assessing interventions.

The workshop began with a review of the portfolio approach and workshop one, which was followed by outline of the objectives for workshop 2.

Outcomes

Update

The determinants, evidence and risk management objectives were summarised as outlined in the pre-reading materials.

It was suggested the term 'incidental' was not appropriate for the portfolio, as transport physical activity is not seen as incidental but as planned behaviour. Incidental activity has been defined as physical activity that is undertaken while performing other functions (usually a by-product of the function rather than specifically planned physical activity) (NSW Physical Activity Taskforce). There was general agreement for the pilot to be named: 'promoting physical activity in transport settings'.

Portfolio Objectives

It was suggested that 'Active Transport' was the term that was appropriate to use in relation to physical activity in transport settings. Active Transport was defined as: Travel by foot, bicycle, non-motorised or public transport for a sustainable environment and better health.

The objectives of the portfolio are based on active transport and include:

- to increase the proportion of people travelling by foot, bicycle, non-motorised or public transport for a sustainable environment and better health; and
- to increase the number of trips by foot, bicycle, non-motorised or public transport for a sustainable environment and better health.

Context

The context of the portfolio was discussed and it was confirmed that the following were applicable:

- Custodian – SIGPAH (Strategic Inter-Governmental forum on Physical Activity and Health)
- Stakeholders – multi-sector
- Focus – multi-level
- Resources – unrestricted at the present time
- Time frame – 10 years

Interventions

A summary of the interventions in the area of active transport was presented. It was agreed that stair use studies would be removed from the list of intervention studies, as they are not directly related to active transport. Any additional intervention studies identified by the workshop participants will be provided to the consultant.

Issues related to evidence

Because of the limited number of interventions, it was decided that there was a need to ascertain what interventions have the potential to be implemented rather than focusing on the quality of the evidence. For this reason, there may be a need to look at other criteria than evidence.

Range of Interventions

The interventions suggested at the workshop are presented in Table 8 on page 19. The settings identified and included in the portfolio are schools, workplace, media, shopping, transport, health services, universities, individuals, government (both state & local) and local government.

To determine the range of interventions to be included in the portfolio a mix of interventions was suggested by the group. These interventions include those related to policy and legislation (such as regulation and enforcement, public policy, and standards), programs (such as social marketing, community development, and identification and surveillance of determinants), and infrastructure (such as research, management, and information systems).

Criteria for Choosing Interventions

The top ten criteria based on the scoring exercise following the first workshop were effectiveness; social acceptability; evidence-based; sustainability; political acceptability; utilisation; synergistic; cost; measurable; partnerships. The group scored the top criteria out of 20 to produce the final list of top criteria (see Table 18). Several of the criteria were then combined as they were seen to be similar: effectiveness & evidence-based & measurable; partnership & capacity building; utilisation of existing infrastructure & synergistic. These combinations became the five criteria included on the final list and the previously separate criteria definitions were reassigned to the new combinations. The five criteria were assigned weights by the group based on their level of importance when deciding interventions (see Table 19).

The criteria were then tested on some sample interventions to allow the group to become familiar with the process.

Defining the Portfolio

The final portfolio will be decided based on the intervention weightings as applied by the group. This will be conducted by email. In addition, the group will also determine the settings that are most important within the portfolio based on level of importance.

Where to from here?

Sequence, timeline and responsibility will be decided at a later date after the settings and interventions have been determined.

Table 18: Criteria Scoring – Round 2

Criterion	Ratings of individual decision-makers*												Total	Rank	
	1	2	3	4	5	6	7	8	9	10	11	12			13
Evidence-based; effectiveness	4	4	5	5	5	4	5	4	2	3	4	4	1	50	1
Sustainability	3	1	4	0	5	4	3	4	3	3	3	4	2	39	3
Acceptability	3	3	4	5	2	4	5	4	1	3	1	1	2	38	4
Utilises infrastructure	2	1	0	0	2	1	2	1	1	2	2	1	1	16	8
Synergistic	2	5	4	5	1	0	0	0	3	2	2	2	2	28	5
Measurable	2	1	0	0	0	0	2	2	3	2	2	4	3	21	7
Partnerships	2	3	0	0	0	3	1	2	3	3	3	3	4.5	27.5	6
Capacity building	2	2	3	5	5	4	2	3	4	2	3	1	4.5	40.5	2

* Each decision-maker distributed a total of 20 points between the eight criteria.

Table 19: Weights Assigned to the Criteria

Criterion	Ratings of individual decision-makers*												Total	Weight
	1	2	3	4	5	6	7	8	9	10	11	12		
Evidence-based; effectiveness; measurable	3	3	2	2.5	3	3	3	3	3	1	2	2	30.5	1.79
Capacity building; partnerships	3	2	3	2.5	3	1	2	2	2	3	2	2	27.5	1.62
Sustainability	4	2	1	1	1	2	2	2	2	3	2	3	25	1.47
Acceptability	0	2	1	2.5	1	3	1	1.5	3	2	2	1	20	1.17
Synergistic; utilises infrastructure	0	1	3	1.5	2	1	2	1.5	0	1	2	2	17	1
													120	

* Each decision-maker distributed a total of 10 points between the five criteria.

APPENDIX 10: INSTRUCTIONS FOR SPECIFYING CRITERIA AND SETTING PRIORITIES TO SELECT A PORTFOLIO OF INTERVENTIONS

Given to participants following workshop 1

Background

The priority setting process is predicated on the assumption that there are insufficient resources to do everything that you might like to do to increase physical activity in the transport setting. The first step in selecting the interventions is to identify a set of criteria against which the value of rival interventions can be assessed. A list of possible criteria was generated at the November workshop [workshop 1] in Sydney. To be manageable the list needs to be reduced to five or six.

Task

What are the criteria that you would use to select between interventions to promote increased physical activity in the transport setting? For each criterion on the list provided, give a score from 1 to 28, starting with 1 for the criterion with your highest priority.

Keep the defined objective of the portfolio in mind when scoring the criteria. The big picture objective or goal that received general support at the November workshop was to create sustainable environments that encourage walking, cycling and use of public transport. A more specific, measurable objective was to increase the proportion of short trips that are walking or cycling trips.

You may find it easiest, before you look at the list, to think about what criteria you use? If you think of new criteria that would be in your top five, please add them to the list and give the appropriate score. If you feel there is duplication in any of the criteria or that wording needs changing, please indicate.

Return your score sheet to Margaret Miller either by mail or email by 22 December.

margmiller@bigpond.com

Table 20: Potential Criteria for Assessing Interventions – Score Sheet

Criterion	Definition	Score
1. Effectiveness	To what extent will the intervention achieve portfolio objectives?	
2. Evidence-based	What is the strength of evidence of effectiveness of the intervention in achieving portfolio objectives?	
3. Other benefits	Is the intervention likely to achieve benefits other than the primary objective?	
4. Sustainability	To what extent is the intervention likely to continue being effective after initial resources are withdrawn?	
5. Capacity-building	To what extent will the intervention increase the capacity to respond to problems in future?	
6. Selectivity	To what extent does the intervention reach high-priority population sub-groups?	
7. Distribution	Does the intervention affect a few people a great deal or a lot of people only slightly?	
8. Cost	How expensive (per unit of outcome) is the intervention likely to be?	
9. Affordability	Can the intervention be accommodated within existing budgets?	
10. Scale	What is the relationship between unit costs and the scale of the intervention? Are there (dis)economies of scale? What is the minimum investment required to achieve the desired effect?	
11. Feasibility	Are the necessary human skills and other resources available?	
12. Political acceptability	Ease with which intervention can be implemented given local political circumstances	
13. Social acceptability	Extent to which intervention will be acceptable to local community.	
14. Timing (effects)	How soon will the benefits be realised?	
15. Fertilisation	Will intervention now provide a basis to build on?	
16. Uncertainty	What is the extent to which benefits are 'guaranteed' versus uncertain (how good is the evidence that the program will achieve X effect? What is the likely variation around X?)	
17. Flexibility	What is the extent to which design or scale of intervention can be changed quickly should circumstances change?	
18. Consistency	Is the intervention consistent with national/local priorities?	
19. Attraction	Is the intervention likely to attract the interest (and money) of at least three partners within 6 months?	
20. Revenue	Is the intervention likely to generate a revenue stream?	
21. Synergistic	Is the intervention complementary with other interventions and agencies? Does it add value to other interventions?	
22. Utilisation	Does the intervention promote better use of existing infrastructure (e.g. footpaths) and services? Does it match services with people?	
23. Demand	Does the intervention create manageable demand? Can the system cope with increased demand?	
24. Measurable	Are there measurable benefits of the intervention (e.g. air quality, morbidity, running costs of cars)?	
25. Evaluable	Is the intervention able to be evaluated?	
26. Transferability	How transferable is the intervention from one location/setting/organisation to another?	
27. Partnerships	To what extent does the intervention support capacity building among partners?	
28. Environmental sustainability	To what extent does the intervention promote sustained environment?	
Any new criteria? Comments?		

APPENDIX 11: INSTRUCTIONS FOR SCORING OF INTERVENTIONS

Following workshop 2, the workshop participants were sent the long-list of active transport interventions that had been determined at that workshop and were asked to apply each of the criteria to the interventions.

Background

At workshop 2 we identified potential policy, program and infrastructure interventions for a range of settings. We also decided on the key criteria for selecting interventions from the long-list and tried these with two programs (Walk-to-Work and TravelSmart).

Next step

The next step in the portfolio selection process is to apply the five criteria to the long-list of interventions. In the development of the Fruit and Vegetable portfolio, there were enough existing evaluation studies to allow best practice for each setting to be defined and the scoring applied to each setting. However, since we do not have sufficient case studies for Active Transport, and we need to reach consensus by mail, it will be necessary to score each intervention. Scoring tables for each setting are attached. You need to score each intervention in each setting from 0 to 5, 5 being the highest/best rating.

To maintain consistency when scoring, you should focus on the objectives of the portfolio and the criteria definitions as provided below.

Completion

Allow yourself at least an hour for this activity. It may take longer but the outcome is crucial to systematic definition of the portfolio. Do not allow yourself to become too bogged down with detail.

Since there is need to present the portfolio to SIGPAH at their next meeting on 29 March, please return your responses to Terri by Monday 19 March.

Portfolio objectives

The objectives for the portfolio are:

- To increase the proportion of people travelling by foot, bicycle, non-motorised or public transport for a sustainable environment and better health
- To increase the number of trips by foot, bicycle, non-motorised or public transport for a sustainable environment and better health.

Criteria definitions

- **Evidence-based; effectiveness; measurable**
 - what is the strength of evidence of effectiveness of the intervention in achieving portfolio objectives;

- to what extent will the intervention be reasonably expected to achieve portfolio objectives;
- are there measurable benefits of the intervention (e.g. air quality, morbidity, running costs of cars)

- **Capacity building; partnerships**

- to what extent will the intervention increase the capacity to respond to problems in future;
- to what extent does the intervention support capacity building among partners

- **Sustainability**

- to what extent is the intervention likely to continue being effective after initial resources are withdrawn

- **Acceptability**

- ease with which the intervention can be implemented given local political circumstances;
- extent to which the intervention will be acceptable to local community

- **Synergistic; utilises infrastructure**

- is the intervention complementary with other interventions and agencies;
- does it add value to other interventions; does the intervention promote better use of existing infrastructure (e.g. footpaths) and services;
- does it match services with people

Note: The criteria 'Potential for Effectiveness' and 'Evidence-based/measurable' are separated on the scoring sheet because when we worked it through with some of the interventions there were too many ambiguities to allow meaningful scoring. So please score each separately.

Notes on interventions

Nine settings were identified in workshop 2, with all the interventions suggested at the workshop being assigned to a setting. When an intervention crosses over into more than one setting, it has been included in all applicable settings – e.g., worksite interventions also relate to universities, health services.

Your score should be based on potential to implement the intervention in the defined setting.

Collection of research information for individuals, such as data on barriers, behaviours for specific groups – e.g. Aboriginal, elderly, urban/rural/remote – was identified as an intervention in Workshop 2. However, these data would be collected to assist planning and implementation of interventions in a setting, so the category of 'individuals' was excluded from the scoring exercise.

Table 21: Scoring Example 1: ‘Walk-to-work’ Program Scored at Workshop 2

Criterion						
Individual decision maker	Effectiveness; evidence-based; measurable (Weight 1.79)	Capacity building; partnerships (Weight 1.62)	Sustainability (Weight 1.47)	Acceptability (Weight 1.17)	Synergistic; utilises infrastructure (Weight 1)	Grand total
1	4	4	1	3	5	
2	4	5	2	4	3	
3	2	2	1	5	4	
4	2	3	1	4	4	
5	4	4	1	3	5	
6	2	3	0	3	3	
7	2	3	1	4	3	
8	3	4	1	4	3	
9	2	3	1	4	4	
10	2	2	0	3	3	
11	3	5	0	5	4	
12	3	4	1	3	4	
13	3	3	2	4	5	
Total	36	45	12	49	50	
Rating (total × weight)	64.4	72.9	17.6	57.3	50	262.2

* Each criterion was scored out of 5.

Table 22: Scoring Example 2: ‘TravelSmart’ Program Scored at Workshop 2

Criterion						
Individual decision maker	Effectiveness; evidence-based; measurable (Weight 1.79)	Capacity building; partnerships (Weight 1.62)	Sustainability (Weight 1.47)	Acceptability (Weight 1.17)	Synergistic; utilises infrastructure (Weight 1)	Grand total
1	4	3	3	4	5	
2	5	4	4	4	5	
3	5	2	2	3	3	
4	4	4	5	4	5	
5	4	3	3	4	5	
6	4	2	2	4	4	
7	5	3	2	5	5	
8	5	2	3	4	4	
9	4	4	3	4	4	
10	4	3	3	3	5	
11	4	3	3	5	5	
12	4	4	3	4	4	
13	5	4	4	4	3	
Total	52	41	40	52	57	
Rating (total × weight)	93.1	66.4	58.8	60.8	57	336

* Each criterion was scored out of 5.

Table 23A: Scoresheet for School Setting

School-based interventions are intended to reach students and parents, as well as those to whom the school is a workplace. Thus, those interventions related to workplaces are included in the following list.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Health impact assessment of school location in relation to other facilities – e.g. placement of major roads						
School policies that link active transport to Health Promoting Schools & Active Australia Schools goals and policies						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Venue choice guideline policies – active transport options available						
Provision of information regarding active transport options						
Relaxed dress codes to allow casual wear						
Parking & drop off policies						
Planning for accessibility to active transport						
School policy to reduce need to carry heavy items						
Walking school bus program						
Walk safely to school day						
Safe routes to school promotion						
Bike Education – skills training						
TravelSmart Schools program						
Active transport access guides						
Advocacy program for the school community						
Green transport plan						
Provision of safe routes to school – i.e. infrastructure						
Provision of adequate bike parking facilities						
Secure storage facilities for skateboards, scooters, etc.						
Shower & change facilities						
Teacher & parent training in use & modelling of active transport modes						
Provision of adequate public transport facilities to & from schools						
Data collection – baseline, monitoring						
Incentives to encourage active transport modes						
Use of company bicycle & provision of funding for public transport tickets for work related journeys						
Education – awareness raising						
Walk-to-work & ride-to-work competitions						
Awards for active transport schools, workplaces						

Table 23B: Scoresheet for Workplace Setting
Workplaces represent a convenient setting to promote healthy lifestyles.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Planning guidelines for facilities, parking policies at workplaces						
Venue choice guideline policies to include the availability of active transport options – e.g. for conferences, workshops						
Provision of information to workers regarding active transport options						
Relaxed dress codes to allow casual wear						
Incentives to encourage workers to use active transport modes – e.g. low interest loans to buy bikes						
Use of company bicycle & provision of funding for public transport tickets for work related journeys						
Education – awareness raising of active transport						
Active transport access guides						
Walk-to-work & ride-to-work competitions						
Awards for active transport workplaces						
Shower & change facilities						
Provision of adequate bike parking facilities						
Public transport facilities that are safe, adequate						
Data collection – baseline, monitoring						

Table 23C: Scoresheet for Shopping Setting

Shopping settings have the potential to reach both customers and workers. Thus, those interventions related to workplaces are included in the following list. Shopping areas can be large shopping centres or smaller stores.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Planning guidelines for facility placement, parking policies						
Provision of information regarding active transport options to both shoppers & workers						
Relaxed dress codes to allow casual wear						
Controls over development & planning policies on the placement of shops						
Tax on parking facilities to be paid for by shoppers						
Health impact statement of shop location in relation to other facilities – e.g. placement of major roads						
Incentives to encourage workers to use active transport modes – e.g. low interest loans to buy bikes						
Use of company bicycle & provision of funding for public transport tickets for work related journeys						
Education – awareness raising of active transport						
Active transport access guides						
Walk-to-work & ride-to-work competitions						
Awards for active transport workplaces						
Awareness raising programs						
Active transport access guides						
Tailored active transport information						
Home delivery only available for personal shoppers						
Accreditation for shops based on transport accessibility rating						
Shower & change facilities						
Provision of adequate bike parking facilities for both workers & shoppers						
Public transport facilities that are safe, adequate						
Data collection – baseline, monitoring						
Pedestrian friendly environments – safe, pleasant, direct paths						

Table 23D: Scoresheet for Health Services Setting

Health services target both the users of the health facilities and the staff. Thus, those interventions related to workplaces are included in the following list.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Planning policies & guidelines for health service facility placement & parking						
Venue choice guideline policies (e.g. for conferences, workshops) – ensure that active transport options are available						
Provision of information regarding active transport options						
Relaxed dress codes to allow for casual wear						
Health system policy that encourages active transport as a form of physical activity						
Incentives to encourage workers to use active transport modes – e.g. low interest loans to buy bikes						
Use of company bicycle & provision of funding for public transport tickets for work-related journeys						
Education – awareness raising of active transport						
Advocacy for active transport modes						
Advice – use of active prescriptions & other opportunities to promote active transport						
Training of staff to provide advice regarding physical activity options – active transport as an activity						
Active transport access guides						
Walk-to-work & ride-to-work competitions						
Awards for active transport workplaces						
Shower & change facilities						
Provision of adequate bike parking facilities for both staff & users						
Public transport facilities that are safe, adequate						
Data collection – baseline, monitoring						

Table 23E: Scoresheet for Universities Setting

Universities are both an education and a workplace setting. Thus, those interventions related to workplaces are included in the following list.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Planning policies & guidelines for health service facility placement & parking						
Venue choice guideline policies (e.g. for conferences, workshops) – ensure that active transport options are available						
Provision of information regarding active transport options						
Relaxed dress codes to allow for casual wear						
Training of professionals in a range of sectors that influence active transport use – e.g. urban design, transport, health professionals						
Incentives to encourage workers to use active transport modes – e.g. low interest loans to buy bikes						
Use of company bicycle & provision of funding for public transport tickets for work related journeys						
Education – awareness raising of active transport						
Active transport access guides						
Walk-to-work & ride-to-work competitions						
Awards for active transport workplaces						
Shower & change facilities						
Provision of adequate bike parking facilities						
Public transport facilities that are safe, adequate						
Data collection – baseline, monitoring						

Table 23F: Scoresheet for Media Setting

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Favourable policy for media						
Frame messages to suit target audience						
Advocacy						
Data collection – baseline, monitoring						

Table 23G: Scoresheet for Local Government Setting

Local government settings provide policy and program direction, as well as a workplace. Thus, those interventions related to workplaces are included in the following list.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Planning guidelines for facility placement, parking policies						
Venue choice guideline policies (e.g. for conferences, workshops) – ensure that active transport options are available						
Provision of information regarding active transport options						
Relaxed dress codes to allow for casual wear						
Health impact review to include active transport						
Active transport included in local government strategic plans at the policy level						
Disability access – pedestrian access mobility plans for all areas						
Parking policies – number, location of parking facilities						
Dog policies – education & enforcement of local government regulations concerning wandering dogs						
Planning of amendment reviews						
Event transport policy – ensure active transport is available at venues						
Incentives to encourage workers to use active transport modes – e.g. low interest loans to buy bikes						
Use of company bicycle & provision of funded public transport tickets for work-related journeys						
Education/awareness of councillors & staff of active transport modes						
Implementation of Local Government guidelines, including Active Australia demonstration projects						
Park and ride & park and walk programs						
Active Australia local government network						
Maps & guides to local destinations, facilities						
Local government awards for areas that score high for active transport						
Develop guides to encourage health promoters & local government to work together						
Promote an Active Australia Day as a national event						
Encourage the twinning of cities to exchange ideas, expertise, programs, research – e.g. with US cities						
Education – awareness raising						
Active transport access guides						
Walk-to-work & ride-to-work competitions						
Awards for active transport workplaces, community facilities						

continues

Table 23G: Scoresheet for Local Government Setting (cont.)

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Shower & change facilities						
Provision of adequate bike parking facilities						
Public transport facilities that are safe, adequate						
Provision of bikeways & walking paths that are convenient, safe, appropriate						
Provision of adequate lighting in all areas						
Community bus						
Bus stops & shelters that are safe & appropriate for the community						
Installation of pedestrian & bike-friendly traffic lights – that allow for crossing time						
Development and implementation of guidelines for pedestrian & bike-friendly environments as applicable to individual communities						
Implement & adequately fund a TravelSmart officer program						
Implement & adequately fund a bike & pedestrian officer program						
Implement & adequately fund a road safety officer training program						
Incorporate a cross government approach to active transport in encouraging safe environments for physical activity (SEPA)						
Policing at community level – e.g. foot, bike patrols						
Data collection – baseline, monitoring						
Develop & foster links with researchers to conduct research using Geographical Information Systems (mapping) to plan, analyse, review & advise on active transport modes.						

Table 23I: Scoresheet for Government (Both State and Local) Setting

Government (state & local) settings include policy, program and community strategies, as well as being a workplace. Thus, those interventions related to workplaces are included.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Planning guidelines for facility placement, parking policies						
Venue choice guideline policies (e.g. for conferences, workshops) – ensure that active transport options are available						
Provision of information regarding active transport options						
Relaxed dress codes to allow for casual wear						
Incentives to encourage workers to use active transport modes – e.g. low interest loans to buy bikes						
Development of a Charter on Transport & Health – e.g. European Charter						
Development of quantifiable targets for walking & cycling in the community						
Linking with policies of other non-health sectors – environment,						
Development of planning guidelines – addresses issues of permeability, safety, etc.						
Establishment of a National Transport secretariat						
State Government to provide leadership in delivery of the program						
Use of company bicycle & provision of funding for public transport tickets for work related journeys						
Education – awareness raising of active transport						
Planning for an Active Transport Conference						
Implement programs from a whole-of-government approach – e.g. include all sectors that may be interested – such as national greenhouse office, transport						
Active transport access guides						
Walk-to-work & ride-to-work competitions						
Awards for active transport workplaces						
Shower & change facilities						
Provision of adequate bike parking facilities						
Public transport facilities that are safe, adequate						
Monitoring & surveillance – baseline, monitoring						
Linking research & data sets from across the different sectors – identifying what research has been conducted, accessibility						
Development of a partnership group that is national, high level e.g. AHMAC & equivalents						
Conduct a cost benefit analysis of active transport						
Program outcomes important for advocacy with other groups						

Table 23J: Scoresheet for Transport Setting

Transport includes both workplaces and community settings. Thus, those interventions related to workplaces are included in the following list.

Intervention	Criteria – Score each 0–5 with 5 as highest ranking					
	Potential for effectiveness	Evidence-based; measurable	Capacity-building; partnerships	Sustainability	Acceptability	Synergistic; utilises infrastructure
Score each intervention against each of the criteria						
Review of the tax policy in relation to use of transport – e.g. company car & FBT						
Planning guidelines for facility placement, parking policies						
Venue choice guideline policies (e.g. for conferences, workshops) – ensure that active transport options are available						
Provision of information regarding active transport options						
Relaxed dress codes to allow for casual wear						
Incentives to encourage workers to use active transport modes – e.g. low interest loans to buy bikes						
Use of company bicycle & provision of funding for public transport tickets for work-related journeys						
Education – awareness raising of active transport						
Active transport access guides						
Walk-to-work & ride-to-work competitions						
Awards for active transport workplaces						
Shower & change facilities						
Provision of adequate bike parking facilities						
Public transport facilities that are safe, adequate						
Increase in parking fee rates						
Increase in fuel prices						
Subsidise public transport to encourage people to use active transport modes						
Data on the impact of fees/taxes/subsidised public transport on levels of activity						
Data collection – baseline, monitoring						

APPENDIX 12: KEY OBSERVATIONS AND RECOMMENDATIONS ON USING THE PLANNING FRAMEWORK

1. The domain of active transport is an emerging area for health promotion. Limited information about determinants and lack of empirical evidence of effectiveness of many interventions in the active transport domain restricted the identification of an evidence-based portfolio and makes the collection of monitoring data all the more important.
2. The Planning Framework provided a transparent process for assessing the available published data and accessing the knowledge and expertise of experts in the field. In this regard, it should have similar application in other emerging areas of public health to identify a portfolio of interventions considered by experts to have the most potential to be effective.
3. In an emerging area, an agenda-setting workshop is a desirable first step to introduce the key aspects of the issue to all stakeholders and to gauge and stimulate interest in inter-sectoral action to address the issue.
4. Sufficient time needs to be allowed when planning the initial workshop to engage the interest of representatives of sectors that may not perceive a role for themselves in addressing the issue.
5. To be most successful, initial engagement of key stakeholders should address their needs and priorities, e.g. the potential to reduce greenhouse gases for the environment sector.
6. The context of the portfolio should be discussed early in the Framework Planning process in a forum with a wide representation of stakeholders. This will help to clarify issues, achieve consensus and provide a focus for subsequent discussions.
7. The composition of the decision-making group should reflect the context and objectives of the portfolio.
8. When published data are scarce in an emerging area, systematic review and inclusion of expert opinion and 'grey literature' provide an indication of data collection needs.
9. When lack of data limits risk/benefit analysis, grouping of determinants into action domains such as attitudes, knowledge, behaviour and environments, helps to progress the planning process.
10. Further testing of the framework approach should involve a domain with adequate data on the risks and benefits posed by determinants so that a quantitative model for prioritisation of determinants and definition of risk management objectives is available.
11. Identification of the range of potential interventions should be informed by a literature review, identification of current initiatives, evaluation of effectiveness of interventions in other domains (e.g. smoking, road safety), and the knowledge and experience of experts. Lack of evaluation of interventions should not be a barrier to inclusion in the list of potential interventions.
12. Brainstorming by informed stakeholders using prompts such as settings, risk management objectives and categories of interventions (policy, program, infrastructure) is a useful way to identify the range of potential interventions.
13. Mailed scoring exercises are useful to reduce time in workshops, but to be successful they require unambiguous definition of terms and an understanding of and compliance with the agreed process.
14. Consideration of policy, program and infrastructure interventions within settings helps to ensure a comprehensive approach to portfolio planning.
15. A forum for promotion and advancement of the completed portfolio is desirable to instigate the discussion of roles and strategic planning within and between sectors.
16. Systems to allow evaluation and monitoring should be established as part of the portfolio. This would provide the incentive to develop and foster networks that encourage the sharing of information, data and experience.
17. Identification of short-, medium- and long-term actions should be included as part of portfolio implementation planning.
18. Although specific criteria selected by the decision-making group are used to guide selection of individual interventions in a portfolio, intervention implementation should also be guided by broader public health principles such as the Ottawa Charter and/or those specific to the domain of intervention.
19. Both SIGPAH and the NPHP should lead inter-sectoral action to implement the portfolio.
20. Overall, the Planning Framework process allowed the successful identification of a comprehensive portfolio to promote active transport.
21. Consideration of interventions by setting, both in the identification and appraisal of potential intervention options, is a useful extra step not specified in the existing process.