



Strategies for Non-Motorised and Vulnerable Road Users

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Abstract

There tends to be less emphasis on non-car/truck road users such as pedestrians, bicyclists, public transport users and disabled road users in road programs than in current and emerging transport policy. Where explicit attention is given to these users, initiatives are not always integrated with road policies, comprehensive road programs or complete road projects. The perception, and sometimes the reality, can be that non-car/truck users of roads are treated as 'externalities' to be managed rather than customers to be satisfied.

The role of road authorities around Australia is changing, although some of the directions are not always clear. With increasing emphasis on 'integrated transport strategies', the policy/regulation role of road authorities is likely to be within a narrower context, with a clear focus on deliverables such as asset creation and management.

Road authorities are becoming 'customer focused' and have placed an increasing importance on non-car/truck road users. This has not necessarily permeated throughout road authorities, nor has it always been effectively communicated to customers.

This paper describes the interim outcomes of a project with the objectives of:

- ♦ positioning road authorities to provide effectively for the needs and expectations of customers who do not use cars or trucks; and
- ♦ providing a framework from which a 3-year rolling Traffic Management program, involving fundamental research and development of standards and guidelines can be developed to include non-car/truck road users. It will also provide standards and guidelines to assist industry and road authorities achieve effective and nationally consistent results.

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INTRODUCTION

ARRB Transport Research was retained by Austroads (the national organisation consisting of representatives from all State Road Authorities, Transit New Zealand, the Australian Local Government Association and the Commonwealth Department of Transport and Regional Development) in early 1999 to undertake a project to develop a set of strategies for non-motorised and vulnerable road users, such as cyclists, pedestrians, the elderly, children, the disabled, motorcyclists and bus public transport users, in order to assist in the establishment of a series of priorities for a 3-year rolling Traffic Management Program of research and development.

This project addresses the critical issues relating to the development of a set programs, research initiatives and strategies for these road users. Two stakeholder consultation workshops were held in February and May 1999 to identify key issues of concerns and challenges and directions within this area of focus.

BACKGROUND

Medieval cities were built for walking, and this required that living and working were close together. The railway made spatial division of labour possible and so opened the way for the growth of cities. Rapid transit and the private car have facilitated the expansion of metropolitan areas over wider and wider territories. However, the growing separation of human activities demands ever longer trips and greater volumes of traffic with all their associated problems of congestion, traffic accidents, energy use, pollution and land consumption. (Wegener 1995)

David Engwicht (1993) has argued that auto-dominated urban areas introduce a group of citizens to which he refers to as 'access-to-exchange disadvantaged (ATED)' such as the elderly, the poor, the disadvantaged, the disabled, children and those who choose to not own a car, with over 40 percent of the population in most Westernised cities. This loss of mobility and accessibility causes these groups to bear an unfair proportion of environmental and social costs.

In conclusion, Engwicht (1993) argues that the introduction of an education process into these issues may be hastened by the declaration of a *Bill of Access-to-Exchange Rights* which would entitle people to the equitable distribution of mobility and accessibility rights to all citizens, with preferential treatment for pedestrians and cyclists and the fundamental rights to access and public transport and the equitable distribution of user costs across the income and cultural spectrum. He concludes that "... people are entitled to the protection of their right to a just and equitable share of the 'exchange' opportunities which a city can provide. No group or person should be allowed to improve its share of these exchange opportunities at the expense of another group or person unless this action is necessary to right an existing unjust distribution "

Hardin Tibbs (1997) identified some prevailing assumptions about the future of Australian transport in his paper entitled *Global Change: A Context for Transport Planning*, prepared for Main Roads Western Australia:

Transport: Some Prevailing Assumptions and Perceptions

- ◆ Roads will continue to be the most important component of the fixed transport infrastructure. Long distance passenger rail will continue to decline, while air traffic will continue to grow.
- ◆ The motor vehicle in some form will continue to dominate transport for the foreseeable future. Congestion will continue to plague urban areas as travel grows faster than population.
- ◆ People will continue to show a decisive preference for the private car. Cars will continue to be affordable to most people, and the use of public transport (buses and trains) will continue to decline.
- ◆ There will be no major technology sector other than ITS, which will not have a major structural impact.
- ◆ The population of Australia will continue to grow slowly as it has during the last 20 years, with limited immigration. Rural areas will continue to depopulate as urban areas grow. Jobs in cities will continue to decentralise.
- ◆ In the short to medium term, there will be no major shift in the framework of laws, regulations, fiscal policy and pricing mechanisms which shape the transport system.
- ◆ Environmental concern will focus principally on urban air pollution and carbon dioxide emissions, which will be addressed primarily by controlling emissions and improving fuel efficiency. There will be steady improvements, but no dramatic solution is in view.

Tibbs (1997) also states that " *...sustainability of the transport system cannot be achieved independently of the socio-economic system as a whole, but the level of unsustainability can be reduced and this is an important goal for policy. True sustainability can become a goal for the transport system only after the whole socio-economic system moves towards sustainability* "

A defined emphasis on non-motorised and vulnerable road users such as pedestrians, bicyclists, public transport users and disabled road users has been somewhat lacking in road and transport programs in recent times in comparison to the focus outlined in current and emerging worldwide transport policy trends. Where explicit attention has focussed on these users, initiatives have not always been integrated with existing road policies, comprehensive road programs or complete transport infrastructure projects. The perception, and too often the reality, can be that non-motorised and vulnerable road users are treated as 'externalities' to be managed rather than as unique and integral customers to be satisfied as part of the holistic planning process.

Experience and practice vary substantially across Australia, between the States and Territories and also between levels of government. There may also be differences in objective circumstances and statutory and policy frameworks within which transport authorities operate. The role of road and transport authorities around Australia is evolving, but current direction is not always clear. Generally, there has been a shift from the reactive role towards a policy, regulation and management role; in some States (for example, WA) this may be offset by a transfer of strategic policy and planning functions to a broader-based transport agency. With increasing emphasis on integrated transport strategies, the policy/regulation role of road authorities is likely to be confined within a narrower context, with a clear focus on deliverables such as asset creation and management.

Transport authorities are becoming increasingly 'customer focused' (i.e. end user) and have placed an elevated and increasing priority on non-motorised and vulnerable road users, although this initiative has neither always permeated throughout the agencies nor has it always been effectively communicated to the end users.

Objective of the Project

The primary objective of the *Austroads Strategic Plan (1998-2001)* is:

"...to ensure that roads are considered in their wider national, environmental, land use, social and transport system settings."

Several key issues of environment and sustainable transport are (Austroads 1998):

Issue 1.2: The Impact of Roads and Road Transport on Sustainability

Development and promotion of an ecologically balanced approach to road development and use, with least impact on the long-term viability of life, involving research and analysis of land use, resource consumption and technological solutions.

Issue 1.4: Equity of Access and Mobility in Transport

Equitable provision of mobility, amenity and access to the road system for the community.

Issue 1.5: Environmental Impact of Roads and Road Use

Achievement of a positive contribution to and minimisation of adverse impacts on the environment due to road transport and other road use.

This project:

- ◆ Reflects the Austroads values of the:
 - ⇒ incorporation of stakeholder needs in its strategies and programs;
 - ⇒ recognition of regional differences across Australia;
 - ⇒ recognition of the principles of Ecologically Sustainable Development (ESD); and
 - ⇒ consideration of all road users, including non-motorised and vulnerable road users, as part of the total transport system.
- ◆ Supports Austroads objectives, including the:
 - ⇒ assurance that roads are considered in their wider national, environmental, land use, social and transport system settings, most specifically through:
 - effective contribution to a shared national vision and outcomes for transport in Australia and New Zealand, addressing economic, social, environmental and safety needs (Issue 1.1);
 - development and promotion of an ecologically balanced approach to transport development and use (Issue 1.2);
 - equitable provision of mobility, amenity and access to the road system for the community (Issue 1.4);
 - better integration between land use planning and road and transport planning (Issue 1.6); and
 - improved modal integration both between the various road-based transport modes and between road and other transport modes, to better serve the community's transport needs (Issue 1.7).

- ⇒ promotion of safer and more efficient use of the road system, most specifically through:
 - improved transport performance through more efficient utilisation of road infrastructure (Issue 2.2); and
 - enhancement of the safety of road users (Issue 2.4).
- ⇒ promotion of the development of Australasian standards, determining best practice, and providing professional advice concerning roads and their use, most specifically through:
 - reflecting stakeholder and community needs in Austroads strategies (Issue 4.1);
 - a coordinated approach to regulatory and administrative practice, research, and technical standards, to achieve national consistency and minimise duplication of effort (Issue 4.2); and
 - greater participation by local councils in Austroads activities, which enhances the implementation nationally of best practice in the management of local government roads (Issue 4.3).

There were several objectives associated with the project and these are detailed below:

- ♦ To position transport authorities with strategies which will assist them to cater effectively for the needs and expectations of customers who use non-motorised forms of transport (i.e. pedestrians, cyclists, etc.) and those who can be considered to be 'vulnerable' such as the very young, the elderly and the disabled. Those road users who fall into a 'grey' area such as users on mopeds, scooters and motorcycles will also be considered in the context of the project. Particular emphasis will be placed upon recognition of current policies, strategies and practice (including the *Disability Discrimination Act* (1992) and the *National Bicycle Strategy* (1998) amongst others) at the State and national levels and to identify the gaps within these frameworks.
- ♦ To provide a national agenda and framework from which a 3-year rolling Traffic Management program, involving fundamental research and development of standards and guidelines can be developed to include non-car/truck road users. It will also provide standards and guidelines to assist industry and road authorities achieve effective and nationally consistent results.

Outline of Project

The project was undertaken in three (3) phases:

- ♦ A detailed literature review encompassing programs, policies and trends from around Australia and the rest of the world relating to initiatives for non-motorised and vulnerable road users;
- ♦ A two stage stakeholder consultation process; and
- ♦ Development of a strategy document outlining projected traffic management needs of non-motorised and vulnerable road users, areas for improvement and research and development priorities.

LITERATURE REVIEW

A detailed literature review was undertaken resulted in the collation of 'state of the art' policies, programs, processes and trends from around Australia and the rest of world. 'Best practice' case studies were then identified and will be detailed in the strategy report. These case studies include:

- ◆ Gunnarsson's Model of Urban Spaces (Gunnarsson 1990);
- ◆ *Charter of Rights for the Pedestrian* adopted by the European Parliament in 1988 (Gunnarsson 1995);
- ◆ The Healthy City Office (City of Toronto) mandate (HCO 1991);
- ◆ Bicycle-Friendly Towns Project in West Germany (Hulsmann 1990);
- ◆ Mobility Project undertaken Coventry Council in the UK in 1993 to gauge the needs of wheelchair users (Matthews and Vujakovic 1995);
- ◆ Initiatives by regulatory agencies in Denmark to reduce child mortality on roads (Nielson 1990);
- ◆ City of Vancouver Transportation Planning Study (1996) – shift in funding priority from roads to non-motorised facilities;
- ◆ Walk Safe Program adopted in Cities of Stonnington & Port Phillip in Victoria have adopted this initiative to include treatments of roads ("black spots"), pedestrianisation of shopping precincts, reduction in crashes;
- ◆ Adoption of 30 kph speed limits in Europe;
- ◆ State of Tasmania Bicycle Advisory Committee Annual Operating Plan (State Bicycle Committee of Tasmania 1998);
- ◆ Main Roads Western Australia Draft Cycling and Pedestrian Strategy (MRWA 1997);
- ◆ Perth Area Access Plan (Department of Transport WA 1998);
- ◆ *Access Resource Kit for People with Disabilities* (Disability Services Commission of WA 1996);
- ◆ *Perth Bicycle Strategy* (Bikewest 1996);
- ◆ *Integrated Regional Transport Plan for South-East Queensland* (Queensland Main Roads and Queensland Transport 1998); and
- ◆ *National Bicycle Strategy* (Austroads 1998)

CONSULTATION WITH STAKEHOLDERS

A two stage consultation was conducted with a series of key stakeholders. The initial stage of the consultation was undertaken in conjunction with the Austroads Traffic Management Reference Group consisting of representatives from State Road and Transport Authorities, Local Government, Transit New Zealand and the Commonwealth Government. The results of this workshop are shown in **Tables 1a and 1b**. The second stage of consultation was undertaken jointly as a workshop with selected key representatives from user advocacy groups, non-road authority government agencies, professional organisations, industry, research institutions, motoring bodies and enforcement agencies; and the circulation of a questionnaire for stakeholders unable to attend the second workshop. The results of the second workshop are shown in **Table 2**.

Key issues which were emphasised in the context of the consultation included:

- ◆ perceptions and realities;
- ◆ current policies, practices and strategies at State, national and international levels;
- ◆ perception of role(s) with respect to non-motorised and vulnerable road users;
- ◆ proposed policies and guidelines;
- ◆ opportunities, challenges and constraints; and
- ◆ examples and case studies

Table 1a: Objectives and Problem Definition (Consultation with Austroads Traffic Management Reference Group)

Key Objectives

- Improvements in quality of travel and Levels of Service for users
- Increase in modal share of cycling and walking to promote sustainability objectives such as travel demand management, safety & equity.
- Road authorities often have contradictory objectives in charters; hence, the appropriate balance between users needs to be fortified and established.
- Change in the management of traffic control system priorities to accommodate non-motorised users as 'equal partners'.
- 'Sharing the street'.
- Broad spectrum public education about transport for 'everyone', not just for 'cars'.
- Land use and integrated planning to include an assessment of the non-motorised road user on a more equitable basis.
- Better management of public transport i.e. fare integration, ticketing, cost-effectiveness
- 'Barrier free' design in access and facilities
- Public transport facilities to attract users by providing off-site facilities in order to encourage smooth transfer from non-motorised modes i.e. showers, storage, signage, security, bikes on buses, education/marketing, etc.
- Valuation of costs and benefits associated with non-motorised road transport - i.e. *tangible* versus *intangible*, *quantitative* versus *qualitative*
- Achievement and recognition of social justice objectives including *equity*, *accessibility*, *mobility* and *sustainability*
- Key case studies need to be identified - both hypothetical and 'real life' examples i.e.

TravelSmart, safe routes to school, Dutch cycling initiatives, etc.

Problems to Investigate

- How is increase in modal share of non-motorised transport to be achieved?
- Need for the construction of suitable facilities for users.
- In-depth exploration of financial incentives/disincentives is needed
- Exploration and resolution of conflicts between motorised and non-motorised users in terms of prioritisation and the physical design of the road system.
- Review of existing Australian road rules and its application to non-motorised users.
- Geometric and functional design considerations.
- Increased use and application of Audio-visual and ITS aids for non-motorised users i.e. information systems, audible signals, etc
- What value does an Austroads strategy add to the process when implementation is typically at the State and Local Government levels?
- Lack of consistency with other strategies such as cycling and pedestrian strategies
- Lack of an integrated 'vision' for all road users.
- Resolution of the 'value' versus 'economics' debate.
- In-depth exploration of user perspectives
- What about 'grey' users such as rollerbladers - where do they belong? On or off road?
- Identification and resolution of safety and security issues.
- Conflicts between LATM and non-motorised users

Table 1b:-Identification of Key Issues -Consultation with Austroads Traffic Management Reference Group

TARGET GROUPS	INTEREST AREAS			
	ENGINEERING	EDUCATION/MARKETING	ENCOURAGEMENT	ENFORCEMENT
PEDESTRIANS/ ROLLERBLADERS	<ul style="list-style-type: none"> - LATM features - Roundabouts - Traffic control signal operations - Foot path - design, maintenance, operation - Security - Signage - Pedestrian crossings - Integrated planning 	<ul style="list-style-type: none"> - Conflicts with other modes - Energy consumption - Priority, "sharing the street" - Training and professional development - Safe routes to school - Increased mode share - Integrated planning 	<ul style="list-style-type: none"> - Provision of ancillary facilities - Energy consumption - "Health" promotion - Economic incentives/disincentives - "Global" responsibility - Sustainability - inter/intragenerational equity - Travel demand management 	<ul style="list-style-type: none"> - Conflict with other modes - Signage - regulatory versus warning versus information only - Road rules - "Jaywalking" - On-street parking - conflict between pedestrians & cars, caravans, buses, motorcycles, etc. - Economic incentives/disincentives
PUBLIC TRANSPORT	<ul style="list-style-type: none"> - "Access"/transfer to footpath - transfer between modes - Priority - traffic control, road space, "sharing the street", planning - Terminal/interchange design - security, facilities (showers, storage, etc.) - Bus bays, safety zone - Planning of busways/rapid transit facilities - pedestrian access 	<ul style="list-style-type: none"> - Information dissemination - IT, timetables, transfers - Public education - identify target groups - Priority - Energy consumption - Terminal/interchange design - Financial advantages - Social responsibility 	<ul style="list-style-type: none"> - Integrated planning - Affordable pricing - structure, fare integration - CBD buses/CAT service - HOV's - "Share Ride" - Energy consumption - Car pooling - Subsidies - Kiss 'n Ride/Park 'n Ride facilities 	<ul style="list-style-type: none"> - POP (point of purchase) - Traffic control priority - Safety/security (esp. at night) - Illegal vehicles on busway/HOV facilities - Illegal car parking
CYCLISTS	<ul style="list-style-type: none"> - Integration of bikeways/paths at intersections - traffic management issues/design - Road space - geometrics, bicycle detection, pavement design - Signage - Grade separation - On vs off road facilities - Pavement design - Climate control - Drainage, grades - Transfer between modes 	<ul style="list-style-type: none"> - Conflicts - Priority - Environmental pollution - air quality, noise, etc. - Training/professional development - Road rules incl. helmets - Safety - Energy consumption 	<ul style="list-style-type: none"> - Travel demand management - Economic incentives/disincentives - "Health" promotion - Environment - Energy consumption - "Cycle to Work" strategies - Facilities on public transport to accommodate bicycles - Global responsibility 	<ul style="list-style-type: none"> - Road rules - helmets, traffic signals - Safety & security - Lighting - Rules on footpaths (dual use) - courtesy vs. Enforcement - "Warning" feature

Table 1b:-Identification of Key Issues -Consultation with Austroads Traffic Management Reference Group (continued)

TARGET GROUPS	INTEREST AREAS			
	ENGINEERING	EDUCATION/MARKETING	ENCOURAGEMENT	ENFORCEMENT
MOTORCYCLIST/ MOPEDS/ SCOOTERS	<ul style="list-style-type: none"> - Intersection detection - New safety technologies - Pavement surfaces - hard vs gravel - Geometrics - Maintenance - On vs off-road - Ancillary facilities - Inter-modal transfer 	<ul style="list-style-type: none"> - Awareness of intermodal connections - Economics - cheap fuel - Promotion of off-road facilities - Energy - Safety - Road rules - Education for motorcyclists 	<ul style="list-style-type: none"> - Economics - cheap fuel - Promotion of off-road facilities - Low-powered vehicles - Parking for mopeds/scooters - Safety - Education for motorcyclists 	<ul style="list-style-type: none"> - Road rules - Speeding - Driver behaviour - Conflicts - right-of-way, priority
VULNERABLE (ELDERLY, YOUNG, DISABLED)	<ul style="list-style-type: none"> - Design features - Signage - Detection - audible ped. Signals, tactile strips, etc. - High quality footpaths - Tactile pavements - Traffic control - Visibility, perception - Gradients, ramps, curbs 	<ul style="list-style-type: none"> - Training re technology - Awareness - what and how? - Availability - Public education - Education in schools - Social justice - Perception - Guide dogs - Patience/motivation - Health promotion - Environmental sustainability - Involvement of parents - Safe routes to schools 	<ul style="list-style-type: none"> - Walking School Bus - Family involvement - School buses - embark/disembark safely - Road rules - Environmental sustainability - Equity - Accessibility - Mobility 	<ul style="list-style-type: none"> - Road rules - 25 kph in school bus zones - 40 kph in school zones - Pedestrian crossings - Obstruction/visibility issues - Helmets (bike) for young/elderly

Table 2a: Key Issues - Consultation with Other Stakeholders

Engineering

- What is the true definition of 'road'?
- Road safety versus transport system objectives
- Conflicts within Austroads guidelines - i.e. Part 13(Bicycles) can be considered to be obsolete and Part 14(Pedestrians) does not reflect current thinking or practice.
- Prescriptive guidelines versus performance standards
- Need Level of Service measures/criteria for non-motorised and vulnerable road user to reflect reasonable alternatives, a high quality of facilities and relevant network characteristics.
- Justification for 'standards'.
- Control of through traffic.
- Dedicated facilities for motorcyclists i.e. dedicated lanes, transit lanes.
- High Occupancy Vehicles in the context of preferential treatments/traffic reduction policy.
- Problem with visibility on the part of motorcyclists with respect to pedestrians
- Use of data to identify real needs, strategically and with recognition of scarce resources - performance-based outcomes
- On-road versus off-road facilities - should this project also focus beyond road reserve? Should this then continue to be an Austroads initiative?

Education/Marketing

- Terminology/nomenclature currently being used needs more concise definitions within published strategies, guidelines, etc. (i.e. non-motorised transport, high accessibility versus vulnerability).
- Ranges of vulnerability/capability/competence
- Link strategies to education and awareness
- How does public transport interface with walking?
- Clarify responsibilities with respect to disabilities, pedestrians, cycling, etc.
- Understanding of consumers' real needs so ask and respond to them!
- Awareness on the part of all levels of government the needs of the broad spectrum of users.
- Recognition of cultural differences and respective needs.
- Marketing, choices, preferences.
- Health aspects/impacts of Austroads policies and strategies should be assessed
- Awareness of limitations of other road users as well as those of the decision-makers
- Rollerbladers, skateboarders, wheelchairs within crowded pedestrian areas versus their value as forms of transport.
- Is the primary motive safety? Should it be?
- Changes in existing culture and attitudes?

Encouragement

- Why is the proportion of women riding bicycles so low in Australia?
- Ability to link strategies and programs in order to arrive at -outcomes
- Reactive "mandates" for works (i.e. crash history usually required to trigger works, etc.)
- Public transport should integrate with other modes such as parking and other facilities for bicycles, limits on Park 'n Ride etc
- Need for "champions" in local government
- Prioritise existing programs rather than new programs
- Need to define the range of needs for users especially for those with disabilities.
- Invert the traditional hierarchy - non-motorised and vulnerable users on top rather than the car
- Flexibility of priorities - i.e. time of day etc.
- Scale of initiatives does not necessarily match institutional constraints.
- Conflicts between measures to serve different road users
- Shift in focus to "priority" rather than only modification of what we already have.
- What role does "strategic planning" play?
- Problems created by "bad planning"
- Programs which encourage "high accessibility"
- Proactive approach to demonstration projects

Enforcement

- Review of Australian Road Rules and their application to non-motorised transport i.e. policies and strategies
- Legal liability?
- Speed limits and their impact on non-motorised and vulnerable road user
- Disability Discrimination Act (1992) to be truly responded to and adopted and future policies to be inclusive with regard to outcomes, strategies, etc.
- Adoption of 30 kph speed limits in urban areas.

Economics

- National/State funding allocations/arrangements
- Need for "seed"/"kickstart" funding
- Accessible public transport needs local infrastructure funding/commitment i.e. footpaths, curb ramps, road crossings, etc
- Where do taxes/rates fit in?
- Role of local councils as funding partners
- The word "vulnerable" may reflect negatively and unintentional outcomes may make users aware of risks rather than benefits.
- Demographics in Australia indicates a large "baby boomer" cohort and in 15-20 years, there will be a major shift in travel preferences
- Where will be living? Inner city versus suburbs versus exurbia

Table 2b: Perceptions Versus Realities (Consultation with Other Stakeholders)

Perceptions

- Perceptions of motorised users by non-motorised users and vice versa
- Perceptions of users by road authorities/infrastructure managers and vice versa
- Adult perceptions of cycling on roads as dangerous for children
- Road system is for motor vehicles only – perceptions by both drivers and road builders
- Perceptions can reinforce/feedback into reality – children's learned/acquired behaviour continues on into adulthood
- Support for non-motorised and vulnerable road users is just "rhetoric"
- "Let's build our way out of a problem" i.e. "plenty of land"
- Cycle facilities planned and located based upon planners' "perceptions" of demands/needs
- Car access is "essential" for business (especially retail), but a reversal of these policies can be achieved!
- "Providing the minimum is good enough"
- "Australians are different"
- Public transport is unsafe and unreliable
- "My needs must have priority"
- "The system is inaccessible to me" (and it should be) – reality versus costs
- "This problem is impossible to solve" (agencies)!
- "Darker strangers" (cultural differences)
- Work trips are the problem
- "We know best" – but no one believes us!
- "I travel too far to do it by bike" "Driving is cheaper and saves time" – costs are most often underestimated
- "Motorbiking is unsafe"
- Marketing is only promotion?
- Initiatives require "massive changes" – hence may be "insurmountable"
- Roads "pay their way" but public transport "doesn't pay its way"
- Lack of community awareness (especially of minority road users groups) – we can all play multiple roles i.e. all pedestrians at the same time, motorcyclists are ordinary people
- Resolution of cultural differences can happen
- Reality is that road supply cannot keep pace with demand and alternatives are needed
- Non-motorised transport/motorcycle parking see as a "concession" rather than an informed decision
- Complaints do not necessarily reflect the real problems
- Work trips are only 20 percent of the total number of trips
- Most trips are within walking and cycling range
- Road surface suitability – do modular surfaces necessarily cause problems for people with disabilities?
- European examples will work here given the chance
- Practice conflicts with existing policy i.e. failure to carry through on with parking policy because the development community has a louder voice than that the planning regulators
- "Person throughput is our aim" – but traffic congestion still wins!
- Need to include carpooling/car passengers
- Enforcement of traffic control measures, LATM – fine collection, etc
- Fines collected from motoring infringements do not offset the infrastructure costs to accommodate non-motorised users
- Prosecution unlikely due to processing glitches
- Competing needs of users
- Enforcement is part of road safety initiatives
- Marketing should be consistent and regular and be integrated with research and development and not just for special promotion purposes
- Deliver to people what they want! But should we? Is it what they need? What about the "greater good"?
- Are we in the mobility business? Or is it accessibility?
- Lack of choices and information to make informed decisions
- Progressive change can be self-funding
- Different funding structures for motorised and non-motorised infrastructure facilities
- Liquid fuels "will not last forever"

Realities

- Local government build cycle facilities which demonstrates a level of commitment but communities see "lack of use" and cyclists see regulators "forcing them off the road"
- NIMBY attitudes – "Speed restrictions on my street not where I want to drive"

Table 2c: Problems, Challenges and Constraints (Other Stakeholders)

Problems

- Public perception of 'legitimacy' of non-motorised modes
- Difficulty of 'demonstrating' (quantitatively) the benefits of non-motorised modes
- Funding levels – State and Local Government
- Lack of recognition that 'you can't build your way out of the problem'
- Some sections of non-motorised transport users are not 'responsible users'
- Non-motorised users 'don't pay road taxes'
- Lack of resources such as funding, talent, training, information, data and getting regulators to recognise these
- Translating overseas models to Australia
- Multiplicity of responsible levels of government & agencies and lack of integration
- Too much regulation
- Industry influence

Challenges

- Legislation/regulations can be counter-productive, constraining, cause misperception
- Information/research needs to be increased and improved
- Challenging the 'dominant mode' in transport with respect to mindset and awareness
- Development industry increasingly putting in infrastructure through 'fasttracking'
- Need for more people to become involved in development process - lack of awareness in the community as land development driven by market and industry can be very conservative even in face of community change
- 'Outsourcing' can become an opportunity if contracts are well-specified/well-managed, hence a responsible and open audit/monitoring process is required
- Pressures on non-motorised transport facilities (especially with respect to electric scooters) with respect to shared paths, perceptions/reality of safety, hence requires prudent allocation of space and proposals for change
- Success breeds 'congestion' on non-motorised transport facilities and may result in conflicts
- Fragmentation of non-motorised transport groups even where a 'shared' agenda exists

- Most significant challenge is to change the paradigm and broaden aims and scope
- Safety and health agendas should be the focus, not transport
- Perceptions that public transport, walking and cycling is 'unsafe' in mixed traffic, though this may not be a reality
- 'Image' i.e. cycling gear, showering, dress codes at work
- Building alliances between public/private/community groups
- Change the leadership role of governments with establishment of communication strategies needed
- Get the funding agenda to coincide with other objectives
- Change the paradigm from 'safety' to 'accessibility & mobility'; focus on outcomes
- Social dividends
- Paradigm shift from 'predict and provide' to 'influence behaviour' and hence creating the future but whose?
- Recognition of cities as 'organisms'
- Shift back from planning as a 'science' to 'how people live'
- Realistic role and implementation of and compliance with supranational/global agreements i.e. Rio Earth Summit, Montreal/Kyoto Protocols, ESD Strategy, etc.
- Lack of 'balance' by transport authorities in achieving strategic objectives

Constraints

- Lack of strategic asset management approach – build, enhance, manage use, manage demand
- Lack of good data
- Inflexible standards and regulators
- How to implement standards is not well explained or outlined
- Increasing size/capability of motor-assisted chairs/scooters and access to public transport
- Lack of national commitment to Agenda 21, ESD, etc
- Privatisation and expectation of self-provision
- Deregulation
- Marketing (or lack thereof)

Table 2d: Directions (Consultation with Other Stakeholders)

- For whom? Transport authorities only? – Perhaps the target audience should include regulators, politicians as well
- 'Broad' versus 'narrow' scope
- Tool for advocacy groups such as public and private sectors
- Involvement of Australian Transport Commission
- Cost is a priority
- Follow lead of national bodies and this should come from the 'top'
- Involvement of Austroads and member organisations with coordinated information and direction dissemination, with both client and primary focus
- Details should be considered in depth and not just continued issuance of 'motherhood statements'
- End product should be a framework for research and development as well as implementation potential
- Inclusion in integrated transport strategies
- Identify process(es) for delivery and the mechanisms for these processes
- Reinforce action-oriented strategies
- Acknowledgment of walking and cycling as promotion of ESD principles
- Integrating walking as a "health & lifestyle" choice, not just for 'safety' or 'sustainable development'
- More integration at Commonwealth level(s) with respect to transport & environment i.e. sustainable transport, accessibility, etc.
- Monitoring and reporting mechanism(s)
- Will this be a document to present to the world or as a national statement only? OR a document to present to member authorities? Need to assist authorities in catering for non-motorised transport users in the movement system
- Harmonised approach
- Research and development must be increased
- Performance measures?
- Upgrading Part 13: Pedestrians (Austroads)
- Enact Part 16: Travel Demand Management, Telecommuting, Non-Motorised Users?
- Integration between modes/travellers' needs
- Recognition of 'conflicts' between modes and users
- Review of Australian Road Rules
- Misconception/tradition that Austroads sets 'standards'. Member authorities are generally State Road Authorities but Local Councils use them too and apply to local roads in absence of anything else
- 'Whole of government' approach
- Application to rural roads?
- Development of liaison between Austroads and non-government organisations such as schools, hospitals, advocacy groups, etc. to develop better and more appropriate strategies to promote understanding, communication, better exchange of ideas and experience. Need to clarify input

TRENDS, DIRECTIONS AND PRIORITIES

Based upon the information collected during the course of the literature review and the stakeholder consultation, several key trends and research directions and priorities were identified to assist both the public sector and industry in recognising and accommodating the needs of non-motorised and vulnerable road users within the context of traffic management and the road user environment. Some of the key trends, directions and priorities have been identified below.

Trends

- More of an 'inclusive' approach to integrated planning to allow for equity, mobility and accessibility considerations to be included in traffic management.
- Devolution of planning and implementation of facilities to local government.
- Cost/benefit analysis to include consideration of intangibles and quality of life considerations.
- Focus on equity and accessibility.
- Prioritisation of non-motorised road users' needs.
- Recognition of non-motorised transport as a health and lifestyle choice.
- Performance measures are no longer focussed on engineering 'yardsticks'.
- Proactive rather than reactive strategies.

Directions

- Planning of facilities to allow for equivalent priority for non-motorised users.
- Public education is the most significant factor which will modify behaviour and attitudes of both motorised and non-motorised users.
- Changes to funding structure and allocation of funds is required.
- Engineering measures should focus on levels of service for all users.
- Integration between modes must be better streamlined.
- Consultation with users on all aspects of projects.
- Projects should be planned, designed and implemented with consideration for motorised and all non-motorised users.
- Education and marketing should be targeted at school age children in order to induce behavioural changes over time.

Priorities

- Shift in transport funding priorities to non-motorised transport.
- Education and marketing of non-motorised transport.
- Increased funding to research and development.
- Improved communication between advocacy groups, the community and government agencies.
- Shift in focus from 'throughput' to 'level of service'.
- Review of Australian Road Rules and relevant Austroads guidelines and strategies.
- Shift in focus from reduction in crashes to promotion of health, welfare and equity.

PREPARATION OF STRATEGY

The project will be relevant to the needs of road authorities in as wide a range of situations as possible. Identification of strategies for improving the coherence of attitudes and

actions within road authorities in respect of non-car/truck users will be conducted. It will provide an approach, illustrated with examples and case studies to make it relevant to the day-to-day needs of practitioners within road authorities. The strategy will be presented in a manner, which will allow the end-user and the targeted road user to understand and implement the initiatives and policies in a prescribed, adaptable way. The strategy document will also document the two phases of the stakeholder consultation and the background information collected during the course of the project. It will also recognise current policies, programs and practice at the State and national levels and will endeavour to identify the gaps in these frameworks in order to recommend future directions with respect to research and development. Particular attention will be given to the recognition and incorporation of relevant aspects of the *Disability Discrimination Act* (1992), the *National Bicycle Strategy* (1998) and recent research in the areas of road safety for the elderly and motorcycle users.

FINDINGS

Based upon the extensive consultation undertaken during the course of the project, there appears to be clear direction and mandate from agencies and users alike that a change in 'direction' and 'priorities' is desperately needed within the traffic management framework in order to accommodate the needs and interests of non-motorised and vulnerable road users. Trends identified from around the world would indicate that the successful integration of the needs of non-motorised and vulnerable road users into traffic management and strategy development can be accomplished.

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