DEPARTMENT OF TRANSPORT AND COMMUNICATIONS

THE FEASIBILITY OF CONDUCTING AN ALTERNATIVE TRANSPORT DAY IN BRISBANE

FINAL REPORT

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1478-01:81C009A:JC/mw

FEDERAL OFFICE OF ROAD SAFETY

DOCUMENT RETRIEVAL INFORMATION

Report No.	Date	Pages	ISBN	ISBN
MR9	28/4/92	42	0 642 51148 9	1034-3830

Title and Subtitle

The Feasibility of conducting an 'Alternative Transport' Day in Brisbane – Final Report

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Abstract

The project investigated the feasibility of an event which promotes the use of transport modes other than the private car. A participative event was considered necessary to draw attention to the promotion.

The study considers the characteristics of the existing transport system and the likely demands placed on it by a promotion.

The proposed promotion is an intensive media campaign culminating in a one-day event.

Keywords

Public Transport, Road Demand Management, Alternative Transport, Public Awareness.

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CONTENTS

			Page No
EXECUTIVE SUMMARY			i
1.0	INTRODUCTION		1
	1.1	General	1
	1.2	Objectives	1
	1.3	Scope	2
2.0	LITERATURE REVIEW		3
	2.1	General	3
	2.2	Melbourne Promotion	3
	2.3	Queensland Department of Transport Car Pooling Surveys	6
	2.4	Road Demand Management	7
	2.5	Other Initiatives	8
3.0	EXISTING TRANSPORT SYSTEM		10
	3.1	Introduction	10
	3.2	Transport System Characteristics	11
	3.3	Transport and Environment Lobby Groups	14
	3.4	Expected Demand	15
	3.5	Legal and Insurance Issues	17
	3.6	Role of Modes in the Promotion	18
4.0	THE PROMOTION		20
	4.1	General	20
	4.2	Aims of the Promotion	20
	4.3	Scope of the Promotion	21
	4.4	Marketing	23
	4.5	People Moving Logistics	25
	4.6	Car Pooling and Public Transport Information Service	29
	4.7	Incentives	30
	4.8	Costs of Promotion	30
	4.9	Benefits of Promotion	31
	4.10	Cost/Benefit Analysis	32
5.0	IMPLEMENTATION		33
	5.1	Introduction	33
	5.2	Promotion Strategy	34
	5.3	Key Participants	35
	5.4	Timing of the Event	36
	5.5	Evaluation	37
	5.6	Actions following the Event	38
	5.7	Implementation Strategy	38
6.0	CONCLUSIONS AND RECOMMENDATIONS		41

EXECUTIVE SUMMARY

Legislators are faced with problems of reducing the greenhouse effect, providing adequate transportation services and reviewing the structure of our cities while generating funds with which to achieve these goals. This promotion gives the public the opportunity to contribute to solving these problems by voluntarily participating in the alternative transport promotion, thus reducing the need for more extreme measures such as distance based road pricing and cordon pricing.

The objective of the promotion is to encourage people to think more about all issues involved in private car use and encourage awareness of feasible alternatives to private car trips. The result of this will be a reduction in the percentage of all trips made by private cars and not a reduction in the number of trips made. However, combining trips would also be considered part of responsible transportation activities which would be promoted. The promotion will provide a basis for on-going promotions to further reduce private car use and introduce new technology and environmentally friendly measures as appropriate. The success of the promotion could provide incentives and information for the transport authorities to alter and bring forward plans for service upgrading. Finally it will provide the basis for future education and promotion activities in Australia.

The implementation of the promotion should involve government at federal, state and local levels. The participants should include members of the steering committee for this project which were:

Department of Transport and Communications (Federal);
Department of Primary Industries and Energy (Federal);
Department of Transport (Qld);
Department of Environment and Conservation (Qld); and
Brisbane City Council (Local).

The joint resources will allow a much wider education program and scope for incentives than would be capable by the transport authorities alone.

It is considered necessary by the committee that a participative event is required to draw attention to the message and let people experience the public transport alternatives.

The commuters that are most likely to switch to public transport are those that drive private cars and pay for all parking expenses. If one third of this group is assumed to participate, 3200 extra passengers will have to be carried to the CBD. The existing bus system is estimated to have a spare morning peak capacity of 20,000 seats. therefore, there is not expected to be any difficulty in carrying the additional passengers. It is likely that other commuters may switch to public transport for social conscience reasons while some existing public transport users may choose to car pool on the day. These effects cannot be quantified.

The promotion will be an intensive media campaign culminating in a one-day event where the public will be encouraged to participate in the use of alternative transport modes. Incentives should be provided to maximise the participation rate. There could be random prizes, free breakfasts and entertainment.

The funding for the event will come from government in terms of resources and real funding and from private sponsorship. it is expected that the costs would split up as follows:-

	Funds/Expenses $000	**Value of Resources $000**	**Sponsorship $000**
Promotion	30		70
Information Service	20	20	
Incentives			30
Monitoring	10	5	
Steering Committee	10	15	
Consultants	30		
Coordinator		20	
TOTAL	100	60	100

The benefits of alternative transport are reduced degradation of the environment and the social fabric of our city. In the context of the one day promotion, these benefits will not be apparent. Therefore, the benefits of the promotion will be :-

. be a practical way of allowing the public to experiment with alternative transport;
. support long term aims of all participants;
. provide greater public awareness and higher productivity of using alternative transport in the future;
. demonstrate the practicability of implementing alternative transport in the future.

Following the promotion, it is likely that the participating organisations will engage in their own promotional activities. However, regular coordination meetings would be necessary to ensure that these activities are complementary to the long term goals.

1.0 INTRODUCTION

1.1 General

This study was commissioned by the Department of Transport and Communications to investigate the feasibility of conducting a 'car free day' promotion in Brisbane. This title has proved to be inappropriate for the purpose of the promotion. Therefore it has been referred to as an 'Alternative Transport' day in this report.

Legislators are faced with the tasks of reducing the greenhouse effect, providing adequate transportation services, and reviewing the structure of our cities while generating funds with which to achieve these goals. This promotion will give the public the opportunity to contribute to solving these problems by voluntarily participating in the alternate transport promotion. This will reduce the need for more extreme measures such as distance based road pricing and cordon pricing.

The South East Queensland Passenger Transport Study (SEPTS) discusses a 10 year vision where increased costs of running a private car will encourage discretionary travel on an improved public transport system. The system would be fully integrated, have increased frequencies, higher speeds and be more reliable. This study will help to make the general public aware of alternatives for travel and the physical and social consequences of their decisions. The long term effect of the study and SEPTS should therefore be an increased use of public transport.

The urban consolidation and renewal initiatives being undertaken by Brisbane City Council and the Better Cities Program have a significant need for improved public transport and alternate transport measures. Energy and infrastructure savings feature highly in the goals of urban consolidation. This promotion will assist the public understanding the importance of urban form and efficient public transport systems.

1.2 Objectives

The main purpose of the promotion is to encourage people to think more about all issues involved in private car use and encourage awareness of feasible alternatives to private car

trips. The intention is not to change the number of trips which are made daily or alter the destination, but rather to encourage alternative transport.
The promotion is to provide a practical experience for the long term possibility of increased utilisation of alternative transport.

1.3 Scope

This report describes the investigations undertaken to determine the feasibility of the promotion and recommends how to proceed for a successful event. Activities following the promotion were not considered in detail during the study.

The following sections are included in this report:

- Literature Review;
- Review of the existing transport system;
- Development of alternative concepts for a feasible event;
- implementation of the event; and
- Conclusions.

2.0 LITERATURE REVIEW

2.1 General

A review of all literature obtainable regarding 'alternative transport' promotions was undertaken. The literature was obtained from a number of sources:

- Literature search at State Library;
- Discussions with Transportation Authorities libraries; and
- Discussions with Transport and Environment Lobby Groups.

Reference to promotions in Melbourne, New Zealand and Milan were found from the search. It is expected that many promotions to generally encourage the use of public transport have been undertaken including free travel days in Sydney and Melbourne. However, there is very little evidence of a concentrated attempt to promote a wide spread education campaign encompassing so many issues.

Austroads' Road Demand Management study has recently been published. The report contains information about the implementation of long term Road Demand Management (RDM) measures. This information is also relevant for the selection and implementation of the one day promotion. A review of the study is contained in Appendix A together with a summary of the South East Queensland Passenger Study (SEPTS) and the Brisbane Traffic Study (BTS).

In this section, the Melbourne promotion, an experiment by the Queensland Department of Transport, and a summary of the Austroads report are discussed.

2.2 Melbourne Promotion

A proposal to 'leave your car at home' was initiated by Friends of the Earth and was held on World Environment Day, Tuesday June 5, 1990. The proposal was not taken up seriously by any government departments or private organisations other then VIC ROADS and the RACV.

It is likely that promotional funding was limited by Friends of the Earth resources. However, internal promotions and incentives by VIC ROADS and the RACV give indications of short comings due to the lack of a coordinated approach.

2.2.1 Vic Roads

VIC ROADS undertook a significant promotion and incentive campaign prior to the day. This included Information Bulletins, organisation of shuttle buses from nearby public transport stations and coordination of a ride share program. Incentives of a free breakfast and prizes for novel or innovative and environmentally friendly ways of getting to work were also offered.

A monitoring program was undertaken both internally and Melbourne wide.

The internal survey consisted of an attitudinal survey of which only 18% (954) of staff responded. On the day, 40% of respondents changed their mode of travel and 21% indicated that they would use an alternate mode sometimes after the event

The Melbourne wide surveys included questionnaires handed out to drivers entering CBD carparks; a limited household letter box questionnaire; traffic volume analysis from the Signal Coordination of Regional Areas in Melbourne (SCRAM) system and vehicle occupancy counts at selected sites. The results of these surveys were:

Parking Survey

- Only 5% of respondents changed their travel arrangements on the day.
- Mean occupancy rate was 1.4 persons per vehicle.
- Only 6% of respondents considered public transportation an alternative.

Household Survey

- The survey response rate was 14%.
- Design of the survey forms lead to errors in completing them and therefore the survey data was meaningless.

SCRAM Counts

No significant difference was found in the counts taken that could confidently indicate reduced traffic flows in either peak hours or daily flow.

Occupancy Counts

Statistical tests for each site and then all sites combined showed no significant difference on World Environment Day compared to normal conditions.

2.2.2 RACV

The RACV held a similar internal promotion and ride sharing coordination for the event.

Results of an attitudinal survey toward car pooling, indicate some of the problems that are associated with car pooling. There were 173 (69%) responses from 250 staff surveyed on the day. A free breakfast was also provided by the RACV as an incentive to change modes. On the day, a private car occupancy of 2.31 was achieved. Over half of those surveyed said that they used a different mode on the day. Just over 22% respondents said that they would continue to use the alternative mode.

A summary of the responses on the attitudes show that:

Car Pooling is desirable:

- for environmental/social reasons;
- if promoted and coordinated;
- for passengers that would have otherwise had the stress of driving;
- due to reduced operating costs of private vehicles.

Car Pooling is undesirable because of:

- increased travel time;
- loss of personal flexibility;

- dependence on passengers to be on time;
- loss of transport if driver is required to leave earlier then passengers may not have other transport alternatives.

2.2.3 Relevance to Promotion

The result of the surveys do not indicate a great success for the Melbourne promotion. It is expected that this was due to the lack of coordinated public awareness campaign. Many of the complaints against car pooling are related to personal dis-benefits without considering long term road funding and environmental issues. The results of the VIC ROADS and RACV promotions are encouraging as a wider promotion through major companies and all government departments may have resulted in a noticeable decrease in city wide traffic.

As this trial was only undertaken on one day, the fact that there are more benefits to being a passenger rather than the driver were highlighted.

Regular car pooling would result in a more equitable distribution of the benefits. However, there will always be loss of privacy and personal flexibility. The trial also highlighted the need for coordination of drivers and passengers and alternative modes of transport being available in the case of emergencies.

These issues must be addressed in the planning of the promotion.

2.3 Queensland Department of Transport Car Pooling Surveys

The Department of Transport Spring Hill offices have undertaken research and coordination of car pooling due to the potential closure of illegal car parks and high parking fees in the area. Users of all car parks in the area including illegal car parks were surveyed. Approximately 70 percent of 230 questionnaires were returned.

The results from the survey are:

- Only 19% of the respondents said that they would use public transport or some form of car sharing.

- Over 50% of respondents said they would park on-street. (However, there is very little on-street parking available in the area and greater competition for these spaces will result. In effect, these respondents would be forced to use off-street parking or find alternative methods of transport).

- One third of respondents expressed interest in some form of ride sharing. (Analysis of home addresses showed that there was a potential for thirty five people to ride share).

- The major negative impact of the car park closure is the reduced safety aspects of walk to/from bus or train stations and the occurrence vandalism at park and ride car parks. Of secondary importance were social contact, increased stress level, cost and travel time.

2.4 Road Demand Management Study

Two major Road Demand Management techniques that are discussed in the report are summarised briefly here.

The report covers road pricing technology in detail, the limited technological development and public attitudes to road pricing and tolls suggest that significant further development and education will be required before it could be introduced in Australia.

Because of the existing attitudes toward road pricing, it would not be practical to introduce a road pricing 'trial' for one day. Also road pricing is expected to increase public opposition to such measures rather than providing incentives for future public transport usage and car pooling.

The use of HOV incentives and increased public transit usage are the most likely measures that could be introduced for a one day trial. The report states that **education and attitude changes by media campaigns** are required for the successful implementation of any measure. Such a campaign will be essential for a one day trial to achieve a reduction of private vehicle trips.

The use of incentives is also necessary for successful implementation. such incentives for the one day trial could be subsidised car parking or park and ride transfer to high occupancy vehicles.

2.5 Other Initiatives

There are many examples of initiatives that are being undertaken at a smaller scale while contributing to the overall public education process.

There are a number of regular items in the media that contain messages relating to the greenhouse effect, environmentally friendly practices and traffic conditions (generally radio). These have a similar objective to the promotion. The first two examples help to educate the public regarding the implications of their lifestyles and the third helps motorists plan travel routes/patterns to avoid congested areas and therefore save travel time but more importantly help to reduce vehicle emissions due to congestion. These activities are critical to increasing the public awareness of environmental issues.

The Conservation Council of Victoria is to conduct a conference titled 'Competing with the Car' in March 1992. This conference will independently discuss the issues and alternatives contained in this study. The conference would appear to be an initiation phase for the introduction of road demand management measures in Victoria.

Brisbane Transport is currently promoting bus usage with an external bus advertisement 'Avoid the Rat Run' which is highly visible to all motorists. The advantages of this form of promotion is that it is present when the frustrations of driving are most relevant (i.e. sitting in congested traffic).

Such initiatives provide useful background information to the public and could be utilised during any promotion which is adopted.

3.0 EXISTING TRANSPORT SYSTEM

3.1 Introduction

Extensive research has been carried out in the past 5 years into the transportation characteristics of the Brisbane region. The Brisbane Traffic Study (BTS) and South East Queensland Passenger Transport Study (SEPTS) have considered in detail the use of the existing road and public transport network and the implications of future growth scenarios of the city.

3.1.1 SEPTS Relevance to 'Alternative Transport' Promotion

Public transport has generally been considered to be undesirable due to unreliability, lack of flexibility and security compared to the use of a private vehicle when one is available.

Unless traffic congestion and the associated perceived cost of congestion increases, public transport infrastructure and services are improved, or a form of road pricing in introduced, it is unlikely that trip makers will voluntarily switch from private car use. Existing congestion on Brisbane roads is much less than on Melbourne and Sydney roads and is very small on a world scale. Therefore, it is difficult for public transport to compete with the private car when there are no perceived restraints to car travel.

The proposed improved public transport system includes requirements for the development of local services that are to transport passengers to the line haul services. These guidelines are logical and achievable and should be adopted if the provision of new services for the promotion is to be undertaken.

The study investigates RDM measures and recommends ride sharing incentives. The use of road pricing was considered to require more research and analysis of its use in actual cases before adoption. However, the study did accept the use of distance based road charges as a RDM measure but has not been endorsed by the Minister.

3.1.2 Brisbane Traffic Study

The Brisbane Traffic Study considers RDM as a measure to delay the construction of additional road capacity. The report recommends restraints for CBD travel using parking policy and physical controls as well as improved public transport systems. The report also considers funding for future transportation infrastructure.

Significant road sections were found to be at or above acceptable operating capacities which does not agree with the findings of the SEPTS attitudinal surveys.

The coordination of transportation agencies is also considered to be of significant importance.

3.2 Transport System Characteristics

The public transport system within Brisbane consists of rail, bus, and ferry services. Services are operated by State and Local Government and private concerns and are subsidised by State and Local Government.

3.2.1 Queensland Rail

The Queensland Rail (QR) system consists of a CBD central network with seven electrified lines. The services are orientated toward commuter travel and other CBD orientated trips. The network consists of approximately 120 stations in the metropolitan area with approximately 9,000 park and ride spaces in commuter car parks.

Services run up to every 5 minutes in peak periods; every 30 minutes between peaks; and every hour on weekends and evenings.

Rolling stock consists of 88 three-car electric trains of which 81 are used in the peak hour; one is used on the Gympie run; one is always being overhauled; and five are spare for emergency.

The network capacity is currently governed by the inner city tunnel capacity which is 27 trains per hour per direction. The present time table shows 24 trains per hour per direction which is near capacity.

The passenger seating capacity of a six car set is 500 passengers and 750 passengers under crush conditions. During the peak hours, most services are operating with an average passenger load equal or slightly greater than the seating capacity. Therefore, there is some spare capacity but it is likely to be limited to standing room only.

A study is currently being undertaken for QR to determine actual passenger demand and will recommend changes to timetables which, if adopted, will take effect from June 1992. Due to the constraint of the inner city tunnels it is unlikely that capacity could be significantly increased in the time frame for the promotion.

QR have indicated a desire to be involved in the promotion. They have indicated that 3 additional services could be provided for the promotion. It is their expectation that costs of additional services and promotion could be covered depending on other budget requirements.

It was stressed by QR that the best possible level of service must be provided on the day of the event. Therefore, railmotors or diesel locomotives would not be appropriate for use during the promotion.

3.2.2 Brisbane Transport

Brisbane Transport, part of Brisbane City Council operates the bus network within the council boundaries and cross river ferries.

The bus network consists of CITY BUS (all stop) and CITY EXPRESS (limited stop) which usually terminate in the CBD. THE GREAT CIRCLE LINE serves major shopping centres on a circumferential route approximately nine kilometres from the CBD.

The fleet consists of 579 buses in August 1991 of which 40 were articulated. It is normal practice to have a proportion of the fleet off the road for maintenance, regular overhauls, and emergencies. It is likely that 30 additional buses could be utilised for a one day promotion by cancelling preventative maintenance on the day.

It is estimated that there is a potential to carry an additional 20,000 passengers during each peak period under the existing timetables. There is a period of approximately 20 minutes in the morning peak when the majority of buses have at least reached seating capacity. It is the times at the 'shoulders' of the peak where the spare capacity exists. Therefore, peak spreading initiatives may be required to fully utilise the spare capacity. This spare capacity could be increased significantly if additional buses can be utilised.

Brisbane Transport have indicated that they have a department promotional budget that could be used to fund the event if they were to participate. Marginal operating costs may be covered by the marginal revenue.

3.2.3 Ferry Services

Ferries on the Brisbane River provide a cross river function. The Golden Mile services which provided CBD services has recently been replaced by bus services. Services are operated by Brisbane Transport and private companies.

Ferries also operate between the mainland and bay islands.

3.2.4 Private Bus Companies

The Queensland Department of Transport licences private companies to operate bus services in areas not serviced by Brisbane Transport. The services are either express to the CBD or provide connections to the rail network. Licensing agreements include level of service and fares and all marketing and promotion is carried out by the companies.

It is likely that the private operators will not be able to take part in the promotion due to the likely requirements of new performance agreements. However, where possible it is recommended that private operators are encouraged to participate particularly if SEPTS local service can be introduced and continued after the promotion.

3.3 Transport and Environment Lobby Groups

To determine issues relating to and likely support for the promotion. Comments from two lobby groups were sought and unsolicited comments were received from another. These were:

- Australian Conservation Foundation (ACF);
- Citizens Advocating Responsible Transport (CART); and
- Brisbane City Heart Business Association Limited (BCHBA)

Australian Conservation Foundation (ACF)

A favourable response was received from ACF in terms of the need for the promotion and the desire to be involved in the promotion. ACF could provide support through their Global Change Program. This Program is co-ordinated through the Canberra office and is interested in the environmental and social aspects of RDM. Support from this program would be valuable. State branch activities can support promotion and education programs.

Considerable interest was also expressed from the Sydney branch.

Brisbane City Heart Business Association (BCHBA)

Considerable concern was expressed by the BCHBA regarding the effect of the promotion on the viability of the city as a retail centre. The response was initially due to a misquote in a press article which stated that cars would be banned in the city. Although the intention is to reduce the use of cars, it is not to reduce trip making. The implementation of the promotion must take into account a possible drop in discretionary trip making on the day and promote the aim of not reducing trip making to alleviate any opposition by commercial interests.

Citizens Advocating Responsible Transport (CART)

CART has been concentrating on producing educational material and is about to launch a 'National Livable Streets' promotion. Their research has shown that United States cities concentrate on car pooling promotions, whereas European cities are generally promoting cycle and walk modes as well as public transport usage. Documented promotions in German cities show a 17% reduction in road traffic over a six year period. A book is soon to be published which will suggest ways of providing more efficient transportation in cities.

Due to their extensive research, CART can assist with the preparation of educational material for the promotion on a consultation basis.

3.4 Expected Demand

It is difficult to quantify the number of person trips that are likely to be converted to public transport or alternate modes. One of the reasons for this is that the data collected in various studies had different study boundaries.

Most census or Main Roads (now DOT) information defines the CBD as sector 1 (traffic zones 1 to 16). This area includes Petrie Terrace, Normanby, Spring Hill, Fortitude Valley, New Farm and Bowen Hills. Other studies have defined the CBD as the area bounded by the river, Boundary Street and its extensions, and Countess Street and extensions. Obviously the further that areas are removed from the CBD and major public transport corridors, the less likely people are to use public transport. Similarly, once outside the central traffic area, on-street parking is free. This applies to Kelvin Grove and New Farm.

Trip characteristics from the 1986 home interview survey and census journey to work data are shown in Table 3.1. Traffic counts have indicated a 2 percent compound growth since 1986. It is likely that trips to the CBD have increased at this rate also.

The likely target group is the private car commuter who pays for their own parking charges. Why should anyone who is provided with a car and a parking space give up the privacy and flexibility of driving. This group would be diminished by the fact that not all residents have a suitable public transport alternative. Of the 76,500 people who commute daily as a car

driver to the CBD (defined as Sector 1), 32,000 drove private cars and only 9,500 actually contributed to their parking costs (14,700 and 4,500 for Zones 1 to 8). It is expected that some of these 9,500 drivers would choose public transport if the main factor in choosing driving is convenience. Others may car pool or use other modes such as walk or cycle and there will be a number that will not give up the privacy of the car.

In order to determine the likely effects of the promotion it could be assumed that one third of the private car users switch to public transport, one third car pool in the peak hour and one third do not change. Therefore it is estimated that the number of cars driven to the CBD could be reduced by 8 percent. Due to the significant through traffic in the CBD (40% of peak hour traffic to the CBD is through traffic), it is expected that the overall impact on the road network will be a 5 percent reduction in the peak hour traffic volumes at the CBD cordon.

TABLE 3.1

BRISBANE STATISTICAL DIVISION
TRIP CHARACTERISTICS

TRIP TYPE	TOTAL	As Vehicle Driver	By Public Transport
Total Daily Person Trips	4,157,535	2,509,340 (60.35)	344,063 (8.28)
Total Daily Home Based Work (HBW) Person Trips	687,510 (16.54)	488,317 (11.75)	96,129 (2.31)
Total Daily Person Trips to CBD (Sector 1)	578,359	297,784 [51.49] (7.16)	151,522 [26.2] (3.64)
Total Daily HBW Person Trips to CBD (Sector 1)	167,362 [28.94] (4.03)	76,519 [13.23] (1.84)	74,179 [12.83] (1.78)

() = percent of total daily trips

[] = percent of trips to CBD

Some car drivers who have their expenses met by employers may participate for social conscience reasons thus further reducing the vehicular traffic. This factor is very difficult to quantify due to the effects of human nature and personal attitudes. Human nature effects are the basic need to provide for ones' well being and to improve ones' social standing. It is

considered a status symbol 'to be provided with a company vehicle and therefore the general public is conditioned to desire to have the privacy and flexibility offered by the motor vehicle. It is known that there is currently a high public awareness of environmental issues. However, when it comes to environmental protection measures, the participation rate quickly drops. It is expected that the same would occur for participation in alternative transport measures.

Approximately 50% of new vehicle registrations are government or company vehicles. This is partly brought about by the trend to provide a vehicle as part of a salary package. It is difficult to change public attitudes to the use of vehicles for commuting purposes when there are such incentives for their use. It may become necessary to legislate against this practice if vehicle use is not reduced voluntarily through education measures. This effect cannot be quantified at this stage but public attitude surveys during the promotion could give an indication of the order of magnitude if there is concern that this effect could be significant. It is likely that employees of government departments would be encouraged to adopt alternative transport modes during the promotion. This is likely to cause a greater impact during the promotion than would occur if the individuals decision were made based on personal situations and attitudes.

Assuming the one third rule, which indicates that there could be an additional public transport demand of 3,200 passengers, the existing system would be adequate to carry the increase. The capacity of the existing rail and bus systems have been discussed with the relevant authorities and the previous analysis confirmed.

3.5 Legal and Insurance Issues

There are currently legal implications with respect to payments or income generated from ride sharing or other proposed methods of moving people on the day of the event. Legislation exists to protect the taxi industry and similarly bus operators by Department of Transport licensing. Special insurance arrangements are also required for commercial vehicles.

For a short term promotion, it is suggested that no income incentives are provided for drivers who car pool on the day. In this situation, normal car insurance policies would still apply.

Charter services could be operated by Brisbane City Council within existing legislation.

3.6 Role of Modes in the Promotion

All modes of transport can be utilised in a promotion. Some modes will provide a greater impact than others, however all will play an important role in the success of the promotion. Table 3.2 shows how each mode could be implemented and the trip type and purposes that would be affected.

Modes such as walk and cycle could be actively promoted for all shorter trips. The bikeway system if actively promoted could provide significant opportunities for east–west movements (most bikeways follow creeks) which are not currently serviced by public transport. Council produces bikeway maps and information regarding safety and legislation.

It is expected that ferries could not play a large role in the promotion. However, careful promotion may make more people aware of opportunities for their use.

The bus system is likely to play a major role in the promotion because of its flexibility, spare capacity and ability to provide additional services if needed. Any additional services would be provided on existing routes where there is a high demand rather than providing new route services. The transport operators may find new services impractical to implement for the promotion. However, if any new services were proposed, this would provide an ideal opportunity to introduce them.

The train system provides an excellent line haul network however is limited in capacity by the inner city tunnels and the spare fleet that could be used for the promotion.

There will be many instances where there are no suitable alternatives available and private vehicles must be used. Ride sharing initiatives should be implemented to increase the average occupancy of all vehicles.

TABLE 3.2

Mode/Activity	Trip Type	Trip Purpose	Implementation
Walk	Local	– Recreation – Shopping – Work – Education – To public transport	Own initiative through promotion
Cycle	Local Regional	– Recreation – Shopping – Work – Education – To public transport	Own initiative through promotion
Ferries	Cross river movement	– Coordination with public transport services – Work – Education – Shopping – Recreation	Own initiative through promotion
Bus	CBD based Local Regional	– Work – Education – Recreation – Shopping – Coordination with train services	Brisbane Transport – Advertising – Additional services
Train	CBD based corridors	– Work – Education – Recreation – Shopping	Department of Transport – Advertising – Additional services
Ride Sharing	To place of high trip generation	– Work – Education	– Coordinated by Brisbane City Council/Department of Transport – Employer organised
Staggered Working Hours	All trips to region of high trip generation	– Work – Education	– Coordinated by Brisbane City Council/Department of Transport – Employer organised
Cars	When none of above is available	– Park and Ride – Work – Shopping – Recreation – Education	Education and Promotion of alternative and social and environmental issues

4.0 THE PROMOTION

4.1 General

Many factors must be considered in the planning of such a promotion. The literature reviews and analyses of existing travel patterns show where deficiencies and where spare transportation capacity is located. The following steps were taken to determine the feasibility of the promotion:

- Determine aims of the promotion rather than long term road demand management schemes;
- What should the scope of the promotion be;
- Logistics of moving people to the public transport system;
- Set up of information systems for prospective riders; and
- Determine how it is to be marketed.

4.2 Aims of the Promotion

It is stated that the aim of the event is to encourage people to think more about all the issues involved in private car use and to encourage awareness and use of feasible ways of reducing the usage of private cars. Therefore, the promotion is an education tool focusing on a particular event to highlight the advantages of alternative transport.

A secondary aim of the promotion is to achieve an on-going reduction in the percentage of private car trips. This will give momentum to the on-going public awareness campaign and actual physical evidence of improvements to the operation of the transportation system and will stimulate interest and participation in future schemes. This aim should be reached by an informed public who use the appropriate form of transport for individual trips rather than forcing people to use public transport through active road demand measures. Trip makers should be educated to ask themselves if it is necessary to use the car or is there a more appropriate form of transport available for the trip destination and purpose being considered. System improvements are likely to be required to obtain the long term goals.

During the promotion, no trip markers should be disadvantaged either by reduced amenity or increase travel costs. However, an important part of the education is to highlight the environmental aspects of alternative transport which do not present themselves as immediate benefits of using alternate modes to the car. A more efficient use of the transportation system is required to, for example, rationalise further infrastructure funding and reduce environmental degradation. It is critical in cases that the community is educated to be aware of all benefits from the change of mode.

The concept was tentatively called the 'Car Free Day'. This appears to be easily misconstrued as a car ban which is not the intention at all. A more appropriate name is required for the promotion although one is not recommended. The promotion has been referred to as the Alternative Transport Day in this report.

4.3 Scope of the Promotion

4.3.1 Scope

The committee considered that a participative event was required so that the public could get first hand experience of alternative transport measures.

Due to the orientation of public transport services toward commuter trips and CBD based trips, the promotion should aim to make the most efficient use of that system.
Therefore, the public transport network reaches its highest utilisation during peak commuter periods. The private car commuter peaks also result in the most congestion on the road system on the approaches to the CBD.

SEPTS recommended a system of regional line haul rail and express bus routes combined with sub-regional networks by local routes focussed on sub-regional centres. SEPTS produced guidelines for design of the local services, which are produced in Table 4.1. It is recommended that this system is adopted for any additional services that may be provided as part of the event. Detailed analysis and design of these services should be undertaken by the transport departments.

Car pooling should be undertaken as a city wide promotion. All major employers (for example more than 200 staff at one location) should be encouraged to organise car pooling for the event. This could be undertaken for a week so that the benefits or ride sharing are distributed amongst those that participate.

TABLE 4.1

GUIDELINES FOR DESIGN OF LOCAL SERVICES

Serviced areas	All urban areas would have a service to their subregional centre. (In some cases this may be part of a linehaul route.
Directness	*The route from any significant catchment point* to the subregional centre should be no more than 1.2 times the distance by the shortest road route. (This ratio may be extended to 1.5 in some areas). The route should use major roads and through streets.
Coverage	A local route should be provided within 400m of 90% of households. *A route should have a catchment on both sides and* should avoid unproductive areas. Routes should avoid duplication except where they approach the local centre of linehaul interchange).
Consistency	Routes should not vary from the regular pattern. (During peak periods a local route may operate on a different pattern as a feeder to a linehaul route).
Destinations	All local routes by definition must serve the subregional centre. They should also serve other major destinations en route or at the outer terminus. where feasible and appropriate, the outer terminus of a route should be at another linehaul point to promote use of the route in both directions. In many cases a single route would cross a local network boundary and provide a local service to two subregional centres.
Transfers	Transfer from one vehicle to another should not be required to reach the subregional centre (but will often be necessary to reach the subregional centre of another network).
Frequency	Each route would have a basic minimum service frequency.
Regularity	Services would be run at clock-face frequencies (at regular times past the hour).
Coordination	The opportunity for timed transfer should be offered at all interchanges (except the Brisbane city centre), at least for major transfer movements in major directions. Time allowed for transfer should be five minutes. (This time should be increased if schedule adherence of the approaching service is poor).

4.3.2 Scale

There are two orders of scale that could be adopted for the promotion.

A minimal risk promotion would be to step-up the activities described in section 2.5 with direct messages relating traffic congestion to greenhouse effects and future traffic problems and funding required for road improvements if traffic volumes are to increase at the present rate. The promotion would primarily be an education campaign which would be repeated periodically. Public transport services would be upgraded as the demand grew over time – a market forces approach.

A promotion as alluded to in the Terms of Reference which gives the long term promotion a 'kick-start' with a high profile initiative on a one day event inherently has a higher risk of failure. This event would be to provide additional services where generated demand is likely to occur, coordinate car pools and staggered working hours, and provide incentives on the day of promotion. This level of scale is required to get the public involved with a positive effect. The committee considers that a participative event is required to obtain a suitable result from the promotion.

4.4 Marketing

It is clear from the literature review that effective education and marketing campaigns are required for the successful implementation of any promotion. Although marketing has not been considered in depth, some basic requirements are listed below:

- Community debate through TV, radio, newspaper media should be stimulated and community consultation encouraged;
- Harness concerns for the environment to generate changes in community attitude and support of major lobby groups;
- Involve private sector interests in modifying practices and policies which generate road demand or hinder its management; and
- Provide incentives for the use of public transport during the event.

It is expected that a marketing consultant will be required to coordinate the event campaign.

The marketing and promotion is to be aimed at certain transport user groups. Although there are general messages regarding impacts of transportation, some user groups will have to be targeted specifically. These are people who drive private vehicles and have alternate modes of transport available.

An important feature of the marketing will be to show how public transport is improving and what steps are being made in the immediate future for service improvement. It is important to highlight the quality of service that is being provided and not just the number of services.

A major criticism of the promotion could be that the money should not be wasted on advertising when it could be used to provide better services. The cost of the promotion to government departments is likely to be approximately the capital cost of a bus.

The marketing and promotion should be undertaken in a number of ways. Examples include:

- Electronic media;
- Print media;
- Advertising by Authorities;
- Sponsorship; and
- Lobby groups/professional organisations.

The electronic and print media should be the main basis of the campaign due to their wide spread coverage.

The transport authorities can be involved in the promotion. The Brisbane City Council 'Avoid the Rat Run' is an example of the promotion that is envisaged. It would be advantageous to have a number of buses dedicated to 'car free day' promotion with a larger number displaying messages of a similar size to the 'Rat Run' campaign.

The train system does not provide the same degree of visibility as the bus system however, signboard messages close to rail stations could be useful.

It is recommended that a proposal document is prepared for submission to the electronic media and larger private organisations for sponsorship of the event. The purpose of this will be to reduce costs of advertising and obtain sponsorship to pay for promotional material. Funds may also be available from the Greenhouse Information Program administered by the Commonwealth Department of the Environment.

A large proportion of advertising costs are expected to be covered by sponsorship. It is important that being associated with the event is shown to be desirable to likely sponsors in terms of:

- interest in social and community issues;
- concern for the environment; and
- economic benefits to the community.

Additional coverage could be obtained through the activities of lobby groups and professional organisations through their regular activities. They can assist with technical information development.

A budget of $100,000 was recommended by BCC corporate communications for adequate promotional coverage. Funding of $100,000 will be required from the participants and other government sources. Other internal state and local government resources would be required for the coordination of alternate transport measures. It is expected that an equivalent amount to the government funding could be raised through private sponsorship.

4.5 People Moving Logistics

The guidelines developed in SEPTS have been adopted from which the two significant items are 90% of households should be within 400 m of a service and transfer times should be less than 5 minutes.

There are a number of modes that could be used to transfer passengers to line haul systems. The promotion focuses on the first three of the following systems while the remaining systems although not adopted are worthy of future research:

- walk;
- cycle;
- park and ride;
- multiple hire taxi services;
- shuttle mini-buses; and
- Demand responsive bus systems.

The possibility of implementing a local suburban shuttle service utilising mini buses (12 seaters) and off-duty BCC bus drivers was investigated. The service could provide connections to rail or bus stations during peak periods and to regional shopping centres during the inter-peak. It is estimated that the operating costs of the service would be $2,500. Additional costs of publicity (mailbox drop of timetable and route map) and route/timetable development would cost $6,500.

Assuming a 50% occupancy during the peak and 20% at other times, the service could transfer 300 passengers to the line haul system. However, it is expected that a fare of five dollars would be required to cover the operational costs if implemented for a day.

SEPTS has shown that local services can be implemented where an existing service can be modified with little additional resources. In these cases, the current revenue/operating cost may be maintained. This option is preferable to local shuttle services using para-transit methods.

Demand responsive bus systems are currently being trialled in NSW. This system allows off-peak users to register a demand for the system by the telephone. The next service adopts a route variation that is closest to the registered demand. This type of system could be developed as part of the local network system. It would be impractical to implement such a system for the promotion.

There are opportunities to provide park and ride facilities at two major locations under the control of Brisbane City Council. These are:-

Boondall Entertainment Centre - because of the efficient arterial road network which leads to the centre, efficient road access can be gained to Boondall rail station. An express rail service would bypass the typical Sandgate road traffic congestion. QR have indicated that it is possible to provide two additional services from Boondall in the peak periods.

Queen Elizabeth II - A proposed transit lane on the south east freeway would enable a free flowing express bus service to operate from Mt. Gravatt to the city. There is a large catchment of potential public transport users in this area. The implementation of the transit lane will be critical for this proposal to be successful.

Other opportunities exist at major shopping centres such as the Logan Hyperdome, but this would only be possible with the support of shopping centre management.

One of the major public concerns of public transport is safety and vandalism. Many park and ride carparks are not well patronised due to poor security. This could be overcome during the event by supplying security guards at carparks but the cost of this would prevent it from being carried out on a full time basis. This issue requires further consideration for long term improvements to the system.

An analysis of Journey to Work Data from the 1986 Census for the Boondall, QEII and Logan areas was undertaken. Work trips to the CBD for various modes are included in Appendix B. This type of analysis would be used during implementation to determine suburbs where there is high proportion of private car use and a switch to public transport or alternate modes is possible.

There is a concern that the provision of additional services for a one-day promotion could lead to a high demand for those services. It is unlikely that the services could continue on an on-going basis due to fleet constraints. The public may be reluctant to use such services knowing that they would not be available the next day. On the other hand, a large demand for public transport during the promotion would provide the incentive for authorities to bring forward plans to upgrade services.

QR could only manage minor adjustments to timetables until the central city tunnels were duplicated and Brisbane City Council would have to acquire additional buses. Considering budget requirements, purchasing etc it is likely to be six months to a year before significant fleet size increases could be achieved through councils fleet upgrading program.

Therefore, it is recommended that the additional 30 buses should be used on existing routes where there is anticipated to be a high utilisation of services. If there is some spare peak hour capacity in the fleet or fleet replacement/augmentation allow, limited new services could be implemented using the guidelines from SEPTS. This should only occur if the services could be continued after the promotion.

The physical capacity of the public transport must also include a consideration of the ability for passengers to access the system and also to transfer from one service to another.

Approximately 23 percent of passengers arriving at interchanges transfer to another service.

Significant numbers of passengers are known to transfer at the following interchanges:

Bus–Bus:	Garden City	763
	Toombul	844
	Capalaba Park	412
	Enoggera	316
Bus–Train:	Darra	314
	Enoggera	452
	Oxley	302
	Sandgate	609
	Wacol	266

At Bray Park, Darra, Enoggera, Goodna, Kingston, Kuraby, Oxley, Petrie, Sandgate, Toombul and Wacol over 25 percent of arriving passengers transferred. Although some of these interchanges are small, the proportion of transfers is high. If this trend continues as additional services are provided, there may be insufficient capacity for the increased passenger volumes.

It is recommended, that where additional services are provided, that queuing and thorough fares are checked for capacity using accepted pedestrian level of service criteria.

The city terminals currently operate satisfactorily under the current passenger loadings. As the demand for pedestrian movement is related to arrival and departure of services, any congestion relating to one service generally clears before another service induces the following peak.

The city rail stations operate satisfactorily when trains arrive simultaneously at the platforms. This represents the peak loading possible at the station. However, there will be shorter periods with low pedestrian demand if additional services are provided resulting in a higher workload for staff and ticketing services.

4.6 Car Pooling and Public Transport Information Service

A service will be required to answer public concerns regarding the event. It would have the responsibility to:

- supply information on transport services during the event;
- coordinate or give advice on car pool initiatives;
- collect information on public attitudes during the promotion;
- provide general information regarding the promotion.

The service would be similar to those already operated by Queensland Transport and Brisbane City Council and could be an extension of those existing services.

Timetables for coordinated services and route maps will be required. An initial approach was made to SEQEB to distribute information about the promotion in electricity bills, however this is against SEQEB policy. Brisbane City Council may be able to distribute promotional material with rates notices. These can be letter dropped according to suburb and other information collected from, say post offices.

The information service could assist government departments and major private employers to organise and participate in ride sharing and car pooling activities. A package could be produced to assist in planning and coordinating a car pool.

The effectiveness of these activities could easily be quantified using questionnaires within each organisation.

4.7 Incentives

Although the community benefits of reduced environmental degradation and road funding should be effective incentives, it is recommended that other more tangible benefits are offered to participants of the event. These could include:

- reduce parking fees for car poolers in King George car park;
- free breakfast for car poolers and public transport users in King George Square;
- free breakfast at Boondall Station and QEII car park;
- free entertainment during breakfast/lunch for participants;
- competitions for innovative methods of travel; and
- inter departmental/company competitions to provide the greatest decrease in parking generation.

The scope of the incentives should be defined during implementation so that they can be tailored to suit the trip making characteristics of the participants. A budget of $30,000 has been allowed for incentives. This would cover free breakfasts at three locations and some competition prizes. This budget could be increased significantly depending on the level of private sponsorship.

4.8 Costs of Promotion

The scale of the participative event proposed will require a certain level of funding to ensure that the promotion is a success. The media campaign to ensure participation will be extensive as there are numerous messages that have to be conveyed in the leadup to the one-day event.

Incentives should be provided to maximise the participation rate. These could be random prizes, free breakfasts and entertainment.

The funding for the event will come from government resources and budgets as well as private sponsorship. A degree of government staff resources will be required for the Steering committee, Promotion Coordinator, information service, monitoring and coordination of incentives. It is expected that the costs would be split up as shown in Table 4.2.

Table 4.2

Distribution of Costs – $1,000

	Government Funding	**Government Resources (Staff/Expenses)**	**Sponsorship**
Promotion	30		70
Information Service	20	20	
Incentives			30
Monitoring	10	5	
Steering Committee	10	15	
Consultants	30		
Promotion Coordinator		20	
TOTAL	100	60	100

4.9 Benefits of Promotion

The promotion is to educate and involve the public in the use of alternate transport. The long term result of this will be to reduce the impact of travel on the transport system by:

- improved asset utilisation;
- reduced environmental degradation;
- reduced accident rates;
- reduce energy consumption;
- increased mobility for those without existing public transport services.

The promotion will contribute to these long term benefits by giving a practical opportunity for the public to try other methods of transport other than the car and thus implement a process for a continuing reduction in car use.

The success of the promotion would show the practicability of the public adopting alternative transport in the long term.

The greatest dis-benefit to existing car users that switch to public transport is the immediate loss of flexibility, for example - more difficult to conduct private business during lunch hours.

Therefore, the education of the community prior to the event is important so that the social benefits are perceived to flow on due to their participation in the event though the benefits may not be apparent on the day.

4.10 Cost/Benefit Analysis

In terms of a true cost-benefit analysis, such a promotion is difficult to analyse as it requires financial values to be placed on environmental savings and personal attitudes and perceptions which will be longer term effects. Because of the cost involved in staging the promotion and all public transport operations in the Brisbane region are currently heavily subsidised, a positive benefit could not be obtained solely through the days activities.

Therefore, it is considered that the decision to proceed is based on the future community benefits of encouraging alternative modes of transport.

5.0 IMPLEMENTATION

5.1 Introduction

This section will briefly discuss the implementation of the promotion including marketing and evaluation. It is intended that this will provide the basis of the marketing and implementation strategy.

A suggested structure for the implementation of the promotion is shown in Figure 5.1. The degree of success of the promotion will be determined by the extent of the publicity and the public awareness.

ORGANISATION STRUCTURE
FOR THE ALTERNATIVE TRANSPORT DAY

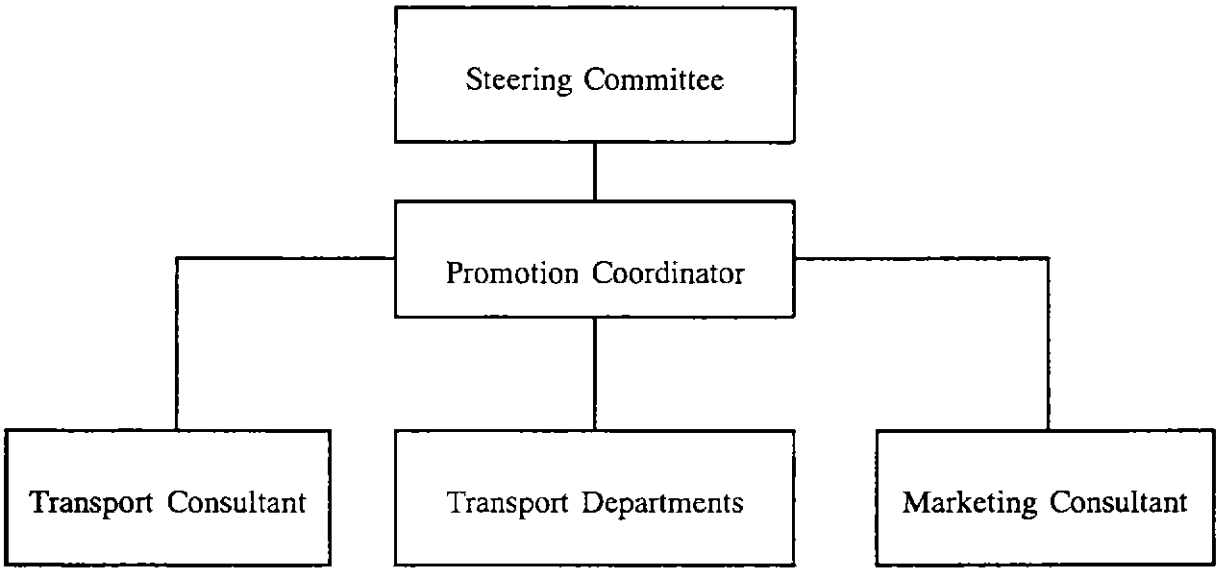

Figure 5.1

5.2 Promotion Strategy

The promotion strategy is to be aimed at educating the public to use the private motor vehicle responsibly. The actual content or message to be used could be developed from the attitudinal survey information available and any additional data that may be collected. There is specific information available from surveys in Queensland which could be supplemented with general data from interstate. As this data is expensive and time consuming to collect, it is recommended that further surveys are not carried out unless specific information is required that is not available through existing data. It is expected that the promotion would be undertaken through all major media services to ensure that all socio-economic groups are covered.

It is recommended that major media organisations (i.e. television, radio and newspaper) be approached as sponsors of the event. The benefits to these organisations would be that they are seen by the public to be involved in community issues and support ways of improving the community.

An important part of the strategy will be the development of an information service to advise on the most efficient public transport alternatives available on the day. This could be an extension to the service recently introduced by Queensland Transport. The service could also monitor public attitudes to the promotion. A similar service could organise car pooling or assist large organisations with car pooling initiatives.

Promotion material could be distributed to residents via a letter box drop, addressed to the householder. The approximate cost for the Brisbane Statistical Division would be $40,000. Alternatively, promotional material could be included in Council rate notices.

It is recommended that an appropriate title is determined for the promotion. All participants should agree on the aims and objectives and use these as the basis to determine the title.

5.3 Key Participants

5.3.1 Coordination

The implementation of the promotion should involve government at federal, state and local levels. The implementation should be coordinated in terms of promoting related aims and objectives of participants and provision of services to achieve the maximum response to the promotion. The aims of efficient transport asset utilisation, urban consolidation, and reducing greenhouse emissions are all interrelated.

SEPTS has shown the need for coordinated services information and ticketing systems. The coordination should be continued into the marketing and promotion. The reason for this is the joint resources of local and state government will allow a saturation through many information mediums and varying messages to build enthusiasm and target various user groups. Individual authorities would only target their potential users and would not have the financial resources to market on a large scale.

A steering committee should be formed which comprises representatives from each of the government bodies involved as well as community and lobby groups.

5.3.2 Federal Government

Federal agencies that could be involved in the promotion are:

- Department of Primary Industries and Energy (DPI);
- Department of Transport and Communications (DOTC);
- Department of the Environment (Greenhouse Information Program); and
- Better Cities Program.

DPI and DOTC should be actively involved in the steering committee. Funding could be available from all groups.

5.3.3 State Government

The Department of Transport and the Department of Environment and Conservation are involved at State level on the steering committee. Both groups would be expected to contribute funding to the promotion. The DOT would be expected to provide rail services through QR and undertake monitoring of the promotion.

The goals of the promotion reflect the findings of SEPTS and will assist in public awareness of the public transport system and the benefits of its use as is recommended in the SEPTS report. A successful promotion in terms of a high demand for public transport could provide the impetus for implementing SEPTS findings.

5.3.4 Local Government

Brisbane City Council is expected to provide additional bus services, promotional material relating to those services and monitoring of the promotion. Funding of the education campaign is also expected.

The provision of transport services is an important part of urban renewal and increased population density policies. This promotion is an ideal opportunity to encourage alternate transport use before these new policies have a significant impact on inner city population densities.

5.4 Timing of the Event

The promotion should be held on a Tuesday or Wednesday to avoid a 'long weekend' effect and Thursday late night shopping.

To ensure that there is a relaxed party atmosphere about the whole promotion, it should be held during spring.

The reasons for this tentative timing are as follows:

- Good lighting (there will still be light at stations to ensure reasonable security);
- Good chance of fine weather;
- Approximately 6 months away to allow adequate planning; and
- Time to attract sponsorship and coordinate media participation.

The duration of the event was originally nominated as one day. The possibility of running the event over a longer period of one week or five working days was considered. The advantages of this type of promotion is that feedback after each day through the electronic media could be used to encourage more effort from the community on the following days. Many workplaces have radios on during the day which would provide an opportunity for this type of advertising.

Brisbane City Council indicated that, if they were to participate, they could only provide additional services for one day. Therefore the public transport initiative could only be promoted as a single day event. However, it is recommended that the car pooling and alternate modes promotion over a working week be investigated.

5.5 Evaluation

The success of the event can be monitored in a number of ways. The reduction in car travel can be counted at a number of strategic counting locations where comparisons could be made with historic data. The greatest impact of the promotion is expected on travel to the city. Public transport counts on the CBD cordon and vehicle occupancy counts will give an indication of any switch from private car use.

The integrated ticketing system is to be installed in the rail network by July. This system would enable patronage loadings to be given at major interchanges. It is understood that Brisbane City Council can get an indication of patronage through revenue. The sale of single trip tickets may also give an indication of increased demand during the promotion.

Traffic counts can be obtained through the DOT and BCC permanent counters or the coordinated signal system. BCC is introducing an automatic counting system which could be utilised but it is expected that only a few sites will be in operation by the proposed timing of the promotion.

It is recommended that the evaluation methods are limited to these 'automatic' systems that could give a quick indication of the magnitude of public transport patronage and any reduction in vehicular traffic. A detailed traffic count study is considered to be uneconomical for the purpose.

Attitudinal surveys after the event could show if there has been a change in attitudes and if people would continue to use alternative modes of transport. These surveys would be more expensive to implement but may be required if information on energy consumption attitudes was required.

5.6 Actions following the Event

Successes of the promotion should be made public as soon as possible after the event and the benefits and public attitudes reinforced by a follow up media campaign. Although the continued promotion of alternate transport is considered important to achieve the long term benefits, it was not part of the scope of this study.

The followup promotion would most likely be in the form of reminder or encouragement messages on a smaller scale than the original promotion. Higher profile promotions may be used to implement new transport services or environmentally friendly technology and activities.

5.7 Implementation Strategy

The strategy for implementation of the promotion is based on the Steering Committee which will oversee the preparation. Major decisions and progress reviews should be made at coordination meetings. Other tasks would be carried out by the relevant participants between

meetings.

The proposed strategy is shown in figure 5.2 and the major agenda items at each meeting are summarised in Table 5.1. This strategy would be reviewed in the Implementation Meeting.

Table 5.1

Coordination Meeting Agendas

Implementation Meeting A - Appoint Promotion Coordinator - Finalise Implementation Strategy - Confirm inputs, commitments, resources from all participants - Implement community debate through editorials, press releases, etc.
Progress Meeting B - Transport authorities report on supply/demand characteristics of transport system and opportunities for additional services - Appoint advertising and promotion consultant - Set objectives for information system
Progress Meeting C - Adopt additional services to be provided and implement detailed planning - Review progress of advertising consultancy - Review and implement information system and car pooling kit - Review public debate
Progress Meeting D - Review information system and car pooling - Review and implement media campaign - Review and commit monitoring program and resources
Review Meeting E - Review success/failures of promotion - Prepare program for future activities

Figure 5.2

Six Month Implementation Strategy

	MONTH						
	1	2	3	4	5	6	
Coordination Meetings	A	B		C		D	E
Promotion Coordinator	- - -	- - -	- - -	- - -	- - -	- - -	
Investigate Transport System Supply/Demand	.....	.....					
Program Services/Staff				- - -			
Review Public Attitudes			.....				
Advertising and Promotion Consultancy			- - -	- - -			
Information System			.....	- - -	- - -	___	
Incentives						- -	*- - -
Media Releases/Promotion	- - -		- - -		- - -	___	- - -
Monitoring						- - -	- - -
Promotion							*

..... Planning
- - - Part Time Input/Preparation
___ Full Time Input/Implementation

6.0 CONCLUSIONS AND RECOMMENDATIONS

There is considerable interest to organise and stage a successful event by government authorities and community lobby groups.

Due to the existing spare capacity in the public transport system and the added capacity that could be provided for a special promotion, it is recommended that the promotion concentrates on encouraging trips on the existing public transport system. That is, CBD based commuter trips. It is also recommended the major employers at regional commercial and industrial centres be encouraged to car pool during the event. General promotion activities should encourage the use of modes such as walk and cycle.

A steering committee comprising the relevant government transport organisations and community lobby groups should be formed to coordinate the promotion and transport services.

It is recommended that support is obtained from leading media houses (television, radio and newspaper). This support should be promoted in terms of a community service which will highlight those companies interest and concern in community and environmental issues.

The promotion strategy and advertising campaign should be undertaken by a professional marketing agency. It is recommended that either government resources (depending on availability) or a private consultancy are engaged for this purpose. The consultancy would be required to prepare advertising material, the mix of media used, negotiate sponsorship with media and other companies and monitor public attitudes.

It is important that the success of the event can be quantified and the results used as follow–education measures. It is recommended that a monitoring program is setup utilising automatic data collection systems to show the effect of the promotion. Measures of the use of the transport system will be required before, during and after the promotion. This promotion could be the first of a series of promotions throughout Australia if successful.

The benefits of the use of alternative transport are:

- improved asset utilisation;
- reduced environmental degradation;
- reduced accident rates;
- reduced energy consumption;
- increased mobility for those without existing public transport services.

The promotion will contribute to these long term benefits by giving a practical opportunity for the public to experience other modes of transport other than the car and thus implement a process for a continuing reduction in car use. the promotion will also assist the public to understand the need and outcomes of SEPTS and urban consolidation initiatives.

The promotion can take the form of a public education campaign where the message is sold through the media and participation. There is little risk in this approach however the benefits will be slower in appearing and public transport services can be upgraded in line with demand.

The other end of the scale is to encourage the use of public transport and alternative modes by providing additional services and incentives on a one day promotion. The risks involved with this are greater in terms of :

- The actual demand for public transport can not be quantified;
- Additional services could only be provided for the day of the promotion and not immediately following;
- Concerns of commercial groups regarding reduced trip making; and
- Public opposition to the use of funds for the promotion.

It is recommended that as far as possible the promotion and incentive scheme be adopted. Where possible, new services should be introduced according to SEPTS findings during the promotion and must be capable of being continued following the event. Otherwise, spare resources should be used to provide additional services on existing routes.

APPENDIX A

LITERATURE REVIEWS

- Austroads Road Demand Management Study
- SEPTS
- BTS

ROAD DEMAND MANAGEMENT SUMMARY

The Road Demand Management study for Austroads was a significant literature research of implemented and proposed RDM schemes. The report states the aims of RDM and discusses various measures and their effectiveness. Finally it evaluates the measures in terms of Australian conditions and recommends procedures for planning and implementation.

The major outcome of the study was to determine measures which reduce the effect of travel on the urban transport system rather than on the demand for travel itself. The emphasis will be given to measures which give better or more accurate signals to road users concerning the costs they incur or impose on others.

The objectives of demand management which appear most appropriate in an Australian context are:

- Improved economic efficiency;
- Environmental improvements;
- Safety improvements;
- Improving public transport;
- Conserving energy;
- Finance; and
- Equity.

The real issue is the need to achieve a more efficient use of the capacity which is available at any particular time, i.e. to balance supply of and demand for transport. The greatest benefit from these measures can be obtained by reducing peak demands on the system.

The available measures are summarised in Attachment 1.

The most common form of measure in World use is the high occupancy vehicle lane, accompanied by specific actions and incentives to encourage ride sharing. The use of price as a demand management measure is quite rare.

Passive Measures are defined as those which do not involve forms of pricing or coercion and apply in an essentially voluntary manner.

Passive measures include:

- Urban form;
- Staggered working hours; and
- Ride sharing.

Ride sharing is basically an attempt to increase the average occupancy of private vehicles on roads. There is an impediment to ride sharing due to preference for privacy, lack of flexibility in personal travel decision, difficulty in finding people with similar travel needs.

Ride sharing can be improved by changes in attitude by road users, and sufficiently strong incentives to cause those changes. Ride share matching services that are employer based and employer supported have been successful in the US.

Infrastructure modifications to provide benefits for vehicles with higher occupancies give incentives for ride sharing. The incentives can be:

- High occupancy vehicle lanes;
- High occupancy vehicles carparks;
- Reductions in parking fees or exemptions in tolls/charges; and
- Ordinances.

Active Measures are those which are deliberately applied to limit the use of vehicles below a natural equilibrium.

Active measures include:

- Physical controls;
- Regulatory methods;
- Parking controls and pricing;
- Vehicle and Fuel taxation; and
- Road user charging methods.

In the area to which they apply, their effect cannot be avoided by the targeted road users.

Road Pricing

Road pricing is a very powerful measure and is evaluated in significant detail. The technology for road pricing is still in the early developmental stages. This and the need to educate and change public attitude to pricing will delay the introduction of this measure in Australia. However, there are successful examples overseas.

Road pricing is most effective when the perceived cost of travel is comparable to real costs. Better appreciation of total car travel costs would probably result in a decline in the number of private vehicle trips made. Effective costs of travel should be made apparent to drivers and should vary between congested and uncongested travel.

The requirements for effective road pricing are:

- Pricing should appear fair and equitable in its allocation of road space to users;
- That it is reliable and publicly acceptable;
- Enforceable; and
- Simple for operator and user.

There are difficulties related to the introduction of road pricing:

- People object to paying for services that they believe they have already paid for or are perceived to be free;
- Schemes are seen as inequitable;
- Technology to be proved;
- Resentment over surveillance;
- Impact on CBD; and
- Enforcement.

Specific highlighting of the contribution of excessive road vehicle use to environmental degradation and energy depletion will have some impact on the ease of implementation. The changes in behaviour and attitude which are necessary to enable physical restraint, particularly road pricing, to be introduced will take time; probably several years. Overall conclusion from the literature review is that the impacts have been relatively small so far.

HOV lanes have almost exclusively been related to freeways and thus there is likely to be less opportunity to exploit this encouragement to ride sharing in Australia compared with US cities.

If the use of roads is to reduce and mobility is to be maintained, then there is an almost inevitable growth in public transport, much of that growth being in peak periods when the public transport systems capacity is as stretched as the road system.

Reduced congestion due to road demand management means that there are less cars producing pollutants and consuming fuel and each vehicle individually consumes less fuel when flowing freely.

The various RDM measures where evaluated in terms of their practicality, effectiveness, financial and economic viability, social impact, and environmental effects. The analysis showed that passive measures such as HOV incentives and peak spreading to be most applicable for Australian conditions.

The study clearly states that successful implementation requires:

- a gradual and thorough program to inform and educate the general public about the objectives, advantages and safeguards built into any technological measure;
- introduction of measures most consistent with current community attitudes;
- a convincing demonstration that privacy is protected and that the system cannot or will no be used for overall surveillance;
- a system that is fair and equitable;

- a genuine opportunity for individuals and organisations to participate in the planning process;
- the education of the public for the need for management of demand;
- a clear statement of how revenue raised will be invested;
- an ability to counter the objections which will arise from various lobby groups;and
- the harnessing of the genuine public concern for such issues as environment, pollution, congestion and energy waste to gain support for the measures.

The study conclusions indicate that:

- clear objectives for Australian cities to ensure evaluation, consultation, implementation and achievement are set into a consistent framework;
- research and education on the social impacts of and public attitudes to RDM to ease the path for the introduction of measures;
- road pricing is likely to be a powerful but controversial tool. Investigations into the concerns of social impacts, privacy and financial coats are required to reduce the impediments to its introduction;
- less controversial measures should be introduced to gain experience and begin the process of community education; and
- transport planning models should be developed to predict the impact of measures.

Relevance to 'Alternative Transport Day' Promotion

Although the report covers road pricing technology in detail, the limited technological development and public attitudes to road pricing and tolls suggest that significant further development and education will be required before it could be introduced in Australia.

It would not be practical to introduce a road pricing 'trial' for one day. Also it would increase public opposition to such measures rather than providing incentives.

The use of HOV incentives and increased public transit usage are the most likely measures that could be introduced for a one day trial. The report states that eduction and attitude changes by media campaigns are required for the successful implementation of any measure. Such a campaign will be essential for a one day trail to achieve a reduction of private vehicle trips.

The use of incentives is also necessary for successful implementation. Such incentives for the one day trial could be subsidised car parking or park and ride transfer to high occupancy vehicles.

ATTACHMENT 1

DEMAND MANAGEMENT MEASURE

Strategy	Method	Technique
A. Improved Asset Utilisation	A1. Peak Spreading	A1.1 Staggered hours A1.2 Flexible hours A1.3 Working week changes A1.4 Fare or toll differentials A1.5 Parking cost differentials A1.6 Parking availability differentials
	A2. Vehicle Occupancy	A2.1 Ride Sharing A2.2 Van Pools A2.3 HOV lanes A2.4 Parking priority A2.5 Park and ride schemes
B. Physical Restraint	B1. Area Limitation	B1.1 Traffic cells B1.2 Traffic mazes B1.3 Area Licences/permits B1.4 Cordon collars
	B2. Link Limitations	B2.1 Access metering B2.2 Signal timing B2.3 Reduced capacity B2.4 Public transport priority
	B3. Parking Limitations	B3.1 Parking space limits B3.2 Parking access controls
C. Pricing	C1. Road Pricing	C1.1 Tolls C1.2 Area entry fees/licensed C1.3 Congestion pricing/electronic road pricing
	C2. Parking Prices	C2.1 Short term priority policies C2.2 Higher entry costs
	C3. Taxes	C3.1 Higher fuel taxes C3.2 Parking taxes C3.3 Higher ownership taxes
D. Urban and Social Changes	D1. Urban Form	D1.1 More compact cities D1.2 Efficient urban development
	D2. Social Attitude	D2.1 Community information and awareness D2.2 Community education
	D3. Technical Change	D3.1 Communication substitutions D3.2 Transportation development

SOUTH EAST QUEENSLAND PASSENGER TRANSPORT STUDY

SUMMARY

The study determined marginal social costs per passenger by mode and levels of travel pricing.

Generally it was found that traffic congestion in Brisbane is not yet perceived as a major problem and public transport cannot compete with the flexibility of the private car. Buses are regarded as being less reliable than trains. There is unfavourable attitudes towards restricting car use unless public transport services and infrastructure are significantly upgraded.

Travel Demand Measures

The following measures are discussed:

- Distance based road charges;
- Congestion pricing mechanisms –

  Increased parking charges will be difficult to apply due to the majority of car parks being under private ownership;
- Walking and Cycling –

  The study recommends improving walking and cycling connections in the city;
- Telecommuting;
- Ride sharing –

  The study recommends the creation of ride sharing agencies; private companies contracted to design, implement, monitor and maintain ride sharing programs on behalf of Government and major employer groups.

It was found that greater use of public transport was inhibited by:

- Inaccessibility/insecurity;
- Convenience to destination;
- Vehicle performance;
- Scheduling and reliability;
- Lack of coordinated services.

Safety was rated as relatively important in making decisions about choice of mode. Train travel was rated higher than cars, but buses are considered less safe. Security from attack and security of property are issues of concern.

Recommended System

The backbone of the system would be a regional linehaul network of rail lines and express bus routes. Subregional networks of local routes focussed on subregional centres with a service direct to the feeder/linehaul system.

The system also considers school transportation, central city distribution, taxis, ferries, integrated fares and ticketing, telephone information service and personal security.

Methods of Achieving a more balanced land use/transport interaction:

. Increase central city employment and entertainment;
. Increase population in the inner suburbs;
. Increase population and employment near linehaul public transport routes;
. Increase local area containment within subregional centre catchment;
. Charging of transport 'Headworks' for development;
. Local area design priority for pedestrians and cyclists;
. Development of new residential areas.

GUIDELINES FOR DESIGN OF LOCAL SERVICES

Serviced areas	All urban areas would have a service to their subregional centre. (In some cases this may be part of a linehaul route.
Directness	The route from any significant catchment point to the subregional centre should be no more than 1.2 times the distance by the shortest road route. (This ratio may be extended to 1.5 in some areas). The route should use major roads and through streets.
Coverage	A local route should be provided within 400m of 90% of households. A route should have a catchment on both sides and should avoid unproductive areas. Routes should avoid duplication except where they approach the local centre of linehaul interchange).
Consistency	Routes should not vary from the regular pattern. (During peak periods a local route may operate on a different pattern as a feeder to a linehaul route).
Destinations	All local routes by definition must serve the subregional centre. They should also serve other major destinations en route or at the outer terminus. where feasible and appropriate, the outer terminus of a route should be at another linehaul point to promote use of the route in both directions. In many cases a single route would cross a local network boundary and provide a local service to two subregional centres.
Transfers	Transfer from one vehicle to another should not be required to reach the subregional centre (but will often be necessary to reach the subregional centre of another network).
Frequency	Each route would have a basic minimum service frequency. These basic frequencies and service class areas as shown on Figure 3.2.
Regularity	Services would be run at clock-face frequencies (at regular times past the hour).
Coordination	The opportunity for timed transfer should be offered at all interchanges (except the Brisbane city centre), at least for major transfer movements in major directions. Time allowed for transfer should be five minutes. (This time should be increased if schedule adherence of the approaching service is poor).

Relevance to 'Alternative Transport Day' Promotion

Public transport has generally been considered to be undesirable due to unreliability, lack of flexibility and security compared to the use of a private vehicle when one is available.

Unless traffic congestion and the associated perceived cost of congestion increases, public transport infrastructure and services are improved, or a form of road pricing in introduced, it is unlikely that trip makers will voluntarily switch from private care use.

The proposed improved public transport system includes requirements for the development of local services that are to ferry passengers to the linehaul services. These guidelines are logical and achievable and should be adopted for the provision of services for the promotion.

The study investigates RDM measures and recommends ride sharing incentives. The use of road pricing was considered to require more research and analysis of its use in actual cases before adoption. However, the study did accept distance based road charges.

BRISBANE TRAFFIC STUDY
STRATEGIC TRAFFIC PLAN 1989 - 2006

Summary

The Brisbane Traffic Study considers RDM as a measure to delay the construction of additional road capacity. The report recommends restraints for CBD travel using parking policy and physical controls as well as improved public transport systems. The report also considers funding for future transportation infrastructure.

There is a conflict with the SEPTS report in that significant road sections were found to be at or above acceptable operating capacities.

The coordination of transportation agencies is also considered to be of significant importance.

APPENDIX B

JOURNEY TO WORK DATA

JOURNEY TO WORK BOONDALL TO CBD ZONES 1 TO 14

FROM CENSUS TRAVEL ZONE	SUBURB	MODE VEHICLE DRIVER	VEHICLE PAX	TAXI PAX	TRAIN	BUS	OTHER	TOTAL
86	WAVELL HEIGHTS	348	98	2	186	168	8	810
87	NORTHGATE	112	21	2	159	8	4	306
88	BANYO	135	25	0	238	12	7	417
89	VIRGINIA	86	15	0	81	12	6	200
90	GEEBUNG	189	42	0	236	19	4	490
91	ZILLMERE	215	35	2	257	33	9	551
92	NUDGEE	67	16	4	114	2	6	209
93	BOONDALL	186	43	2	220	23	6	480
94	TAIGUM	45	10	0	32	2	0	89
95	DEAGON	75	15	0	172	2	6	270
96	SANDGATE	108	22	0	226	4	4	364
97	BRIGHTON	206	42	0	278	6	8	540

JOURNEY TO WORK QEII TO CBD ZONES 1 TO 14

FROM SUBURB CENSUS TRAVEL ZONE		MODE VEHICLE DRIVER	VEHICLE PAX	TAXI PAX	TRAIN	BUS	OTHER	TOTAL
136	SUNNYBANK	243	49	4	200	74	4	574
137	ROBERTSON	153	28	0	20	59	2	262
138	COOPERSPLAINS	83	13	0	96	22	12	226
139	ACACIA RIDGE	13	0	0	2	8	0	23
140	ACACIA RIDGE	125	18	2	47	123	12	327
141	ARCHERFIELD	16	5	0	7	8	4	40
142	SALISBURY	126	34	0	71	92	6	329
143	ROCKLEA	9	4	0	12	5	0	30
144	ROCKLEA	16	0	0	30	2	0	48
145	BERRINBA	3	0	0	0	0	0	3
146	MACGREGOR	202	44	0	11	199	9	465
147	ROCHEDALE	23	2	0	4	0	2	31
148	BURBANK	34	8	0	0	14	0	56
149	WISHART	316	58	2	4	223	2	605
150	UP MT GRAVATT	286	61	0	2	269	15	633
151	NATHAN	42	13	0	2	27	10	94
152	MT GRAVATT	136	37	2	4	109	3	291
153	MT GRAVATT ET	330	79	2	12	314	15	752
154	MANSFIELD	351	81	0	8	275	16	731
155	BELMONT	37	4	0	0	23	8	72
156	CHANDLER	71	5	2	15	27	5	125
157	EIGHT MILE PLA	161	27	2	66	47	8	311

JOURNEY TO WORK LOGAN CITY TO CBD ZONES 1 TO 14

FROM CENSUS TRAVEL ZONE	SUBURB	MODE VEHICLE DRIVER	VEHICLE PAX	TAXI PAX	TRAIN	BUS	OTHER	TOTAL
193	GREENBANK	79	4	0	21	19	4	127
194	MARSDEN	143	26	4	112	6	23	314
195	BROWNSPLAINS	285	52	0	121	83	15	556
196	WATERFORD WT	30	0	0	22	2	2	56
197	LOGANLEA	53	13	0	88	0	2	156
198	TANAH MERAH	8	4	0	2	6	0	20
199	LOGANHOLME	120	30	2	46	15	11	224
200	CORNUBIA	191	33	0	56	26	10	316
201	KINGSTON	168	47	2	237	8	14	476
202	WOODRIDGE	225	49	2	339	11	28	654
203	SLACKS CREEK	236	38	0	122	35	12	443
204	DAISY HILL	102	19	0	34	8	0	163
205	SPRINGWOOD	166	32	2	54	14	12	280
206	UNDERWOOD	68	14	0	34	10	2	128
207	ROCHEDALE	499	101	0	130	136	25	891