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Public transport reforms

.....
Moving from
a system to
a service



VICTORIAN
AUDITOR-
GENERAL'S
OFFICE

Special Report No. 57

May 1998

VICTORIA

Auditor-General
of Victoria

SPECIAL REPORT No. 57

**PUBLIC
TRANSPORT REFORMS**

**Moving from a
system to a service**

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**VICTORIAN
AUDITOR-
GENERAL'S
OFFICE**

*Auditing in the
Public Interest*

May 1998

The President

The Speaker

Parliament House

Melbourne Vic. 3002

Sir

Under the provisions of section 16 of the *Audit Act* 1994, I transmit the Auditor-General's Special Report No. 57, "*Public transport reforms: Moving from a system to a service*".

Yours faithfully

C.A. BARAGWANATH
Auditor-General

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Contents

	Foreword	vii
PART 1	EXECUTIVE SUMMARY _____	1
	<i>Overall audit conclusion 3</i>	
	<i>Summary of major audit findings 7</i>	
PART 2	BACKGROUND _____	13
	<i>Roles and responsibilities 15</i>	
	<i>Public transport services in Victoria 15</i>	
	<i>The public transport reform program 20</i>	
	<i>The Government's prioritisation plans 20</i>	
PART 3	CONDUCT OF THE AUDIT _____	23
	<i>Audit objectives 25</i>	
	<i>Scope of the audit 25</i>	
PART 4	REDUCTION OF \$245 MILLION IN THE GOVERNMENT'S ANNUAL PUBLIC TRANSPORT SUBSIDY _____	27
	<i>Overview 29</i>	
	<i>Introduction 29</i>	
	<i>Achievement of the targeted budget savings 30</i>	
	<i>Overall financial outcome from the program 36</i>	
PART 5	PUBLIC TRANSPORT RELIABILITY _____	39
	<i>Overview 41</i>	
	<i>Introduction 42</i>	
	<i>Service delivery and punctuality 43</i>	
	<i>Interfacing with passengers and the public 52</i>	
	<i>Achieving and sustaining reliability through improved resource management 58</i>	
	<i>Managing the impact of the traffic system on tram services 63</i>	
	<i>Improving reliability to world class standards 67</i>	
	<i>Strategic business planning by transport services to meet future needs 69</i>	
PART 6	CLEANLINESS IN THE PUBLIC TRANSPORT SYSTEM _____	73
	<i>Overview 75</i>	
	<i>Introduction 75</i>	
	<i>Adequacy of cleanliness standards 75</i>	
	<i>Measuring public perceptions and expectations of cleanliness 79</i>	
	<i>The need to consider comfort of the passengers 79</i>	

.....

PART 7	SAFETY OF THE PUBLIC TRANSPORT SYSTEM _____	81
	<i>Overview 83</i>	
	<i>Introduction 83</i>	
	<i>Importance of an integrated approach to safety 84</i>	
	<i>Passenger safety 87</i>	
	<i>Employee safety 93</i>	
PART 8	EFFICIENCY OF PUBLIC TRANSPORT _____	95
	<i>Overview 97</i>	
	<i>Introduction 98</i>	
	<i>Efficiency of services from the perspective of travellers 98</i>	
	<i>Improving cost recovery and increasing patronage 105</i>	
	<i>Level of fleet utilisation 111</i>	
	<i>Sound of maintenance practices 114</i>	
	<i>Adequacy of staff rostering 118</i>	
PART 9	PLANNED PRIVATISATION ENVIRONMENT FOR PUBLIC TRANSPORT IN VICTORIA _____	121
	<i>Overview 123</i>	
	<i>The government's privatisation plans for public transport in Victoria 124</i>	
	<i>The impact of the reform program upon the privatisation of the public transport system 125</i>	
	<i>Management of franchises in the public interest 127</i>	
	<i>Attracting new patronage to public transport services 130</i>	
	<i>Use of assets by franchised operators 131</i>	
Appendix A	The government's twelve guarantees for public transport passengers _____	133

Foreword

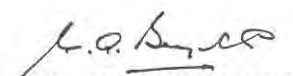
In my May 1994 *Report on Ministerial Portfolios*, I informed the Parliament that the Public Transport Corporation had embarked upon a major reform program in public transport. I indicated that, if it was successfully implemented, the program would bring about substantial resource savings and lessen the annual financial burden then carried by taxpayers in funding sizeable transport operating deficits.

This Report outlines the various reform activities which have been undertaken since 1992-93 by the Public Transport Corporation under the Government's Public Transport Reform Program. These activities led to a reduction by June 1996 of \$245 million in the contribution required by taxpayers to the annual public transport budget, which was in line with the challenging financial objective set by the Government at the commencement of the program.

Also, under the program, steady progress has been made towards transforming the public transport system from a system to a service with an emphasis on cleanliness, safety, reliability and efficiency in meeting customers' needs.

Notwithstanding the positive outcomes achieved to date, significant challenges remain in terms of progression to the reform program's ultimate aim, namely, provision of world class public transport services within Victoria. These challenges mainly involve successful implementation of the automated ticketing system, establishment of effective control over fare evasion within an automated ticketing environment, extension of the suburban rail system to service outer growth areas of Melbourne, modernisation of suburban and regional vehicle fleets, and upgrading of existing infrastructure such as signals and tracks.

The Government is currently preparing for privatisation of Victoria's public transport system. It has the major task of ensuring that its privatisation strategies effectively meet the above challenges and result in expanded, modernised and less costly public transport services for Victorians, at world class standard.


 C.A. BARAGWANATH
 Auditor-General

Part 1

Executive summary

Part 1.1

Overall audit conclusion

1.1.1 In January 1993, the Government announced its Public Transport Reform Program which sought to achieve ongoing savings in the public transport budget of \$245 million per annum by December 1995. It was also aimed at transforming the existing public transport system “*from a system to a service*”, providing world class transport services. In the process, public transport was to become clean, safe, reliable and efficient.

1.1.2 Audit has confirmed that, by the end of June 1996, the Public Transport Corporation (PTC), which is responsible for the operations of MetTrains, MetTram, V/Line Passenger and V/Line Freight, had achieved total savings of \$643 million in recurrent expenditure and ongoing savings per annum of at least \$245 million. Most of these savings were accompanied by a large reduction in the transport workforce, which had fallen by around 9 600 staff up until June 1997.

1.1.3 The major sources of savings were a rationalisation of workshops, specific productivity improvements, improved maintenance practices and the outsourcing of many functions. The relative ease with which the PTC’s workforce was downsized in co-operation with the transport unions was a direct reflection on the over-resourcing levels and inefficient practices which had existed in public transport operations for many years and which had not been addressed. In May 1992, the Auditor-General’s *Report on Ministerial Portfolios* to the Parliament drew attention to the need for corrective action by the PTC in the management of workshops and in vehicle maintenance practices.

1.1.4 The PTC deserves specific recognition for its management of a wide range of reform actions under the program which led to attainment of the challenging and significant financial objective set by the Government. In line with the Government’s stated intention at the start of the program, this achievement established a sound foundation for the future long-term viability of public transport in Victoria.

1.1.5 Without detracting from this marked achievement, for the financial benefits generated under the reform program to be sustained, it will be important that effective action is taken in 2 key areas, namely, successful implementation of the automatic ticketing system and development of a strategy to control and accurately monitor fare evasion within the automated ticketing environment. These issues will be addressed during the course of a separate performance audit, currently underway, which deals specifically with the automatic ticketing system.

1.1.6 During the course of the reform program, the reliability of services provided by the PTC's respective transport operators progressively improved in terms of making available sufficient vehicles to meet scheduled services. However, a clear exception to the overall improvement trend has been a deterioration in the delivery of suburban train services in peak periods. The PTC's capacity to realise further improvement in reliability of services is also hindered by a very high incidence of faults in aged rolling stock.

1.1.7 In addition, punctuality for all scheduled transport services has risen. With trams, which were the least punctual of all the transport services, the achievement of punctuality gains is directly impeded by the increasing density of traffic and a need to improve traffic management on many routes.

1.1.8 Patronage levels of public transport have progressively increased after a sharp decline at the beginning of the reform program. There is further scope to attract new patronage to public transport and reverse the increasing public trend to utilise private cars for commuting purposes. However, audit considered that achievement of significant patronage growth in the future will require substantial capital outlays for expansion of the transport network to service Melbourne's outer growth areas and for upgrading existing infrastructure (i.e. tracks, signals, stations etc.) in the metropolitan area. Also, many vehicles within each vehicle fleet are nearing the end of their useful lives and are very maintenance intensive. Further, much of the country rail infrastructure will need to be improved substantially if high speed modern trains are to be deployed in the future.

1.1.9 Very little marketing of the distinctive advantages of public transport, when compared with private car travel, has been undertaken to date. In the development of future strategies to increase public transport patronage, it will be important to determine:

- why many passengers like using public transport, such as stress-free travel, and to develop marketing strategies around these stated reasons; and
- why other people use private cars in preference to public transport, for reasons such as door-to-door convenience, personal safety and timeliness or because of negative perceptions formed of public transport.

1.1.10 During the reform program, the PTC has taken action to improve safety on trains and trams and at stations through initiatives such as better security lighting, video surveillance and establishment of "premium stations" which provide a higher level of safety. Despite these initiatives, limited marketing of the enhanced safety on public transport at night has taken place.

1.1.11 It is therefore clear that a key issue from this point on, in terms of attracting new patronage, will, in addition to capital investment, be the formulation and implementation of suitable marketing programs for public transport. Such programs will need to be aimed at promoting the distinctive advantages of public transport and addressing any factors identified as deterring prospective patrons.

1.1.12 While the PTC has displayed a strong commitment during the program to cleanliness of vehicles and improved safety for both the public as well as its workforce, action is warranted to establish suitable cleanliness and safety standards and to progressively monitor compliance with the standards.

1.1.13 In terms of progression to the reform program's ultimate aim, provision of world class transport services, the Government is currently embarking on a strategy of preparing Victoria's public transport system for privatisation. It has recently released details of 12 guarantees for public transport passengers which are designed "to protect passengers' rights and improve service quality on Victoria's trains and trams under a privatised transport system".

1.1.14 As a prelude to privatisation, the Government has legislated to corporatise, with effect from 1 July 1998, the PTC's passenger transport services through the establishment of 5 business corporations. It plans to seek tenders later in 1998 from private sector operators for franchise rights to operate these 5 businesses over periods ranging from 7 to 15 years.

1.1.15 Since the release of the Government's 1996 visionary document, "Transporting Melbourne", the Department of Infrastructure has been directing attention towards the development of comprehensive future plans for the State's public transport system. The need for such plans is now critical in order to provide a basis for determining the overall priorities for capital investment in public transport and the level of involvement by private operators in providing the necessary capital.

1.1.16 It will be important that prospective tenderers for franchises are provided with sufficient relevant detail on the condition and status of the transport system, so that submitted bids accurately reflect the costs to be incurred by operators in providing quality services to the public and in adequately maintaining the State's public transport assets.

1.1.17 The adequacy of contractual arrangements entered into with private operators will be a critical prerequisite for achieving effective management of a privatised public transport system. If contracts are not specific in setting out the obligations of private operators, the quality of service offered to the travelling public may well suffer. Nevertheless, contracts should not be unduly prescriptive, in order that operators have scope to display innovation in the delivery and nature of services offered to the public.

1.1.18 Finally, the Government has the major task of ensuring that its privatisation strategies build upon the past achievements under its reform program and bring about higher quality and less costly public transport services, equivalent to world class standards.

□ **RESPONSE** provided by Secretary, Department of Infrastructure

The Department of Infrastructure is pleased to note the Overall Audit Conclusion that the Public Transport Reform Program met all of its objectives and that in particular it has:

- achieved ongoing savings of at least \$245 M per annum;
- established a sound foundation for the future long-term viability of public transport in Victoria;
- delivered progressive improvement in the reliability and punctuality of all scheduled trains and tram services;
- led to increased patronage levels; and
- improved safety on trains and trams through initiatives such as better security lighting, video surveillance, premium stations and cleanliness of vehicles.

Paragraph 1.1.15 in the Overall Audit Conclusion refers to the involvement of the Department of Infrastructure in the development of comprehensive future plans for the State's public transport system.

The Strategic Planning and Economic Services Division was established in the Department of Infrastructure specifically to cater for transport planning. It has a Public Transport Branch devoted to the State's future public transport needs. Considerable work is in progress including:

- the upgrading of Transporting Melbourne;
- development of a Transporting Victoria plan;
- a draft Metropolitan Train Service Strategy;
- Metropolitan bus initiatives adopting new technology and marketing strategies;
- public transport plans for Docklands, Melbourne Sports and Entertainment Precinct, Federation Square, Major Events including 2006 Commonwealth Games, the Scoresby Corridor, Airport Rail Link, Modal Interchanges; and
- Metropolitan Train and Tram Network Options.

I note your conclusions that prospective tenderers for the public transport businesses should be provided with sufficient relevant detail, and for contractual arrangements to adequately reflect obligations to be met by private operators. The Transport Reform Unit in DTF in conjunction with the Department of Infrastructure is systematically working through both sets of requirements with final arrangements to be endorsed by Government.

Paragraphs 4.24 and 4.25 reflect the overall financial outcome from the Program. Capital costs incurred to achieve the Program are cited but capital cost savings have been overlooked. Significant examples are:

- privatisation of Government-owned bus services avoided the need to replace some 350 buses;
- considerable revenue was gained through the sale/lease of depots and buses through bus privatisation;
- competitive tendering of capital works lead to significant project cost savings relative to the previous arrangements where in-house labour, etc. was used;
- the Government has gained through the accelerated land asset disposal program.
- Savings to Government through reduced employer contribution for superannuation are not mentioned. These savings are estimated at \$23M per annum for 8 500 employees formerly employed by the PTC.

Part 1.2

Summary of major audit findings

**REDUCTION OF \$245 MILLION
IN THE GOVERNMENT'S ANNUAL PUBLIC TRANSPORT SUBSIDY** Page 27

- By 30 June 1996, implementation of the first stage of the Public Transport Reform Program had resulted in a reduction of \$245 million in taxpayers' annual contributions to the operating budget for public transport.
Paras 4.8 to 4.11
- A distinctive feature of the management reform actions taken by the Public Transport Corporation (PTC) under the program was the magnitude of reductions in the transport workforce, which had fallen by around 9 600 staff as at 30 June 1997.
Paras 4.12 to 4.13
- The PTC deserves specific recognition for its management of a wide range of reform actions which led to attainment of the challenging and significant financial objective set by the Government.
Paras 4.14 to 4.15
- For the financial benefits generated under the program to be sustained, it will be important for the PTC to take effective action in 2 key areas, namely, successful implementation of the automatic ticketing system and development of a strategy to control and accurately monitor fare evasion within the automated ticketing environment.
Para. 4.16

PUBLIC TRANSPORT RELIABILITY

Page 39

- The performance of public transport in service delivery and punctuality progressively improved during the reform program following implementation by the PTC of a range of management strategies.
Paras 5.18 to 5.26
- An exception to the overall improvement trend has been a deterioration in the delivery of suburban train services during peak periods.
Paras 5.20 to 5.21
- For trams, greater use could be made of the information capabilities of the automatic vehicle monitoring system to assist in the provision of better services and improved punctuality.
Paras 5.27 to 5.32
- The Department of Infrastructure and the PTC should take action to introduce more meaningful performance measures for service delivery and punctuality, with a greater passenger focus.
Paras 5.33 to 5.39
- While new initiatives such as on-board announcements and publication of tram timetables have enhanced the quality of information provided to passengers, several avenues are available to build on these initiatives and further enhance communication links with passengers and the community.
Paras 5.40 to 5.65
- The activities of the Victorian Public Transport Forum need to be more widely promoted and public input more actively sought, if the Forum is to be viewed as representative of public opinion.
Paras 5.48 to 5.51
- The reliability of the suburban train system was impacted by a high incidence of faults occurring in trains, with a mean distance between faults of between 4 000 and 5 000 kilometres, which differs markedly from a best practice target of 100 000 kilometres between faults, identified by transport consultants appointed by the Government.
Paras 5.75 to 5.85
- By the time the automatic ticketing system is fully implemented, the PTC will need to have established a very high and sustainable availability of W class trams for the peak periods, to minimise the existing reliance on reserve trams which have not been modified for driver-only operations.
Paras 5.86 to 5.91
- Around 80 per cent of Melbourne's tram network, or about 197 kilometres, is on shared road space with motor traffic, a factor which significantly constrains the punctuality of tram services.
Paras 5.95 to 5.98

PUBLIC TRANSPORT RELIABILITY - continued

Page 39

- The Department should initiate an assessment of the current effectiveness of the Fairway Program, which was introduced in 1983 to address the impact of traffic congestion on tram services.
Paras 5.99 to 5.107
- Grounds exist for the Department to articulate criteria governing priorities of trams on shared roads relative to other road users, and the respective obligations of the PTC, VicRoads, councils and other parties.
Paras 5.108 to 5.116
- Pursuit of "world class" standards under the second phase of the reform program will require progression towards much tighter punctuality targets, higher speeds, more frequent transport services and a greater number of express services.
Paras 5.117 to 5.128
- Because most of the suburban train network was established over 70 years ago, the average maximum speed of trains within the network is restricted to approximately 80 kilometres per hour, notwithstanding the fact that the trains have a top speed capability of 115 kilometres per hour. This average speed is far below that which would be possible utilising contemporary signalling systems, advanced communications and control technologies.
Para. 5.120

CLEANLINESS IN THE PUBLIC TRANSPORT SYSTEM

Page 73

- All transport operators within the PTC are committed to cleanliness of vehicles and facilities however, to date, acceptable standards on cleanliness which are consistent with passenger expectations have not been developed.
Paras 6.4 to 6.18
- Future contractual arrangements with private sector operators should include provision for the carrying out of periodic passenger surveys on cleanliness.
Paras 6.19 to 6.21
- There would be merit in the Department developing a definition of standards of passenger comfort expected in travel and for these standards to be incorporated within future contracts with private sector operators.
Paras 6.22 to 6.26

SAFETY OF THE PUBLIC TRANSPORT SYSTEM

Page 81

- All transport operators should undertake comprehensive risk management surveys and ensure that documented safety strategies cover the full range of safety responsibilities for passengers, staff and the public.
Paras 7.9 to 7.16
- There is a need for the Department to verify that adequate documentation on safety incidents is not only prepared by operators but utilised as key input in the development of strategies to minimise re-occurrence of similar incidents.
Paras 7.17 to 7.21
- To effectively meet their public accountability obligations, individual operators need to report annually to the Parliament on their performance against passenger safety standards.
Paras 7.31 to 7.38
- Based on information provided by transit police, the levels of reported crime against persons using public transport are low by comparison with the incidence of crime in private residential situations, notwithstanding the greater amount of time likely to be spent by passengers in their homes.
Paras 7.45 to 7.50
- Reported crime associated with public transport is very low in comparison with the number of passenger boardings every year. Nevertheless, because there remains a strong public perception that travel on public transport at night is unsafe, transport operators should take action to address this aspect of public perception of safety which impacts upon patronage.
Paras 7.51 to 7.56

EFFICIENCY OF PUBLIC TRANSPORT

Page 95

- Notwithstanding achievements made under the reform program, the current public transport system does not efficiently meet the needs of all areas of Melbourne, particularly its outer growth areas, and significant capital upgrading of the network will be necessary to address this position.
Paras 8.11 to 8.19
- Through initiatives by the PTC to increase the level of suburban train services and provide greater flexibility for passengers, the total number of train kilometres covered each year has increased by 23 per cent from 12.3 million kilometres in 1991-92 to 15.1 million kilometres in 1996-97.
Paras 8.24 to 8.25
- The PTC is precluded from meeting any demand for additional suburban train and tram services in peak periods due to extensive vehicle maintenance requirements which restrict the availability of extra rolling stock.
Paras 8.26 to 8.33
- Tram travel times compare very unfavourably with car travel times and are deteriorating on nearly all tram routes, a position attributed by the PTC to increasing traffic density.
Paras 8.39 to 8.40

EFFICIENCY OF PUBLIC TRANSPORT - continued

Page 95

- The overall cost recovery performance of PTC-operated services, expressed as a ratio of revenue to operating costs, improved significantly during the period of the reform program, due principally to reduced operating costs.
Paras 8.42 to 8.45
- The PTC estimates that approximately half of all tickets sold relate to concessionary travel and that the annual contribution it receives from government for fare concessions covers only about 50 per cent of the gap between concessional revenue and full fare value.
Paras 8.47 to 8.52
- In the past, the PTC has been unable to accurately apportion fare revenue across its 3 suburban transport services (trains, trams and buses) because of the characteristics of the ticketing structure.
Paras 8.53 to 8.57
- It will be important that future transport operators be motivated, through appropriate incentives, to develop strategies aimed at achieving higher levels of operational efficiency on poorly patronised lines and routes.
Paras 8.58 to 8.61
- Based on information compiled by the PTC, patronage levels on trams and trains in Victoria have increased progressively during the reform program, with the total number of passengers carried in 1996-97 about 10 per cent higher than the position in 1992-93.
Paras 8.64 to 8.67
- Attracting new patronage in the future will require the formulation and implementation of suitable marketing programs which promote the distinctive advantages of public transport and address any factors which deter travellers from using it.
Paras 8.69 to 8.74
- While the PTC's vehicle refurbishment programs are aimed at extending the useful lives of vehicles, such programs should be regarded as short-term measures in that much of each fleet will need to be replaced over the next 5 to 10 years by modern, more efficient and economic vehicles in order to improve operational efficiency.
Paras 8.78 to 8.92
- Despite the growing obsolescence of the existing vehicle fleets and the fact that fleet renewal has now emerged as a critical factor influencing the State's ability to provide a high quality public transport system, the PTC is yet to formulate a long-term fleet development strategy for any of its services.
Paras 8.93 to 8.94
- Maintenance enhancement strategies implemented by the PTC such as the rationalisation of workshops, improved work practices, re-furbishment of aged vehicles and a shift from reactive to preventative maintenance have contributed to improved efficiency of the vehicle fleet in recent years.
Paras 8.95 to 8.104
- There is scope to achieve further productivity gains by addressing a number of current practices which hinder efficient staff rostering
Paras 8.105 to 8.110

**PLANNED PRIVATISATION
ENVIRONMENT FOR PUBLIC TRANSPORT IN VICTORIA**

Page 121

- The Government has recently announced a 12 point package of guarantees designed to protect passenger rights and improve service quality on Victoria's trams and trains under its planned privatised transport system.
Paras 9.8 to 9.14
- Due to the complexities of much of what the Government intends to achieve with the privatisation of transport operations, it is likely to be some time before it is in a position to reach finality on the ultimate shape of privatisation arrangements.
Paras 9.15 to 9.19
- After 6 years of cost-cutting and rationalisation of operations, there appears to be limited scope for further large savings to be achieved in an environment where a substantial proportion of existing rolling stock will need replacement over the next few years.
Paras 9.20 to 9.23
- A basis needs to be developed for determining the overall priorities for urgently-required capital investment in the public transport system and the level of involvement by private operators in providing the necessary capital.
Paras 9.24 to 9.26
- It will be important that prospective tenderers are provided with sufficient detail on the condition of the system, so that submitted bids accurately reflect the costs involved in providing quality services to the public as well as adequately maintaining the State's transport assets.
Paras 9.28 to 9.32
- From an accountability perspective, adequate details of the financial arrangements relating to fare concessions ultimately agreed with private sector operators should be periodically communicated to the Parliament.
Paras 9.34 to 9.37
- Contracts with private operators should contain suitably stringent performance standards and include targets and incentives for operators to increase patronage and improve services, in line with the Government's overall policy direction.
Paras 9.38 to 9.41
- Seven principal factors will be critical for attracting new patronage to privatised public transport services. Several of these factors will involve major capital expenditure.
Paras 9.42 to 9.45

Part 2

Background

ROLES AND RESPONSIBILITIES

2.1 Responsibility for public transport within Victoria rests with the Department of Infrastructure. This Department was established in 1996 and combines the former Department of Transport, as well as elements of the former Departments of Planning and Development, Treasury and Finance, and Arts, Sport and Tourism. The Department develops and manages major contracts for the delivery of transport services throughout Victoria. Under a Transport Services Agreement, the Department contracts the Public Transport Corporation (PTC) to operate transport services in accordance with the *Transport Act 1983*. The Department also manages contracts with private sector bus and rail transport operators and is responsible for the Public Transport Safety Directorate.

2.2 The PTC operates 4 individual business units, namely, MetTrains, MetTram, V/Line Passenger and V/Line Freight. It was also responsible for MetBus operations until April 1998, when the remaining portion of this business was taken over by a consortium of private sector bus operators. Each of the PTC's businesses manages its own operations which are reported upon separately in the organisation's annual report. Two commercial services divisions within the PTC, Rail Vehicle Maintenance and Infrastructure, provide engineering support services for the businesses.

PUBLIC TRANSPORT SERVICES IN VICTORIA

2.3 Victoria's public passenger transport system encompasses suburban train, tram and bus services operating in the Melbourne metropolitan area and country train and coach services operating throughout Victoria.

Suburban train services

2.4 Suburban train services are operated throughout an electrified rail network with a total route length of over 336 kilometres serving 197 stations. The rail network originates from the centre of Melbourne on 15 routes which extend to outer suburban locations up to 55 kilometres from the central business district of Melbourne.

2.5 The suburban train fleet comprises:

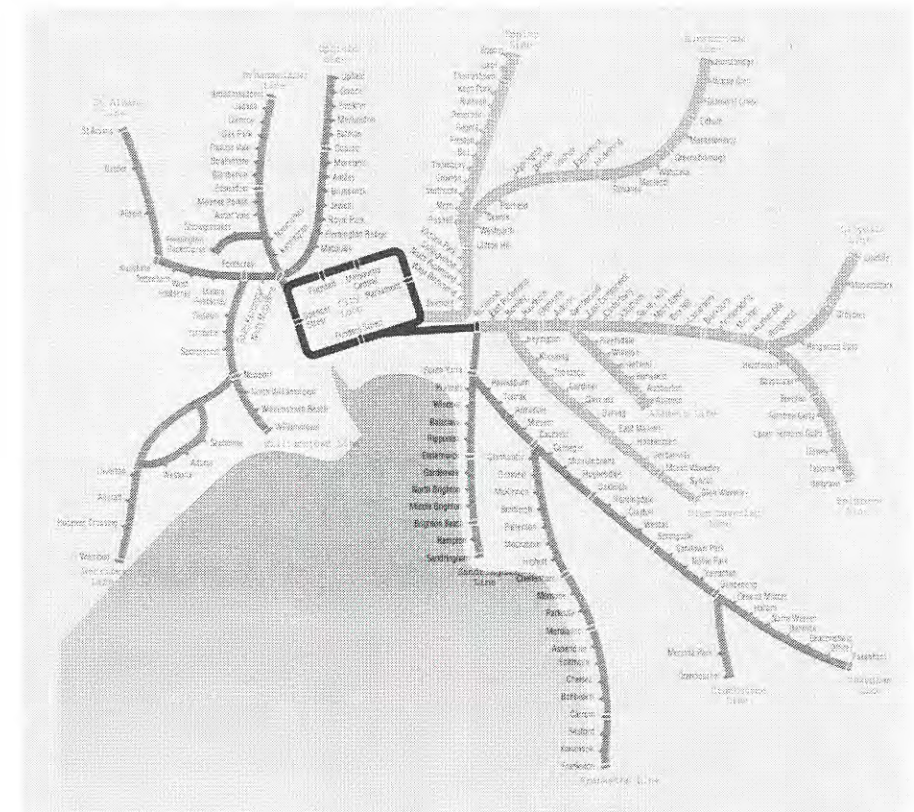
- 56 Hitachi 6-coach trains purchased between 1972 and 1980;
- 93 Comeng 6-coach trains purchased between 1981 and 1989; and
- 2 doubledeck 2-coach trains purchased on an experimental basis in 1992.



A Comeng train - the main element of the suburban train fleet.
(Reproduced with the permission of the Public Transport Corporation.)

2.6 Until April 1998, suburban train services were operated by the MetTrains division of the PTC. In April 1998, in preparation for the corporatisation and proposed privatisation of public transport operations, described in later paragraphs, MetTrains was separated into 2 separate business units within the PTC operators, namely Hillside Trains and Bayside Trains. Chart 2A illustrates the suburban train network.

CHART 2A
THE SUBURBAN TRAIN NETWORK.



(Reproduced with the permission of the Public Transport Corporation.)

Suburban tram services

2.7 Melbourne's tram network is the fourth largest tram network in the world, comprising 240 kilometres of double track. It extends from the Central Business District of Melbourne to a distance of approximately 25 kilometres. Around 80 per cent of the network, about 197 kilometres, is on shared road space with motor traffic. The remaining 43 kilometres consists of dedicated road space for trams.

2.8 The Melbourne tram service involves the delivery of services on 30 routes with frequencies ranging from every 4 minutes on some routes in peak periods to 20 minutes or longer during the day and at weekends.

2.9 The tram fleet of 526 vehicles comprises:

- 132 B class articulated trams or light rail vehicles acquired between 1984 and 1994;
- 70 A class trams acquired between 1985 and 1987;
- 221 Z class trams acquired 1975 and 1984;
- 43 W class "heritage" trams in normal service;
- 10 W class trams in service on the City Circle tourist route; and
- a "ready reserve" fleet of 50 W class trams of lower operating standard.

2.10 Similar to the position with MetTrains, the former MetTram operations have been separated into 2 separate business units within the PTC, namely Swanston Trams and Yarra Trams.



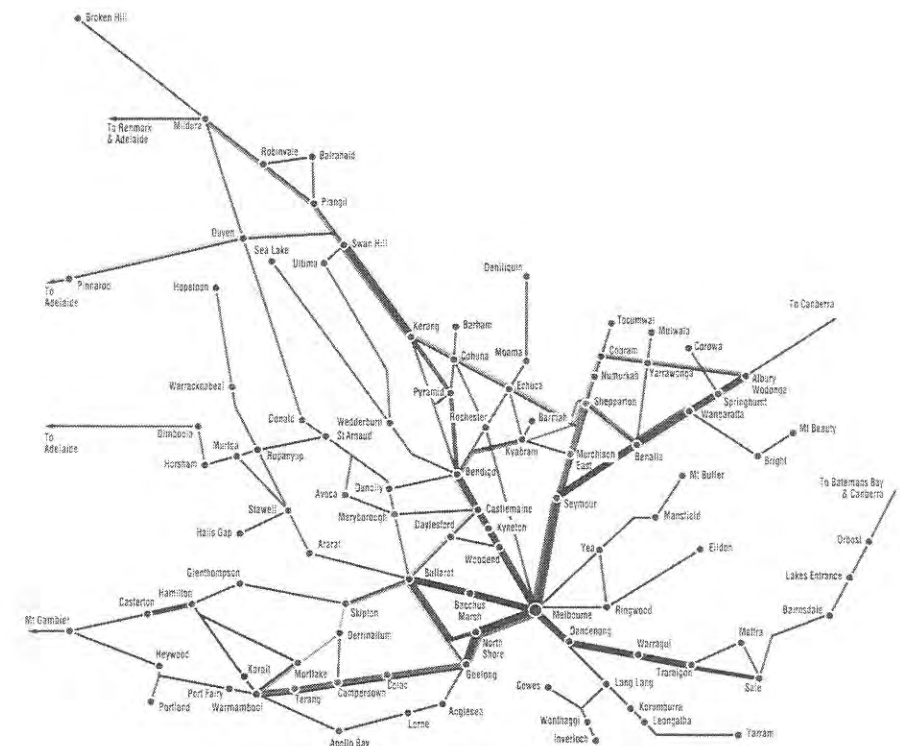
A Melbourne Z class tram.
(Reproduced with the permission of the Public Transport Corporation.)

Regional services operated by V/Line Passenger

2.11 Regional services provided by V/Line Passenger comprise a number of train services between Melbourne and regional Victorian cities as well as a network of coach services. The rail services operate on over 4 500 kilometres of rail track.

2.12 V/line Passenger rail services include both InterUrban and Intercity services. Its InterUrban services provide transport in and out of Melbourne, including morning and afternoon commuter travel, from a number of outer suburban, satellite and country towns not yet part of the electrified system. Intercity services provide regular services between Melbourne and major regional centres in Victoria. The V/Line service network is shown in Chart 2B.

CHART 2B
V/LINE COUNTRY PASSENGER SERVICE NETWORK



(Reproduced with the permission of the Public Transport Corporation.)

2.13 The V/Line Passenger fleet comprises:

- 20 "Sprinter" diesel railcar trains;
- 25 "N" class locomotives acquired in the late 1980s;
- 12 "P" and "A" class locomotives dating from the 1950s but with engines replaced in 1984 to 1985;
- 140 passenger carriages of various classes;
- 6 heritage carriages;
- 11 luggage vans;
- 5 power vans; and
- 4 shunter locomotives.

THE PUBLIC TRANSPORT REFORM PROGRAM

2.14 The Government's annual subsidy for public transport operations constitutes one of its major budget outlays.

2.15 Upon its election in 1992, the current Government commenced to implement its policy of reforming what it considered to be "*an inefficient and very poor quality transport service*".

2.16 In January 1993, the Government announced its Public Transport Reform Program. This program comprised 2 principal elements namely to ensure the long term viability of public transport in Victoria and to transform the public transport system into a service that is responsive to the needs of its customers.

2.17 The reform program had an initial strategic objective of reducing the contribution by taxpayers to the operating budget for public transport by \$245 million per annum by the end of 1995.

2.18 A further objective of the program involved the provision of reliable, clean, safe and efficient services in a manner which progresses the State's transport system towards a world class service.

2.19 An important component of the program involved the Government entering into a transport reform agreement with the transport unions in April 1993.

2.20 Principal responsibility for the management of the program rested with the Public Transport Corporation (the PTC). The main focus of the performance audit in terms of actions taken under the program was directed towards the activities of MetTrains, MetTram and V/Line Passenger.

THE GOVERNMENT'S PRIVATISATION PLANS

2.21 In 1996, the Government commissioned a major consultancy study to provide directions on the future of public transport in Victoria. The report from this study, presented to the Government in December 1996, considered that further savings of around 20 per cent or \$95 million per annum could be realised. Savings were mainly to be achieved from the introduction of automatic ticketing, better scheduling of tram and train drivers, and more emphasis on preventative maintenance. Scope was also identified for increased revenue from reforming fare structures.

2.22 The report recommended that the transport businesses should be initially corporatised as the first step towards privatisation. The consultants' view was that from experience elsewhere in the world even though corporatisation of transport services produced benefits, often these benefits proved to be short lived. The most efficient driver of cost-efficiency and improved service delivery was seen as competition between public transport operators which would be achieved by privatisation of the businesses. The consultants recommended accordingly that MetTram and MetTrains should each be split into 2 businesses and corporatised prior to privatisation. It was further recommended that V/Line Passenger services be packaged for privatisation.

2.23 The Government determined to generally accept the consultants' recommendations. In this regard, the *Rail Corporations (Amendment) Act 1997*, which received Royal Assent in December 1997, provides for the corporatisation of the Public Transport Corporation's (PTC's) tram services and suburban and country passenger train services.

2.24 Under this legislation, MetTrains is to be divided into 2 State business corporations which the Government has named as Hillside Trains and Bayside Trains. MetTram will be similarly restructured into 2 State business corporations to be known as Yarra Trams and Swanston Trams. The Government has announced that the 4 corporations would become operative from 1 July 1998. It is also the Government's intention that the corporatisation of V/Line Passenger take effect from 1 July 1998.

2.25 Around the same time as the Act received assent, the Government announced its plans to proceed with the privatisation of all public transport in Victoria within a short period after the business operations of the PTC have been corporatised. In this regard, it indicated that the 5 corporatised passenger services would be sold as individual franchises, with re-tendering for each business to occur at the end of the franchise period. Franchise periods are expected to range between 7 and 15 years. The Minister has announced that the Government expects the privatisation process for passenger services to be completed by March 1999.

2.26 At the date of preparation of this Report, legislation was before the Parliament to abolish the PTC Board and replace it with an administrator in the lead-up to privatisation.

2.27 The Government is moving under separate plans to privatise V/Line Freight, Victoria's main rail freight business. It has recently announced that it expects V/line Freight will be sold later in 1998.

2.28 On 8 April 1998, the Government announced a 12 point package of guarantees designed to protect passenger rights and improve service quality on Victoria's trams and trains under a privatised transport system. The Government's announcement indicated that these guarantees will be enshrined in legally binding long-term contracts with any future private sector operators. Appendix A of this Report sets out the 12 guarantees provided by the Government.

Part 3

Conduct of the audit

AUDIT OBJECTIVES

3.1 The overall objective of this performance audit was to determine whether the Public Transport Reform Program had been managed and implemented effectively, efficiently and economically in line with Government policy and related legislative requirements.

3.2 Specifically, the audit sought to determine whether:

- projected savings of \$245 million in the Government's annual public transport subsidy had been achieved and, if so, were sustainable and did not adversely impact upon the quality of public transport services provided to the community; and
- as a consequence of the Public Transport Reform Program, the Victorian public transport system provides a clean, safe, reliable and efficient service for both city and country passengers.

3.3 In the pursuit of this objective, audit sought to give recognition to improvement initiatives taken by the Public Transport Corporation (PTC) during the course of the reform program.

SCOPE OF THE AUDIT

Areas covered

3.4 The scope of the audit covered the passenger service operations of the PTC relating to MetTrains, MetTram and V/Line Passenger. Its freight business unit, V/Line Freight, was excluded from the audit due to its impending corporatisation in preparation for its projected sale in the latter part of 1998.

3.5 The activities of the private bus companies, including the National Bus Company which purchased 80 per cent of PTC's former MetBus business unit, were also not subject to this audit as their operations did not fall within the ambit of the reform program.

3.6 Within this scope, the audit included an examination of:

- the extent to which the aims and objectives of the Reform Program were achieved;
- the degree to which the Department of Infrastructure and the PTC have been able to reliably measure whether clean, safe, reliable and efficient public transport services were provided to the public;
- the ability of transport operators within the PTC to measure customer satisfaction levels and to initiate service improvements where warranted;
- maintenance practices for transport fleets;
- the nature of long-term planning undertaken for transport services in Victoria, including infrastructure development, fleet replacements and service extensions; and
- major factors inhibiting the achievement of further improvements in the quality, efficiency, cost-effectiveness and reliability of transport services.

Compliance with auditing standards

3.7 The audit was performed in accordance with Australian Auditing Standards applicable to performance audits and accordingly included such tests and other procedures considered necessary in the circumstances.

Specialist assistance

3.8 Specialist assistance was provided to the audit team by the Transport Research Centre.

3.9 This Centre reviewed the performance measures developed by MetTrains, MetTram and V/Line Passenger Service, and compared them with measures used in other transport services in selected overseas countries.

Assistance provided to audit

3.10 Appreciation is expressed for the significant support and assistance provided to the audit team from the management and staff of the Department of Infrastructure, the Public Transport Corporation, the Transport Reform Unit within the Department of Treasury and Finance, the Public Transport Users Group, West Coast Railways, Hoys Roadlines and the Victorian Public Transport Forum.

3.11 Audit wishes to acknowledge the contribution that the above assistance and cooperation made to the preparation of material included in this Report.

Part 4

**Reduction of
\$245 million in the
Government's
annual public
transport subsidy**

OVERVIEW

4.1 A key strategic objective of the first stage of the Public Transport Reform Program was to reduce the contribution by taxpayers to the operating budget for public transport by \$245 million per annum by the end of 1995.

4.2 The audit examination confirmed that a more favourable financial outcome expressed in 1995-96 terms of \$245 million, equivalent to the targeted amount, had been achieved by 30 June 1996. This outcome was derived from both reduced cost levels in a variety of operational and management functions and additional revenue directly attributable to a 10 per cent fare increase at the start of the reform program

4.3 Clearly, the Public Transport Corporation (PTC) deserves specific recognition for its management of such a wide range of reform actions which led to attainment of the challenging and significant financial objective set by the Government. In line with the Government's stated intention at the start of the reform program, this situation established a sound foundation for the future long-term viability of public transport in Victoria.

4.4 Without detracting from this marked achievement, for the financial benefits generated under the reform program to be sustained, it will be important for the PTC to take effective action in 2 key areas, namely, successful implementation of the automatic ticketing system and development of a strategy to control and accurately monitor fare evasion within the automated ticketing environment. These issues will be addressed by audit during the course of a separate performance audit which deals specifically with the automatic ticketing system and is currently underway.

INTRODUCTION

4.5 Following its election in 1992, the Government recognised that the existing public transport deficit was in the vicinity of \$549 million, with the Commonwealth Grants Commission assessing the per capita contribution of Victorians to the public transport deficit as \$294, the highest at that time in Australia. In January 1993, the Government announced its Public Transport Reform Program which, as mentioned in Part 2 of this Report, was aimed at transforming the public transport system into a service that meets the needs of its customers.

4.6 Part 2 of this Report also indicated that the reform program comprised 2 stages, with the first stage directed to ensuring the long-term viability of public transport. The key strategic goal of this stage was to reduce taxpayers' contribution to the operating budget for public transport by \$245 million per annum by the end of 1995.

4.7 The Auditor-General's *Report on Ministerial Portfolios, May 1994*, outlined the various resource management initiatives which were to be implemented by the Government in order to achieve the targeted savings of \$245 million.

ACHIEVEMENT OF THE TARGETED BUDGET SAVINGS

4.8 The Government's March 1996 Public Transport Policy Statement indicated that the PTC's annual operating deficit had been cut by the target amount of \$245 million.

4.9 The audit examination of management reports presented to the PTC Board and of related financial documentation, including the annual financial statements of the PTC and the Department, the Government's annual budget papers and the relevant appropriation acts, confirmed that a more favourable financial outcome in 1995-96 terms of \$245 million, equivalent to the targeted amount, had been achieved by 30 June 1996. This outcome was derived from both reduced cost levels in a variety of operational and management functions and additional revenue directly attributable to a 10 per cent fare increase at the start of the reform program.

4.10 Table 4A summarises, on both an annual and cumulative basis, the expenditure savings and additional revenue achieved from the various management actions under the reform program, as recorded within the PTC.

TABLE 4A
EXPENDITURE REDUCTIONS AND ADDITIONAL REVENUE UNDER THE
PUBLIC TRANSPORT REFORM PROGRAM, 1992-93 TO 1995-96
((\$million))

Reform actions	New expenditure reductions and additional revenue per year				Total
	1992-93	1993-94	1994-95	1995-96	
Expenditure reductions -					
Rationalisation of workshops	11.5	33.1	17.4	13.8	75.8
Reductions in revenue staff numbers	3.8	14.7	0.4	3.9	22.8
Infrastructure rationalisation	5.0	9.0	7.6	0.9	22.5
Freight rationalisation	3.4	8.4	7.4	1.5	20.7
Specific outsourcing measures	3.7	4.5	7.6	1.6	17.4
Driver-only suburban trains	0.8	1.3	4.3	8.9	15.3
Inventory management	1.0	1.1	4.5	8.0	14.6
Corporate overhead staff	0.8	8.0	3.3	0.1	12.2
MetBus services	2.4	8.2	(0.6)	-	10.0
Country passenger services	0.9	4.9	0.8	-	6.6
Private bus contracts	2.0	2.0	-	-	4.0
Trading and catering	0.2	3.0	0.3	-	3.5
MetTrains driver roster changes	0.7	1.0	0.3	-	2.0
Rationalisation of suburban train services	0.5	0.8	-	-	1.3
Cessation of dedicated city loop train service	-	0.6	-	-	0.6
Additional revenue -					
10% fare increase	6.0	8.0	0.4	0.4	14.8
New savings for year	42.7	108.6	53.7	39.1	244.1
Cumulative annual budget reduction	42.7	151.3	205.0	244.1	643.1

Source: Public Transport Corporation.

4.11 Comments on the various actions referred to in Table 4A are presented below:

- *Rationalisation of workshops, \$75.8 million*

Major workshop improvement initiatives taken by the PTC encompassed:

- closure of Jolimont and other workshops and rationalisation of activities in remaining workshops;
- better utilisation of the modern facilities at the Epping workshop and construction of a new workshop at Macauley;
- cessation of non-core activities such as furniture manufacture and foundries for the manufacture of brake pads;
- reductions of staff numbers by 2 315 throughout all workshops;
- outsourcing of various activities including train and tram cleaning; and
- retirement of aged vehicles in fleets with a consequential reduction in maintenance activities.

- *Reductions in revenue staff numbers, \$22.8 million*

It was anticipated that major savings would be achieved through the introduction of an automatic ticketing system by reductions in the number of station staff involved in ticket sales and the removal of tram conductors.

A significant delay has occurred in the implementation of the automatic ticketing system which is now scheduled to be fully operational by July 1998, almost 2½ years after the initial target date of February 1996. For this reason, major expected cost savings from the planned removal of 700 tram conductors have not been realised. In fact, the PTC was forced to re-engage or replace a number of tram conductors who had received voluntary departure packages because of the delay in introducing automatic ticketing.

In anticipation of achieving the initial target date for full implementation of automatic ticketing, the PTC progressively reduced the number of station staff by 40 per cent from 1 298 in June 1992 to 786 in September 1995. It attributed approximately \$19 million of the expenditure reduction in this area to these staff reductions.

The savings identified by the PTC under this heading do not take into account the loss of revenue through fare evasion which has occurred following the removal of station staff. In September 1995, the PTC recognised that revenue yields in MetTrains had deteriorated over the 3 year period 1992-93 to 1994-95, after allowing for fare rises. While the PTC has not yet quantified the magnitude of the ongoing adverse impact on revenue, it has identified fare evasion as a significant causal factor. Based on PTC revenue and passenger figures for MetTrains, audit estimated that MetTrains had suffered a total revenue loss in excess of \$10 million over the 3 year period.

- *Infrastructure rationalisation, \$22.5 million*

Infrastructure savings were achieved through outsourcing of many building and maintenance operations and competitive tendering of various capital works projects.

- *Freight rationalisation, \$20.7 million*

The initiatives involved in freight rationalisation included:

- the handover of interstate freight services to the National Rail Corporation;
- the introduction of driver-only operations in V/Line Freight trains and shunting trains;
- outsourcing of some freight handling and distribution functions; and
- introduction of part-time work and improved work practices in freight terminal operations.

- *Specific outsourcing measures, \$17.4 million*

These measures encompassed a range of outsourcing strategies including the cleaning of stations, administration buildings, tram depots and shelters, and activities such as general building maintenance, plumbing, and gardening.

- *Driver-only suburban trains, \$15.3 million*

The principal savings under this reform action resulted from the removal of guards from trains. Over the period 1992-93 to 1995-96, over 500 guards exited the transport system.

- *Inventory management, \$14.6 million*

The savings under this reform area were derived from upgraded policies and procedures relating to the acquisition and management of materials such as components for vehicle and infrastructure maintenance.

- *Corporate overhead staff, \$12.2 million*

These savings were derived from staff rationalisations (involving the termination of 565 corporate staff) and the outsourcing of various corporate activities, including internal audit and medical examinations.

- *MetBus services, \$10 million*

Eighty per cent of MetBus operations were contracted to the National Bus Company in 1993, and the remainder were contracted in 1998 to a private sector consortium of bus companies.

- *Country passenger services, \$6.6 million*

This action involved the closure of passenger rail services on 5 lines and their replacement by road coaches, and the transfer of 2 rail services to private sector operators. However, as mentioned in the Auditor-General's *Report on Ministerial Portfolios, May 1995*, while these service changes led to cost savings, they also resulted in reduced patronage levels and estimated annual revenue losses of \$2.4 million. The resumption of train services in 1996 to one line, the Albury line, using Sprinter trains has partially reversed the loss of patronage on that line.

- *Private bus contracts, \$4 million*

These savings, which occurred during 1992-93 and 1993-94, were achieved from bus operations by reducing some services. The management of this aspect of public transport was transferred from the PTC to the Department of Infrastructure in 1994-95.

- *Trading and catering, \$3.5 million*

Closure and outsourcing of staff canteens occurred at workshops and depots, in conjunction with the establishment of privately-operated retail outlets at major stations.

- *MetTrains driver roster changes, \$2 million*

Roster changes introduced by MetTrains enabled the number of metropolitan train drivers to be reduced by 50 from a total number of about 620 drivers.

- *Rationalisation of suburban train services, \$1.3 million*

A rationalisation of timetables for suburban trains meant that 6 fewer trains were needed to support peak services which led to lower operating costs.

- *Cessation of dedicated city loop train service, \$0.6 million*

The cessation of a train service continuously circuiting the city loop produced a small saving in operational costs.

- *10 per cent fare increase, \$14.8 million*

A specific element of the financial strategies identified by the Government for achieving the target reduction of \$245 million under the reform program was its decision to increase transport fares by 10 per cent with effect from January 1993.

4.12 It can be seen that the pursuit of significant savings under the reform program involved the PTC in a wide variety of management reform activities. A distinctive feature of most of these activities was the magnitude of staff reductions which can be illustrated by the fact that, by 30 June 1996, over 8 500 staff departures from the PTC had occurred. The management of staff departures of such magnitude was facilitated by a major industrial agreement entered into between the Government and transport unions in 1993.

4.13 It is also relevant to indicate that staff departures continued after 30 June 1996 with the PTC's workforce having fallen by a further 1 100 as at 30 June 1997.

4.14 Finally, the Auditor-General's *Report on Ministerial Portfolios, May 1994*, indicated that the PTC had embarked on a major reform program. The Report stated that successful implementation of the program would bring about substantial resource savings and lessen the financial burden then carried by general taxpayers in funding sizeable transport operating deficits.

4.15 Clearly, the PTC deserves specific recognition for its management of such a wide range of reform actions which led to attainment of the challenging and significant financial objective set by the Government. In line with the Government's stated intention at the start of the reform program, this situation established a sound foundation for the future long-term viability of public transport in Victoria.

4.16 Without detracting from this marked achievement, for the financial benefits generated under the reform program to be sustained, it will be important for the PTC to take effective action in 2 key areas, namely, successful implementation of the automatic ticketing system and development of a strategy to control and accurately monitor fare evasion within the automated ticketing environment. These issues will be addressed by audit during the course of a separate performance audit, currently underway, which deals specifically with the automatic ticketing system.

Reflection of the \$245 million savings in the parliamentary appropriation for public transport

4.17 In examining the success of the PTC in reducing taxpayers' contributions to the operations of public transport, audit sought to determine whether attained savings under the reform program were clearly reflected in the 1995-96 parliamentary appropriation for public transport when compared with the appropriation position in 1991-92, before commencement of the program. In other words, it was necessary to verify that the program's objective of lowering taxpayers' contribution from the Consolidated Fund to public transport had actually been achieved.

4.18 An ability to readily identify the program's savings within the appropriation framework was also deemed to be important given that certain transport activities such as private bus and taxi services, which were the responsibility of the Department and not the PTC, were funded via the public transport appropriation.

4.19 Also influencing audit's approach in this area was the fact that very limited information had been provided to the Parliament over the term of the program in the annual reports of both the Department and the PTC on the success or otherwise of management strategies in achieving targeted savings.

4.20 For internal management purposes only, regular reports were presented to the PTC Board and the Department of Infrastructure detailing the progressive savings generated under the program as well as the impact of the reform strategy on service delivery.

Comparison of appropriations for public transport before and after stage 1 of the reform program

4.21 In order to verify the level of savings reflected in the public transport appropriation for 1995-96, audit requested from the Department information showing a comparative analysis of that appropriation with the position in 1991-92. The information compiled by the Department following this request is shown in Table 4B.

TABLE 4B
SAVING IN 1995-96 APPROPRIATION ON A COMPARATIVE BASIS WITH 1991-92
((\$million))

<u>1991-92</u>	
PTC appropriation for 1991-92 -	
PTC operations	379.4
Transfer payments to private bus operators	123.6
Total appropriation for year for PTC and private transport services	503
<i>Plus</i>	
Adjustments necessary to appropriation -	
Payments due in 1991-92 year, but actually made in 1992-93	31.0
Allowance for inflation over reform period	31.0
	62
Total 1991-92 appropriation adjusted to 1995-96 dollars	565
<i>compared with:</i>	
<u>1995-96</u>	
PTC appropriation for 1995-96 -	
PTC operations	183.5
Transfer payments to private bus and rail operators	195.1
Total 1995-96 appropriation for PTC and private transport services	378
<i>Less</i>	
Additional supplementation provided to the PTC in respect of factors not considered to be part of the program -	
Increase in Federal diesel fuel excise	6.7
Retrospective impact of national wage rises	9.0
Payments to Consolidated Fund in respect of efficiency gains from capital projects	16.4
Special wage increase awarded by the Industrial Relations Commission in recognition of other productivity gains at the PTC	15.5
Compensation from Consolidated Fund for loss of rental in respect of PTC properties sold under the State's asset sales program	10.4
	58
1995-96 appropriation adjusted to be on a comparative basis with 1991-92 appropriation	320
Savings deemed to be attributable to the Public Transport Reform Program	245

Source: Compiled by Victorian Auditor-General's Office based on data provided by the Department of Infrastructure.

4.22 As indicated in Table 4B, the savings of \$245 million deemed to be attributable to the reform program have been determined after taking into account the effects of inflation, amounting to \$31 million during the reform period, i.e. the savings are expressed in 1995-96 dollar terms. Audit considers that recognition of the savings in the dollar value terms which prevailed at the end of the program is appropriate.

4.23 Audit also considered that the reduction of \$58 million from the 1995-96 appropriation figure, also shown in Table 4B, was justified on the basis that the individual items making up that amount were independent of the program, i.e. they represented additional costs or lost revenue which would have been experienced by the PTC whether or not the Government had embarked upon the program.

OVERALL FINANCIAL OUTCOME FROM THE PROGRAM

4.24 Implementation of the reform program meant that the Government incurred a range of significant capital costs, over and above outlays of a recurrent nature, which were a direct consequence of the program. By 30 June 1996, these costs had involved:

- staff termination payments totalling around \$267 million in the form of voluntary departure packages (\$143 million) and targeted separation packages (\$124 million);
- advance realisation of the previously unfunded employer element of accrued superannuation liabilities of approximately \$453 million;
- modifications to trams and trains to accommodate driver-only operation (\$39 million);
- significant upgrading of major stations to a "premium" status (\$15 million) and upgrading of other stations; and
- development of enhanced workshop facilities at Newport and Macauley workshops at a cost of \$11 million.

4.25 In summary, the overall financial outcome from the program up to 30 June 1996, after taking into account both capital and recurrent transactions, could be described as comprising

- capital outlays of \$332 million; and
 - an unquantified opportunity cost in respect of the accelerated superannuation payments of \$453 million;
- which have given rise to:*
- cumulative recurrent savings totalling \$643 million as identified in the earlier Table 4A; and
 - a capacity to continue to benefit in future years from a lower level of government subsidy for public transport.

4.26 There is little doubt therefore that, from a financial perspective, the program's overall outcome at 30 June 1996 was definitely favourable.

4.27 The matters discussed in the succeeding Parts of this Report extend beyond the program's financial focus. They address the key service delivery issues in public transport which underpinned the second element of the program, namely, the provision of reliable, clean, safe and efficient services, in a manner which progresses the State's transport system towards a world class service.

Part 5

Public transport reliability

OVERVIEW

5.1 During the Public Transport Reform Program, the reliability of Victoria's public transport system improved in terms of having sufficient trams and trains available every day to service scheduled requirements. However, the overall improvement was partly offset during 1997 by a deterioration in the reliability of the metropolitan train fleet in servicing peak period demands. One contributing factor to this deterioration was the number of trains out of service due to maintenance and refurbishment activities. The reliability of the suburban train system was also impacted by a high incidence of faults occurring in trains with a mean distance between faults of only 4 000 kilometres which differs markedly from a best practice target of 100 000 kilometres between faults identified by transport consultants appointed by the Government.

5.2 Punctuality of public transport services, although having improved over recent years, still warrants further enhancement. At January 1998, V/Line Passenger was the most punctual service delivering around 96 per cent of its services within specified timeframes, followed by MetTrains with 92 per cent and MetTram with 87 per cent. Transport operators have devised various strategies to improve punctuality which, although successful to some extent, have been hindered principally by aged rolling stock experiencing high fault levels and by the sometimes poor standard of infrastructure. The predominant factor impacting upon tram punctuality is the density of traffic along routes where trams do not have reserved road space.

5.3 Scope exists to further develop performance criteria in service agreements and contracts between transport operators and the Government. These criteria need to be publicised in the form of a "passenger charter" to inform the community of the standards it can expect from transport services.

5.4 Scope also exists for all operators to improve their interfaces with the travelling public and to take action on customer needs as identified from periodic surveys. Such action, in conjunction with the development of marketing strategies to promote services provided by individual operators, should bring about an increased emphasis on customer relations.

5.5 The Department of Infrastructure should commission a study aimed at defining world class standards in terms of vehicle and travel speeds, frequency of services and safety standards. Specific attention could then be directed to determining the level of upgrading necessary to the existing infrastructure in order to support a world class transport service and to identifying the associated funding implications.

5.6 It will also be important for the Department to establish effective liaison with VicRoads on matters involving traffic management to improve the operation of tram services.

5.7 To date, all current transport operators have developed business plans reflecting future intentions in the interim period prior to privatisation of services.

OVERVIEW - *continued*

5.8 These plans to an extent complement the directions contained in *Transporting Melbourne*, a visionary document reflecting anticipated future directions in public transport. The challenge will be for the Government to implement its vision in an environment involving multiple private operators who will be faced with the task of providing improved services to customers and at the same time maximising profits from their operations.

INTRODUCTION

5.9 To passengers using a public transport service, reliability is concerned with whether the various public transport modes are punctual and provide a service which is compatible with passenger needs.

5.10 The 2 key elements of reliability are:

- *service delivery* - the provision of advertised services and the actual completion of scheduled trips; and
- *punctuality* - adhering to published timetables.

5.11 For the purpose of this performance audit, it was determined that reliability of transport services should be assessed in terms of:

- defining service requirements and targets based on a knowledge of passenger and community expectations;
- evaluation of achieved service levels against pre-determined performance measures;
- knowledge of the level of performance that can be expected from existing vehicle fleets and infrastructure and those factors which can inhibit the achievement of optimum service delivery;
- the work force required and skill levels needed to operate the respective transport systems; and
- the successful development of programs to address such factors.

5.12 In examining the reliability of services provided by the Public Transport Corporation (PTC), audit assessed:

- the level of reliability as currently reported by the PTC to the Government from its own measures and passenger surveys;
- the performance measurement framework utilised by the PTC;
- the adequacy of vehicle fleets and infrastructure to sustain reliable services into the future; and
- the capacity within the existing transport systems for further improvements in the reliability of services.

SERVICE DELIVERY AND PUNCTUALITY

5.13 The paragraphs under this heading consider the current reliability of public train and tram services as measured by the PTC and perceived by users.

5.14 At the start of the reform program, Melbourne's public transport services faced significant challenge in meeting the Government's goals of clean, safe, reliable and efficient services. For example, in respect of Melbourne's tram services, audit was informed by executive management within the PTC that, in 1992:

- MetTram's operational staff levels had been held at approximately 87 per cent of the level required to run tram services which limited the percentage of services which could be run;
- Timetables were not printed and displayed at tram stops as many scheduled services were not capable of delivery;
- Services were generally unreliable, with a high level of both early and late running and significant tram "bunching". This latter term involves a number of trams arriving in convoy following a long gap in services. The primary cause of this situation is traffic conditions, but the position is aggravated where several routes converge in and around the Central Business District of Melbourne. Bunching causes service deterioration as the front tram becomes full and gets progressively slower with boarding and alighting times increasing, causing trams to bank-up behind it, with all trams falling behind their schedules. The passenger perspective of this occurrence is of long gaps followed by several trams one after another, which is not conducive to creating a perception among passengers of a frequent and reliable service;
- A high level of vehicle unreliability caused excessive "changeovers" (trams breaking down en-route); and
- Deteriorations in travel times and reliability were progressively occurring as a result of increasing road traffic.

5.15 The Government's Transport Reform Policy paper *From a system to a service - providing quality services* released in March 1994 commented that the quality of services needed improvement, the punctuality of suburban train services was unacceptable, and "... up to 12 per cent of tram services did not run". In addition, V/Line Passenger services were regularly delayed.

5.16 The paper announced the Government's intention to achieve real and sustainable improvements in public transport performance, with improved targets for service delivery and punctuality to be achieved by MetTrains and V/Line Passenger by April 1994. With regard to MetTram, punctuality targets were set in July 1994 following a system-wide monitoring process. The full implementation, in 1996 of an automated vehicle monitoring system to electronically track the position of all trams gave the PTC a capacity to monitor compliance with tram punctuality targets.

5.17 In July 1995, the Government signed a service agreement with the PTC stipulating specific performance criteria for all transport services. These criteria have been subsequently revised in successive annual service agreements.

The extent of reliability gains under the reform program

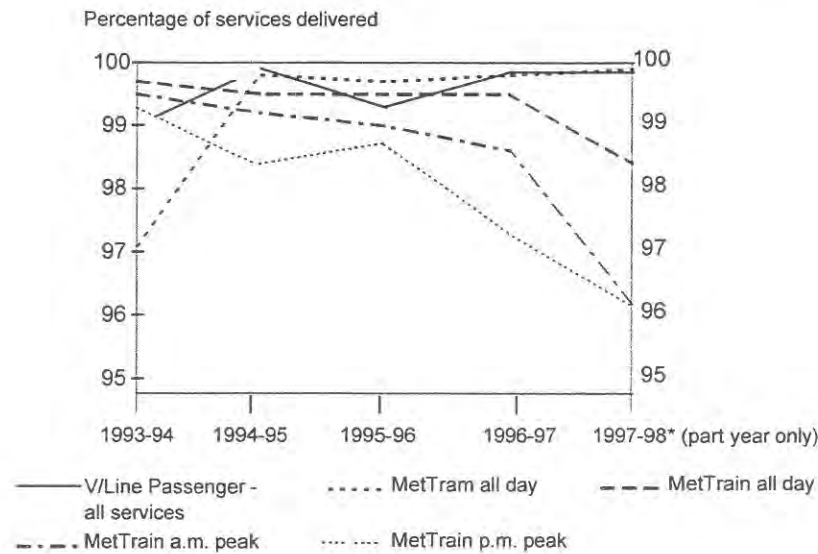
5.18 Based on records maintained by the PTC, which are periodically examined by the organisation's internal auditors, the performance of public transport services progressively improved during the reform program. Table 5B, which compares the measured service delivery and punctuality achieved against successive targets contained in service agreements since 1994, illustrates this enhanced performance.

5.19 Against the government-agreed targets in service agreements with the PTC, reliability has improved in respect of:

- punctuality of suburban train services, with the punctuality in peak periods rising from below 87 per cent in 1993-94 to above 92 per cent in 1996-97;
- tram service delivery, which has moved from 97 per cent in 1993-94 to virtually 100 per cent in 1996-97; and
- the punctuality of V/Line Passenger inter-urban services increasing from 89 per cent in 1993-94 to 93.5 per cent in 1996-97.

5.20 However, as Chart 5A also shows, a clear exception to the overall improvement trend has been a deterioration in respect of the delivery of suburban train services in peak periods. From a reported level of in excess of 99 per cent in 1993-94, the PTC's Annual Report for 1996-97 identified that 98.6 per cent of morning peak services and 97.3 per cent of afternoon peak services had been provided during the year. PTC records showed that, in the current financial year to January 1998, service delivery in peak periods had fallen to 96.2 per cent. Chart 5A highlights the deterioration in the delivery of suburban train services in peak periods from 1993-94 up to February 1998.

**CHART 5A
SERVICE DELIVERY LEVELS FOR THE PTC'S PASSENGER SERVICES,
1993 TO 1998**



Source: Chart compiled by Victorian Auditor-General's Office based in data held by the Public Transport Corporation.

**TABLE 5B
RELIABILITY ACHIEVEMENTS SINCE 1994
(per cent)**

Type of service	Indicator/criterion	April 1994 target	1993-94 results	1994-95 results (a)	1995-96 targets	1995-96 results	1996-97 targets	1996-97 results	1997-98 targets	January 1998 ytd results
MetTrains										
Service delivery all day		99.5	99.7	99.5	99.5	99.5	99.5	99.5	99.5	98.4
Service delivery peak - a.m. peak			99.4	98.8	nst	98.8	nst	97.9	nst	96.2
p.m. peak			99.5	99.2	nst	99.0	nst	98.6	nst	96.2
Train punctuality all day	between 1 min. early and 5 mins late		99.3	98.4	nst	98.7	nst	97.3	nst	96.2
Train punctuality peak - a.m. peak	between 1 min. early and 5 mins late		92.3	92.3	93.5	93.3	93.5	94.8	94.0	94.4
p.m. peak			86.7	87.5	88.0	89.5	89.0	92.4	90.0	91.7
MetTram										
Service delivery all day		96.0	97.1	99.8	99.5	99.7	99.6	99.8	99.8	99.9
Tram punctuality all day	between 1 min. early and 5 mins late	not previously monitored	na	na	80.0	86.7	86.0	86.0	88.0	87.0
V/Line Passenger										
Service delivery - Inter-urban train		99.0	na	99.9	99.5	99.3	99.5	99.5	99.5	99.9
Inter-city train		99.0	99.0	99.5	99.5	99.5	99.5	99.9	99.5	99.8
Punctuality - Inter-urban train	within 5 mins	90.0	89.1	92.2	92.0	93.7	93.5	93.5	93.5	95.9
Inter-city train	within 10 mins	92.5	92.4	95.7	95.0	96.1	94.5	94.5	96.0	97.0

(a) Targets for 1994-95 were based on the April 1994 targets. na (not available) nst (no separate target set) ytd (year to date) Source: PTC Business Reports, Service Agreements and Annual Reports.

5.21 With approximately 175 train services provided in the morning peak and 195 in the afternoon peak, the above position means that, relative to 1993-94, on average a further 8 trains per day, scheduled for peak periods, failed to run during the bulk of 1997. This situation is borne out by PTC's counts of cancellations which show that 3 230 peak services, or 3.5 per cent of a total of 92 000 scheduled services, were cancelled during 1997. The worst period occurred in August 1997, following an extended period of industrial action, when cancellations during peak periods averaged 140 per week. Cancellations tend to be higher during the afternoon peak and there were 5 months in 1997 when cancellations in the afternoon peak averaged over 5 per cent or 50 trains per week.

5.22 With regard to tram services, although close to 100 per cent of timetabled services are now delivered, it needs to be recognised that the timetable is somewhat reduced in comparison with the timetable prior to 1993. Early in the reform program, MetTram established a timetable which reflected what the tram service was capable of delivering. Its achievement has been to deliver almost 100 per cent of services advertised in timetables, equal to the level of services actually delivered at the start of the program, in contrast to the former position where up to 13 per cent of services were cancelled.

5.23 Notwithstanding the achievement of targets for tram services, the figures in Table 5B for service delivery reflect only the percentage of services which started on schedule, and do not allow for services terminating prematurely for reasons such as breakdowns and vehicle accidents. MetTram's service report for 1996-97 disclosed that an estimated 6 700 hours (0.45 per cent of scheduled service hours) were lost in service from trams failing to complete their trips. MetTram had not documented how many passengers were impacted upon by these unscheduled terminations.

5.24 The service agreement requires MetTram to report punctuality levels only in respect of departure times from the commencement of scheduled services and do not reflect punctuality en route. MetTram's periodic management reports during 1997 indicated that the punctuality of tram services arriving on time at all scheduled stops along routes, averaged between 64 per cent and 90 per cent depending on the route. The density of traffic is the main factor influencing punctuality of trams, causing both delays and early running (this latter term involves trams departing more than 1 minute before the scheduled time), with up to 26 per cent early running of trams occurring at stops along some routes.

Management strategies implemented by the PTC to improve the reliability of suburban tram and train services

5.25 Management strategies implemented by the PTC since 1993-94 which have contributed to the improved reliability of public transport services have included:

Tram services

- Detailed operational reviews of all tram routes, a key focus of which was to reduce "bunching" as well as monitoring current running times and reliability, loading levels and the positioning and cleanliness of tram stops. These reviews have led to route improvements and revision of tram timetables to reflect average traffic conditions experienced at different times of the day;
- The computerisation of tram crew rosters to better reflect the scheduling of trams in accordance with timetables;
- Completion of a tram operations control centre and installation by early 1995, on all trams and routes, of automatic vehicle monitoring equipment. This equipment allows route controllers to progressively monitor the movement of trams on every route in accordance with schedules and take action where bunching or delays are occurring or trams are running ahead of schedule. This facility also provides comprehensive data for management information purposes; and
- Rationalisation of tram depots and making depot managers more accountable for the reliability and quality of services delivered from the respective depots.

Train services

- Detailed studies of the delivery and quality of services on every train line. These studies resulted in the identification and rectification of various operational problems;
- Implementation of Temporary Equipment Malfunction Procedures by MetTrains under which trains which have developed certain faults can continue safely in service until repairs can be scheduled at an appropriate time. Previously, detection of many of these faults caused trains to be removed from service, thereby disrupting operations; and
- Introduction in 1993 by MetTrains of a total quality management approach, incorporating a number of improvement initiatives. As an example, MetTrains carried out a detailed analysis of causes of late departures from Flinders Street Station (Melbourne's central station). This analysis resulted in a significant improvement in the number of trains departing from the station exactly on time, by simply ensuring that trains are ready to start before the scheduled departure time and by regularly synchronising station clocks.

Across all services

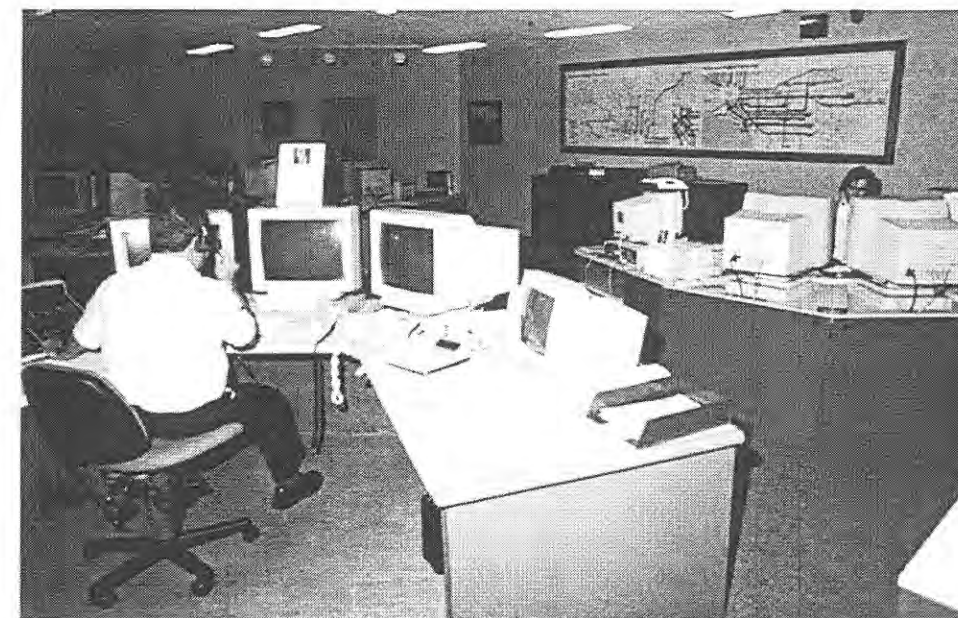
- Detailed daily management meetings to optimise the deployment of available vehicles to meet service demands. In the case of MetTram, this strategy was supported by an ability to utilise a "ready reserve" tram fleet in the event of trams becoming unavailable;
- A change in fleet maintenance strategies to focus on minimising the amount of time trains and trams spend in workshops. As an illustration, where faulty components are detected, the components are replaced immediately and the vehicles returned to service. The faulty components are then repaired without the vehicle having to remain in the workshop as was previously the practice; and
- The introduction of specific programs designed to improve the reliability of vehicles including design modifications, major overhauls and improved preventative maintenance programs.

5.26 Audit considers that there has been a strong commitment by management of the PTC and its respective transport operators to achieve greater reliability from transport services and at the same time reduce costs in accordance with the objectives of the reform program. However, while further scope for improvement remains, as detailed in Part 8 of this Report, the extent to which improvement in services can be achieved will be largely dependent upon maintaining customer satisfaction and modernising infrastructure and vehicle fleets. This latter action will require substantial capital funding over the next few years. In addition, potential improvements in tram services will be dependent on strategic management of the road traffic environment, and more effective use of information on tram operations from the automatic vehicle monitoring system.

Scope to improve utilisation of the Automatic Vehicle Monitoring system in improving tram operations

5.27 Currently, use of the Automatic Vehicle Monitoring system is largely restricted to MetTram's operations control centre, which is responsible for real-time operational control. Tram depots are responsible for provision of sufficient vehicles every day and to start scheduled services on time. At present, depots receive a selection of reports from the system and can request others on an ad hoc basis during the day.

5.28 The operations control centre is best placed to maintain a complete picture of the status of tram services and manage operations. However, audit was advised by MetTram's operational management that depots, with their greater knowledge of drivers, trams and specific routes, could help to improve the reliable running of services if they also had access to real-time service information in respect of the tram routes for which they are responsible.



*The Tram Services Operations Control Centre.
(Reproduced with the permission of the Public Transport Corporation.)*

5.29 The vehicle monitoring system has the capacity to produce far more information on service delivery and punctuality than is presently made available to management. Information currently provided on route punctuality is also difficult to interpret and MetTram is attempting to simplify these reports and produce more meaningful data. At the date of the performance audit, information on punctuality for each route was not produced in aggregate form. The failure to utilise such information restricts management from analysing situations where punctuality is particularly poor and from developing remedial strategies.

5.30 As previously mentioned, the control of bunching is of key importance to tram operations and the system allows operational controllers to directly observe when bunching develops and intervene in an attempt to resolve such situations. Management also needs to be aware of the extent of bunching and in this regard capacity exists for the system to produce reports on the incidence of bunching on various routes and the extent of its impact on punctuality.

5.31 A further feature of the vehicle monitoring facility is its ability to generate suggested timetable adjustments for selected tram services, taking into account actual running times over a previous period. The adjusted timetables are intended to provide improved operating performance, with potential improvements of the order of 15 per cent calculated by the system. However, little practical experience has been gained to date by MetTram in utilising such system-generated timetable changes.

5.32 In summary, audit considers that there is scope for tram operators to make far greater use of the information capabilities of the automatic vehicle monitoring system to assist in the provision of better services and improved punctuality within the tram network. Additional benefits could also be derived from the installation of terminals at depots and the trialling of system-generated timetables.

Adequacy of performance measures utilised in the service agreements

5.33 The annual service agreements entered into by the PTC with the Department of Infrastructure contain very simple and broad service delivery and punctuality measures and targets, applicable to MetTrains, MetTram and V/Line. A distinction between peak and off-peak services is made only with MetTrains.

5.34 While, as shown in the earlier Table 5B, the PTC is meeting most of the targets that have been set in the 1997-98 service agreement, audit considered that it was important to determine:

- whether the performance measures and related targets defined in the agreement adequately reflect the Government's requirements and public expectations; and
- the extent to which established targets are conducive to achieving "world class" performance in line with the goals set out in Stage 2 of the reform program.

5.35 With the assistance of specialist advice, audit evaluated the adequacy of the existing performance measures. This evaluation included consideration of performance measures used in other transport systems throughout the world.

5.36 It needs to be recognised that, due to significant differences in operational environments between transport systems both within Australia and overseas, it is difficult to develop common standards for comparing the performance of different transport systems.

5.37 It also needs to be acknowledged that the annual service agreements entered into to date under the reform program have provided the Government with a facility to measure the reliability of public transport services and to bring about progressive reliability gains. However, audit identified a number of weaknesses in the performance measurement framework established under the service agreements. Relevant details of these weaknesses are presented below:

- The practice of averaging daily service delivery across the total service, rather than for each tram or train route, means that service operators can be seen to achieve overall targets even if the service falls below the specified targets in respect of certain routes or at certain times. Although audit acknowledges that MetTrains monitors performance in more detail for internal management purposes, the measures defined in the service agreements do not necessarily alert the Government or the Parliament (via the PTC's Annual report) to poor performance in specific areas;

- The use of measures and targets in percentage terms only without reference to the impact of percentage movements on service delivery reduces the value of such information as a measure of performance;
- Measures such as "percentage of scheduled services delivered" and "percentage of arrivals within 5 minutes" do not assess the impact on passengers of train delays and cancellations. By way of explanation, passenger-oriented measures could include the approximate number of passengers affected, the total passenger minutes lost as a result of delays or cancellations, or the resultant levels of overcrowding. Also, passenger-based measures involving passenger minutes and kilometres lost or delayed, and passenger waiting times would disclose the varying impacts of cancellations and delays on services at different times of day and on various lines;
- The punctuality measure of regarding services as on time if they are "no later than 5 minutes of scheduled departure or arrival time" across all suburban train and tram services is overly broad and restrictive. For example, a train or tram which is close to 5 minutes late in peak periods impacts upon passenger density, train scheduling and passenger satisfaction. In this regard, MetTrains monitors its performance for internal purposes only in terms of the number of trains which arrive less than one minute late; and
- To define tram punctuality and service only in terms of compliance with "scheduled departure times from termini" provides little indication on how well advertised service frequencies were achieved at scheduled tram stops, the extent of tram bunching, whether all services reached their destinations within scheduled timeframes or whether punctuality fluctuated between scheduled route stops.

5.38 Joint action by the Department of Infrastructure and the PTC to address the above weaknesses could include:

- The setting of service delivery and punctuality targets for each train line or tram route, or of maximum variations allowed from a predetermined average;
- Determination of separate targets for the performance of all services in peak and off-peak periods;
- The use of measures with more meaningful values such as the number of cancellations in peak periods and total delays caused by poor punctuality and cancellations;
- Establishment of passenger-related measures such as passenger trips cancelled, passenger minutes lost, passenger waiting times, average and worst case crowding levels and standing time for passengers. By way of an overseas example, the 1994 Passenger's Charter for British Rail (an organisation with similar operations to V/Line Passenger including intra-urban commuter services) incorporated targets of a maximum of 35 people standing for 100 seated, and that no passenger need stand more than 20 minutes;

- Formulation of punctuality targets defined in terms of advertised train and tram frequency, and recognising the importance of waiting time in passenger satisfaction. For example, trains and trams could be defined as late when their arrival is delayed by more than half the interval to the next train or tram. Alternatively, targets could be defined in terms of 3 minute punctuality in peak periods and 5 minutes at other times; and
- Adoption of specific measures dealing with the incidence of tram bunching. As mentioned in an earlier paragraph, the automatic vehicle monitoring system is capable of providing analyses of bunching and of excessive gaps between successive trams on routes.

5.39 In summary, audit considered that the current performance measures and related targets provided only a broad view of the performance of the respective operators in terms of service delivery and punctuality. There is definite scope for further improvement in the measurement of services and corresponding accountability to Parliament and the public. The use of more meaningful performance measures in future service agreements and in any future contracts negotiated with external private operators will become increasingly important for the Government, particularly in its monitoring of service provision by private operators.

INTERFACING WITH PASSENGERS AND THE PUBLIC

5.40 Well established interfaces with the community and travelling passengers are important elements in providing reliable services which meet passenger needs. Examples of such interfaces include:

- provision to the public of accurate information to inform passengers of timetables, next arrivals, expected delays and timetable changes;
- timely advice to the travelling public of any unforeseen problems which may temporarily disrupt services;
- periodic consultation with the community in order to progressively adjust timetables to meet changing passenger needs; and
- the assessment of passenger perceptions of reliability through regular surveys and monitoring of patronage trends.

Management initiatives relating to the provision of information to passengers

5.41 From a position in 1993 when no timetables were published, MetTram has developed comprehensive timetables and route maps which are now displayed at all tram stops and help to establish a public image of reliability.

5.42 In addition, MetTram and MetTrains instituted a strategy of on-board announcements prior to major tram stops and train stations. Such announcements are viewed to be a valuable service, particularly for irregular, non-local and visually impaired passengers. Effective implementation of this strategy is dependent to a large extent on the adequacy of driver training and communication skills. In this regard, the transformation to one person, driver-only, operation of trams and trains created a new emphasis on passenger communications for drivers because they previously had very limited customer contact. Appropriate training programs were introduced by the operators but progress has been slow. For 1996-97, the PTC reported to the Department a compliance rate by tram drivers of only 56 per cent of meeting the requirement of informing passengers via on-board announcements. The compliance position at MetTrains for the year was much higher at around 76 per cent.

5.43 Improvements have also been made in regard to informing travellers at stations of impending train arrivals. All city loop stations have "next departure" displays for all lines while imminent departure details are displayed on all platforms. At all suburban stations, MetTrains advises waiting passengers of impending train arrivals or of any delays in scheduled services. This communication is in the form of broadcast announcements but can also be obtained through passenger access to an on-line information service.

5.44 Similar facilities are not available for tram passengers. The previously described automatic vehicle monitoring system, in conjunction with implementation of electronic passenger information displays, could provide visual displays to passengers of next tram arrival information. Audit was informed by MetTram that it had conducted a trial of electronic display equipment, however, no further action has been taken in the light of the Government's proposed privatisation strategy for transport services.

5.45 Across all services, provision is made to keep passengers informed of particular situations which could affect service delivery. For example, when notified of service restrictions due to an industrial disputation, MetTrains distributes information pamphlets at particular platforms and in affected areas to ensure the travelling public are kept informed.

5.46 Notwithstanding these various initiatives, customer surveys, which are carried out by the PTC and are commented on in more detail in later paragraphs, indicate a low level of satisfaction of less than 70 per cent with MetTrains' provision of information. The factors contributing to this poor satisfaction could include the lack of visibility of arrival displays from many parts of platforms, frequent failures of displays, poor quality information to suburban and loop stations from central sources and low quality audio equipment on some trains.

5.47 Overall, audit considers that the provision of information to passengers has improved considerably and particularly since the introduction of new initiatives such as on-board announcements. Whether such strategies adequately satisfy passengers' requirements needs to be determined by the PTC through its frequent passenger surveys. Also, it will be important for the PTC to pursue avenues for further expanding communications to passengers, especially if operators are to attract additional patronage. In particular, electronic passenger information display facilities could be installed at all suburban train stations and, at least, major tram stops.

Consultation with the community through the Victorian Public Transport Forum

5.48 As part of the reform program, the Government established the Victorian Public Transport Forum to consult with the community in respect of community transport needs and to provide advice to the Government. Members of the Forum were selected to represent country and metropolitan regions as well as a range of different interests and transport requirements. Members are mostly public transport users and people who have local networks of contacts to assist them in reflecting the needs and views of the areas they represent. New members are invited every 2 years.

5.49 The Forum meets regularly, invites input from the general public and transport service users, undertakes a program of regional visits and consultations and produces an annual report. It also reviews general complaints from members of the public and refers many of these complaints to transport operators for resolution.

5.50 The Forum is the main avenue established by the Government for passengers and other members of the community to provide input on the development of transport policy and service provision. However, its existence and functions are not widely known to the public and its role is not actively promoted.

5.51 Given the importance and potential value of the Forum, audit considers that its activities need to be more widely promoted and public input more actively sought, if it is to be viewed as representative of public opinion. In making this comment, audit acknowledges that the Forum is provided with limited funding of around \$40 000 per year for its activities.

Surveys of passenger priorities and satisfaction

5.52 The PTC seeks to gain an understanding of passenger views through a number of mechanisms, including:

- Broad surveys of passengers and the general public in relation to metropolitan train, tram and bus services;
- A number of individual and periodic surveys of traveller perceptions of service provision conducted by MetTrains, MetTram and V/Line;
- A public information and complaints telephone call number for suburban and V/Line Passenger services. Complaints are handled individually and responses made to each complainant. In this area, MetTram maintains a detailed register of complaints with analyses regularly provided to management including the levels of successful resolution, client response and outstanding matters; and
- A general passenger telephone service.

PTC general surveys

5.53 In 1996, the PTC completed a review of public perceptions and community attitudes in respect of metropolitan trains, trams and buses, based on an independent survey carried out between February and December 1995. At the time of the performance audit, the PTC was in the process of conducting a further survey of metropolitan services, running from August 1997 to June 1998.

5.54 The survey covering 1995 revealed general public satisfaction with major passenger service issues, including availability of services, travel times and reliability, and a public perception that services had improved during the year. The average overall satisfaction rating with services during 1995 from this survey was 79 per cent for suburban trains and 84 per cent for trams.

5.55 In the survey, passengers viewed "running to timetable" as the most important factor in trains and the second most important for trams. In relation to trams, the issue of "how often trams run" was cited as of most importance. Also viewed by passengers to be of high importance for all services was "information about problems and delays".

MetTrains surveys

5.56 MetTrains surveys conducted during 1996 and 1997 focused on determining the extent to which passengers perceived train services as having improved during the 3 months prior to the survey dates. Results disclosed that during 1996 only 36 per cent of passengers considered that the system had improved. However, by February 1997, 54 per cent thought the system was better or much better.

MetTram surveys

5.57 MetTram undertakes a range of surveys which can be classified as:

- Small and large-scale passenger attitude surveys, to assess for example the passenger reaction to a potential new service development or to determine whether a passenger complaint is of wider concern to passengers; and
- Patronage estimation and loading surveys, which establish ratios between the numbers of tickets purchased on trams and the number of actual tram passengers. This mechanism allows overall tram patronage to be estimated from the level of on-tram ticket sales.

5.58 The attitude surveys have revealed among other things that a key factor in tram passenger satisfaction is the length of time spent waiting at a stop for a tram, which is generally considered to be too long.

5.59 Patronage and loading surveys will be important for future private tram service operators in assessing the relative patronage and profitability of different routes, and the underlying reasons why some routes or lines have low patronage.

V/Line Passenger surveys

5.60 V/Line Passenger has established an impressive framework for managing its relationship with the public through:

- 6 monthly passenger satisfaction surveys, with arrangements for ad hoc communication with the public where necessary;
- a system of regular focus groups and surveys which seek the views of users and the general public; and
- twice yearly timetable changes taking into account passenger feedback, where appropriate, with regular patronage monitoring to ensure that timetable changes broadly reflect passenger needs.

5.61 In an April 1997 V/Line Passenger survey, reliability and punctuality were rated by passengers as the most important service element for all categories of business, except the Interstate coach service. Even though V/Line Passenger is meeting its targets for service delivery and punctuality, the April 1997 survey showed that passengers perceived the punctuality of services to be declining. This perception was particularly the case for the InterUrban rail service which carries commuters from outer-suburban areas such as Bacchus Marsh and regional cities such as Geelong, Ballarat, and Bendigo. The survey showed that satisfaction with punctuality had declined from 83.6 per cent in November 1996 to 78.1 per cent in April 1997. This view corresponded with the actual performance of V/Line Passenger during 1996-97 when performance indicators disclosed that punctuality had declined slightly from 93.7 per cent to 93.5 per cent of InterUrban trains arriving within 5 minutes of scheduled times.

5.62 The results of V/Line Passenger surveys are distributed to all managers. However, audit established that there was no formal follow-up of matters arising from these surveys at senior management level within the organisation. This absence of follow-up could mean that senior management may not be in a position to determine if all managers have acted upon results of the surveys, particularly where there were unsatisfactory features. V/Line Passenger would benefit if there were a formal structure in place under which the responsible managers had to follow-up passenger survey results and report back to senior management on action taken. Future surveys could then re-visit these areas to establish if any improvement had been made.

Improving interfaces between transport service providers and the community

5.63 A sound framework for facilitating community and passenger interfaces with transport service providers is clearly integral to meeting the goal of the reform program to move *“from a system to a service”*. The major elements of such a framework would encompass:

- an overall strategy for provision of information to passengers through timetables, operator announcements, media coverage and other information outlets;
- a strong commitment to passenger service and satisfaction throughout all operations;

- regular, reliable and representative input from the community and passengers in respect of their needs, expectations and priorities as well as perceptions and satisfaction levels;
- established performance intentions of transport operators (in the form of passenger charters) involving performance measures and related targets which correspond to passenger priorities and expectations;
- periodic comparison of performance measurements with passenger satisfaction levels obtained through mechanisms such as surveys and investigations of any significant differences;
- an effective passenger complaints system which encourages passengers to register comments and complaints as they arise;
- a media communications strategy to market the transport system which can also be utilised to inform the public of particular developments such as the extraordinary pressures which can be placed on the rail system as a result of extreme weather conditions; and
- ongoing research by the Department and the PTC into anomalies and performance issues arising from surveys, performance measurements and other factors with a view to initiating improvements.

5.64 Audit acknowledges that many aspects of the above framework have already been introduced by the PTC and its individual operators. Nevertheless, it is considered that further enhancements could be made to the current management and organisational framework through pursuit of such strategies as:

- Publicising directly to passengers the progressive achievement of performance targets in respect of service delivery and punctuality;
- Development of a Passenger Charter in order that passengers are fully informed as to their rights and expectations within the public transport system in Victoria. In this regard, the principles underlying the customer charters developed by entities within Victoria's privatised power industry could be used as a guide;
- Positive promotion of a strong commitment by all staff to passenger service through staff training and development programs;
- Publishing the results of passenger surveys irrespective of outcomes;
- Better correlation of performance measures with passenger expectations and perceptions identified from surveys;
- Wider promotion of the activities of the Victorian Public Transport Forum with a view to increasing public input into the running of the public transport system;
- Adoption of more effective passenger complaints procedures such as “on-the-spot” registration of complaints; and
- Generally increasing the availability of tram timetables at appropriate outlets (for example at newsagents and milk bars), upgrading announcements by tram drivers and implementing electronic passenger information displays.

5.65 Notwithstanding the Government's announced intention to disaggregate, privatise and franchise public transport operations, it will be important for the Department, in its attempts to further increase the overall utilisation of public transport, to build on and enhance existing communication links with passengers and the community. Such a strategy should be subject to on-going priority irrespective of whether private or public sector operators are involved in the provision of services.

ACHIEVING AND SUSTAINING RELIABILITY THROUGH IMPROVED RESOURCE MANAGEMENT

5.66 Successfully sustaining an acceptable level of reliability in transport services is dependent upon the adequacy of the underlying vehicle fleets and infrastructure (tracks, signal systems and power supplies etc.). Part 8 of this Report identifies that, since the commencement of the reform program, there have been significant advancements achieved by the PTC in respect of fleet management, maintenance strategies and use of available resources generally. These advancements have contributed to improved reliability in transport services.

5.67 Notwithstanding these favourable developments, the PTC's task of maintaining reliable operations on a daily basis continues to require a very high level of management control. In addition, its future management of vehicle fleets and infrastructure is likely to be subject to increasing challenge to maintain service standards as demand for transport services increases, mainly due to population growth in outer suburbs and in inner city growth areas.

Status of underlying resources for transport services prior to the reform program

5.68 At the start of the reform program, the State's 3 main vehicle passenger fleets (excluding buses and special use vehicles) comprised:

- The suburban train fleet which had 2 components, namely 93 relatively new Comeng trains (purchased between 1981 and 1989) and 56 Hitachi trains (acquired between 1972 and 1980);
- The V/Line fleet involving 173 diesel locomotives (serving both passenger and freight requirements), 189 passenger carriages and around 3 500 freight rolling stock. Much of the locomotive fleet and passenger carriages was built in the 1940s and 1950s, presenting problems for maintenance and spare parts; and
- The tram fleet of about 630 trams, including 171 A and B class trams built from 1984 (to which a further 31 were added in 1993-94), 221 Z class trams (1975 to 1984) and over 200 W class trams of assorted types and ages.

5.69 The vehicle fleets in particular and infrastructure to a lesser extent were not capable of supporting reliable and punctual services.

5.70 In terms of tram services, at the commencement of the program, from a nominal tram fleet of over 630 trams, MetTram could utilise only around 350 trams for provision of services. All of the remaining 280 trams were either unserviceable or were undergoing maintenance.

5.71 There was also a growing maintenance backlog for trams brought about by several factors including:

- A maintenance system which included only a basic 10 000 kilometre service with no long-term scheduled preventative maintenance for major components and body work;
- Trams running without adequate servicing until major breakdowns, with excessive times then spent out of service at workshops;
- A high incidence of faults in all classes of trams without analysis to determine generic causes and enable development of a program of preventative modifications;
- Design problems in A and B class trams, e.g. a brake reliability fault existed in B class trams, for which several modifications had been unsuccessfully trialed; and
- Inadequate maintenance of W class trams, resulting in the availability for regular service of only about 50 of these trams out of a fleet of 220. Another 50 of these trams were only able to be utilised on a "ready reserve" basis.

5.72 In respect of trains, the benefits of proper and regular maintenance have been recognised by the PTC for many years now and, as a result, the impact upon service reliability due to poor maintenance was not as pronounced as with trams.

5.73 Notwithstanding the fact that Comeng trains, which were purchased since 1981, were subject to regular routine maintenance, their reliability was poor due to design faults associated with major components including motors and brakes.

5.74 With regard to Hitachi trains, a half-life refurbishment was overdue for the older trains purchased in the early 1970s, as evidenced by a high incidence of faults related to carriage structures such as doors and windows.



An Hitachi train.

(Reproduced with the permission of the Public Transport Corporation.)

Strategies adopted as part of the reform program specifically to improve fleet performance

5.75 The reform program resulted in the introduction of strategies by the PTC to refurbish those vehicles, both trams and trains, which had suffered from past maintenance deficiencies and to rectify design weaknesses where possible.

5.76 However, these strategies have themselves created a further challenge to the PTC in its endeavours to improve service reliability, because vehicles need to be withdrawn from service for a considerable time for remedial work to be undertaken. The PTC expects all refurbishment projects to be completed by the end of 1998. The design rectification projects for Comeng trains and A and B class trams are expected to continue past that time.

5.77 MetTrains has recognised since the early 1990s the factors that improve vehicle reliability and has concentrated efforts on improving maintenance practices, addressing design faults in trains and refurbishing its vehicle fleet. These strategies are described in more detail in Part 8 of this Report.

5.78 A key element in MetTrains' approach to improving its service reliability was the introduction in 1993 of a total quality process. This process is aimed at recognising when common maintenance, design or operational problems are adversely impacting on service delivery and initiating action to address the problems. For instance, examination of punctuality issues in services on the Burnley group of lines resulted in identifying the need for infrastructure modifications.

5.79 The vehicle refurbishment strategies initiated by MetTrains have had a positive impact on the availability and reliability of trains. At December 1996, MetTrains had increased train reliability to over 5 000 kilometres between faults, from a level of 3 000 in 1993. Nevertheless, despite these early improvements, service delivery has recently declined as illustrated earlier in Table 5B. This decline corresponds with an increasing fault rate in that the level of reliability deteriorated during much of 1997 to between 3 000 and 3 500 kilometres per fault. During the first quarter of 1998, the level has risen to around 4 000 kilometres between faults.

5.80 Reasons for this deterioration in service delivery by trains could not be clearly identified by MetTrains but audit considers that this situation could be attributed to maintenance factors associated with an ageing vehicle fleet. On information provided by MetTrains to audit, the incidence of faults associated with the operational suburban train fleet of about 125 vehicles was in the vicinity of 130 per week, a clearly unsatisfactory position in terms of service reliability.

5.81 In regard to the tram fleet, the previously mentioned Z class refurbishment program was accorded high priority early in the reform program. In addition, MetTram has begun to adopt improved fleet maintenance strategies similar to those in MetTrains, including development of comprehensive maintenance plans and databases of component and vehicle maintenance histories.

5.82 The results of MetTram's refurbishment and improvement strategies can be demonstrated by a 28 per cent increase in the kilometres travelled between vehicle breakdowns over the past 3 years. Kilometres travelled between breakdowns increased from an average across the fleet of 6 100 in 1994-95 to 7 800 in 1996-97. Since mid-1994, MetTram has been able to run almost 100 per cent of scheduled tram services compared with around 87 per cent at the start of the reform program.

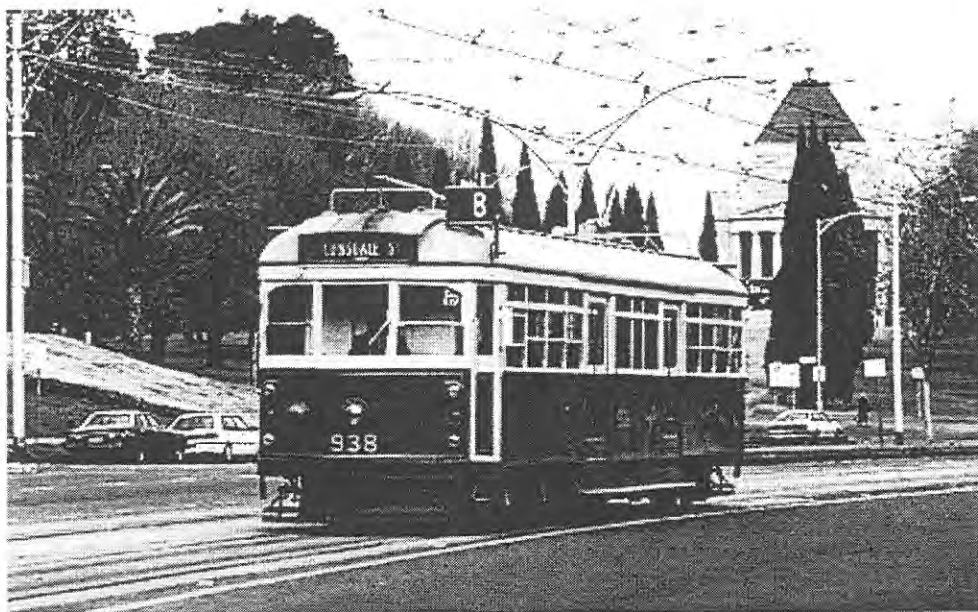
5.83 Despite the range of initiatives undertaken by MetTram and MetTrains to improve reliability within existing constraints, such as the age of the fleet and funding limitations, it was clear that the status and condition of fleets were still major impediments to making significant improvements in service reliability. In terms of the availability of trains for service on a daily basis, the current availability of 125 trains from a fleet of 151 (after allowing for trains undergoing repairs or maintenance) leaves little margin for last minute replacements. MetTrains informed audit that, given a fleet size of 151, at least 135 trains should be available on a daily basis.

5.84 The audit established that the PTC had only established short-term targets for improving vehicle reliability and serviceability. It was not able to provide audit with information on any long-term goals it had formulated in terms of world standards. A best practice goal of 100 000 kilometres between faults for reliability of trains only was identified in December 1996 in a consultancy report to the Government. Contractual requirements for B class trams stipulate at least 20 000 kilometres between faults as a desirable performance standard.

5.85 Finally, in regard to the Government's proposed privatisation strategy, any new transport operators will be faced with the prospect of either replacing a high proportion of vehicle fleets, particularly trains, within the next few years in order to achieve improved reliability or continuing to bear high maintenance costs.

Management of the W class tram fleet

5.86 While most of the tram fleet is relatively modern, the PTC is required to utilise W class services on a limited number of selected normal schedule routes under an agreement with the National Trust. It is also required to operate specially decorated "Heritage" trams on the City Circle service.



W class heritage tram.

(Reproduced with the permission of the Public Transport Corporation.)

5.87 Audit established that the PTC had fully restored 53 W class trams to a suitable working condition for full-time service, with 10 currently deployed on the City Circle service, and the balance of 43 available to meet its obligations with the National Trust.

5.88 A further 50 restored W class trams of lower service quality are held by the PTC for use in a reserve capacity. These reserve trams have not been modified to driver-only operating standards and automatic ticketing equipment has not been fitted to them. The balance of 117 W class trams have been placed in storage.

5.89 Daily fleet availability reports prepared by MetTram show that the system requires 41 W class trams at peak time from the available pool of 43. At present, this availability is only achieved by using trams out of the reserve pool. The importance of this position is reinforced by the fact that, when the automatic ticketing system is fully implemented (expected by the PTC to be June 1998), these standby trams would not generally be suitable, since they lack automatic ticketing equipment and are not modified for driver-only running.

5.90 From a future privatisation perspective, W class trams because of their age are extremely maintenance intensive and require servicing every 2 000 kilometres. At the time of the audit, the PTC was endeavouring to address this matter by improving the design of high maintenance components to increase vehicle availability and reduce reliance on reserve trams. Very late in the audit, the Department advised that action had been commenced to fit automatic ticketing equipment to the ready reserve of "W" class trams.

5.91 By the time the automatic ticketing system is fully implemented, MetTram will need to have established a very high and sustainable availability of W class trams for the peak periods, to minimise the existing reliance on W class trams drawn from the reserve pool to meet service obligations.

External factors impacting upon reliability

5.92 All services can be affected by a variety of external factors such as:

- Climatic conditions that may impact upon services e.g. damage to power supply and signals from fallen trees;
- Human interference, deliberate or accidental, ranging from delaying trains by obstructing doors, to level crossing incidents, vandalism, train obstruction and derailment, and suicides; and
- Extreme weather conditions such as very high temperatures, very heavy rain and rapid temperature changes, any of which may be outside the parameters for which some vehicle components were designed. For example, during 1997 there were several extremely hot summer days which caused vehicle malfunction and severe service disruption, with many cancellations and long delays, causing excessive crowding and passenger discomfort.

5.93 With respect to adverse weather conditions, MetTrains and MetTram are attempting to minimise the impact of such conditions. For example, a current project within MetTrains is studying potential improvements to the operating standards of air conditioning units and other heat-susceptible train components which would allow services to continue to operate reliably during periods of extreme heat.

5.94 While the occurrence of the above factors has in the past been considered as outside a service operator's control, the PTC recognises it is important that extraneous factors be addressed as far as possible through design changes and strategies to control the operating environment in order to minimise the impact on services and maintain passenger comfort.

MANAGING THE IMPACT OF THE TRAFFIC SYSTEM ON TRAM SERVICES

5.95 Melbourne's tram network covers approximately 240 kilometres of double track on 30 main routes. Around 80 per cent of the network, about 197 kilometres, is on shared road space with motor traffic. The remaining 43 kilometres consists of dedicated road space for trams.

5.96 A highly significant constraining factor on MetTram in its attempt to provide punctual services is the fact that the bulk of tram services operate along shared road space with motor traffic. In such circumstances, the following factors become relevant:

- punctuality on parts of some routes is highly variable, due to density of traffic;
- bunching of trams can frequently occur;

- tram travel times are extended and, from a passenger viewpoint, compare poorly with alternative means of transport such as private cars or trains over similar distances; and
- traffic density directly influences overall travel times.

5.97 The impact of traffic on tram services along routes shared with motor vehicles, compared with those with dedicated road space for trams, can be illustrated by the contrast between time schedules on 2 separate routes. On a route travelling south of Melbourne (along St Kilda Road) with a high percentage of dedicated space, the average operating speed is 24 kilometres per hour. On the other route (along Toorak Road), which operates in shared road space and traverses some heavily congested shopping centres, the average speed is 16.6 kilometres per hour, with wide variations in punctuality from day-to-day.



*Tram impeded by heavy traffic.
(Reproduced with the permission of the Public Transport Corporation.)*

5.98 To a large extent, the impact of traffic conditions is accommodated in timetables which have been carefully matched to average run-times. However, the reality is that tram travel times are likely to be reduced and punctuality improved by any advancements in traffic management which can reduce the adverse effect of traffic on tram operations.

The Fairway Program and traffic signal priorities for trams

5.99 Measures which had been taken prior to the reform program to address the impact of traffic congestion on tram services included introduction of the fairway program which incorporated a range of road management strategies and traffic signal priority provisions implemented by VicRoads in conjunction with MetTram.

5.100 In 1983, the Fairway Program was implemented by VicRoads on major tram routes. Its objectives were to:

- "provide, in peak periods priority to trams at signalised intersections, so that trams are able to clear the intersection on the next complete green period after joining the queue;
- "prevent trams being impeded by other road traffic between signalised intersections; and
- "provide tram priority in the counter peak direction at critical locations so that trams will not be delayed for later trips".

5.101 The program involved designating permanent or part-time tram priority lanes where cars were prohibited and trams had exclusive use. In part-time lanes, the tram exclusive priorities were limited to specific time periods displayed on traffic signs at the roadside. The Fairway Program was in large part an education program for drivers in co-operating with tram services as well as a new management initiative for the road system.

5.102 The Fairway Program provided active tram priority at over 500 signalised intersections along tram routes. This measure involved the installation of road-based equipment to recognise the approach of trams and automatically triggering of traffic signal sequences to clear traffic ahead of trams.

Need for an evaluation of the continued effectiveness of the Fairway Program

5.103 MetTram informed audit that the use of permanent fairways had initially reduced travel times for trams by up to 25 per cent in some cases. With regard to part-time fairways, a study was undertaken in 1986 by PTC's predecessor body, the Metropolitan Transit Authority, in respect of the East and West Preston routes. The study disclosed that:

- terminus to terminus travel times reduced by 10 per cent to 15 per cent on the West Preston and by 2 per cent to 5 per cent on the East Preston routes; and
- the number of trams that took longer than the scheduled time to complete the journey was reduced by up to 88 per cent.

5.104 Notwithstanding the above achievements, audit was advised by VicRoads that the restrictions associated with part-time fairways were confusing for some motorists and presented enforcement difficulties.

5.105 In addition, it was evident from discussions with the PTC that a comprehensive evaluation of the effectiveness of the Fairway Program has not yet been undertaken.

5.106 The view expressed to audit by MetTram was that the benefits to tram travel times from the Fairway Program, particularly with regard to part-time fairways, have diminished in recent years.

5.107 Audit has recommended to the Department of Infrastructure that an assessment be undertaken of the current effectiveness of the Fairway Program in achieving its stated objectives, taking into account the overall costs and benefits to the community of the Program.

Measures taken during the reform program to improve tram operations in traffic

5.108 During the period of the reform program, MetTram, with support from VicRoads and local councils, has participated in a number of road and traffic management studies and introduced several measures intended to arrest or reduce the rate of deterioration of tram travel times due to traffic conditions. These studies have resulted in identification of various opportunities for improving safety and overall tram operations, some of which have been implemented, e.g. provision of a facility at traffic lights for trams to be detected and assigned priority through an intersection.

5.109 A special study undertaken in 1994 by MetTram covering the Bundoora tram route involved a detailed examination of each traffic signal site along the route to assess the suitability of tram stop locations and traffic light configurations, and to identify other factors detrimentally impacting on tram services. In addition, a March 1996 report by VicRoads on the Nicholson Street route (a route north of Melbourne) identified numerous opportunities for improving traffic safety and operations including extensions to tram priority controls, the need for additional tram safety zones and a range of issues warranting further investigation.

5.110 Despite the above studies, audit was informed by MetTram that the extent of collaboration between MetTram and VicRoads has been limited. The advice conveyed to audit by MetTram also indicated that consideration of tram operations is not automatically a priority within traffic route reviews undertaken by VicRoads. Consequently, it was felt that such reviews may provide only a piecemeal approach to resolving any major issues associated with tram operations.

5.111 On the basis of the views expressed to audit by MetTram, there would appear to be merit in the Department of Infrastructure establishing an effective framework for coordination of public transport policy on matters involving road management and tram operations. Such action should precede the Government's intended privatisation of tram operations.

Improving the operation of tram services in the road traffic system

5.112 While audit acknowledges the initiatives already undertaken with respect to road traffic management for trams, the tasks of improving tram travel times and the punctuality of services continue to present challenges for transport operators with respect to increasing patronage in line with the Government's objectives.

5.113 Audit established that the underlying factors restricting further improvements in the operation of tram services include:

- lack of an overall strategic plan identifying those tram routes where delays are continually occurring and with potential scope for improvement;
- difficulties in balancing the respective needs of various modes of transport in implementing road management strategies, for example changes which bring about improvements for trams may have a negative impact on other forms of traffic or on pedestrians; and
- responsibility for traffic management, particularly with regard to enforcement of traffic regulations with clearways, rests primarily with municipal councils who may not necessarily be supportive of improving tram services to the detriment of other traffic.

5.114 In relation to municipal councils, MetTram indicated that opportunities at council level to improve the journey times of trams included:

- more stringent enforcement of traffic regulations;
- increased use of clearways to remove kerb side parking on shopping strips along tram routes;
- implementing hook turns (which limit cars to turn right only from left hand lanes) outside the Melbourne Central Business District; and
- the placing of track-side kerbs near city taxi ranks to deter taxi double parking, which at present forces traffic onto tram lanes.

5.115 MetTram also advised audit that suburban planning needs to be sensitive to public transport needs when councils approve plans such as the location of a shopping centre beside a tram route, and the installation of new sets of traffic lights or pedestrian crossings on tram routes.

5.116 Grounds exist for the Department of Infrastructure to articulate criteria governing priorities of trams on shared roads relative to other road users, and the respective obligations of the PTC, VicRoads, councils and other parties. The ramifications for private transport operators of this element of public transport policy will require specific consideration under the Government's impending privatisation of transport services.

IMPROVING RELIABILITY TO WORLD CLASS STANDARDS

5.117 The goals of the second phase of the Public Transport Reform Program, after the initial priority focus on establishing the long-term viability of public transport in Victoria were "to transform the public transport system into a service...that meets the changing needs of customers" and to develop "ultimately ... a world-class service".

5.118 A comprehensive definition of "world class standards" in terms of a comparable transport system to Victoria has not been developed by the Department and the PTC. Audit acknowledges that suitable comparative standards, from cities with a similar geographic layout and transport system structure to Melbourne, are not readily available. Many cities of similar population to Melbourne are more densely populated and better suited to more efficient public transport services. In addition, the geographic structure of some other cities facilitates efficient transport provision either along radial corridors, or to discrete satellite cities where train stations are serviced by local feeder bus services. Melbourne's spread of population does not readily lend itself to such solutions.

The capacity of infrastructure to support further service enhancements

5.119 Pursuit by the PTC of "world class" standards under the second phase of the reform program will require progression towards much tighter punctuality targets, higher speeds and more frequent transport services. In this regard, the ability to increase public transport speeds and the frequency of services will be dependent on the adequacy of infrastructure as well as on the future use of modern high-speed vehicles.

5.120 The audit established that, although progress is occurring in further improving current service reliability through the various strategies referred to in earlier paragraphs, the existing transport infrastructure creates a number of barriers which will need to be addressed if meaningful advancement is to be made by the PTC towards world class services. These barriers mainly relate to the fact that most of the suburban train network was established over 70 years ago. As a consequence, the average maximum speed of trains within the network is restricted to approximately 80 kilometres per hour, notwithstanding the fact that the trains have a top speed capability of 115 kilometres per hour. This average speed is far below that which would be possible utilising contemporary signalling systems and advanced communications and control technologies.

5.121 In Met Train, a recently initiated "line speed improvement program" is directed towards the identification of infrastructure upgrades which could allow the speed of services on lines to be increased within the limitations imposed by the existing infrastructure framework.

5.122 Faster modern trains, operating in some overseas countries, are capable of speeds in excess of 150 kilometres per hour. However, these higher speed trains could not be effectively used on Melbourne's public transport system without major upgrading of signalling and train control systems. In addition, the ability to safely operate a higher speed train system will involve enhancing driver skills. Such infrastructure improvements and the design of driver training programs would need to be planned before the replacement of the Hitachi and Comeng train fleets which, based on information provided by the PTC, is likely to occur within the next 5 to 10 years.

5.123 Further, the ability to attract more patrons in outer suburbs to public transport would be assisted by the provision of more express trains. However, the running of a greater number of express trains may well require future installation of a third track to principal outer suburban centres within the network such as Ringwood, Dandenong, Epping and Frankston. Rail services to and from these satellite centres would also need to be supplemented by efficient "feeder" bus services, conveying passengers from outlying areas to the train stations.

5.124 In respect of tram infrastructure, while certain stretches of tram tracks have low speed limits such as 10 kilometres per hour, a major infrastructure limitation to increasing punctuality and speed, relates to power supplies which are partially reliant on outmoded equipment.

5.125 Although most of the tram power distribution network has been modernised over the last 10 years by MetTram, at a cost of about \$16 million, around 10 per cent of power is still supplied by substation equipment which is over 50 years old. This aged equipment is both unreliable and maintenance intensive.

5.126 Clearly, it will be very important for the Department to eliminate as soon as possible any reliance on power supply for trams from antiquated sources.

5.127 Audit considers that the Department should commission a study aimed at defining world class standards in terms of vehicle and travel speeds, frequency of services and safety standards. Specific attention could then be directed to determining the level of upgrading necessary to the existing infrastructure in order to support a world class transport service and to identifying the associated funding implications.

5.128 The Government's impending privatisation strategies for public transport reinforce the importance of such action.

STRATEGIC BUSINESS PLANNING BY TRANSPORT SERVICES TO MEET FUTURE NEEDS

MetTram

5.129 MetTram outlined its forward strategic business plans in the documents *Strategic Direction Statement 1997-98* prepared in February 1997 and *Business Plan 1997 - 2000* prepared in May 1997. In its Strategic Direction Statement, MetTram defined its primary strategic objectives and targets as:

- "to increase revenue and patronage (target increase in revenue and boardings of 2 per cent per year);
- "to improve cost efficiency (target new productivity improvements to gain additional cost savings of 2 per cent p.a.);
- "to enhance the safety of tram operations (target 5 Star NSCA rating secured by 30 June 1999); and
- "to implement cultural change (target to develop and implement cultural change strategies for empowering employees to deliver quality tram services by 30 June 1998)".

5.130 Detailed strategies to support these objectives include:

- “developing new or improved services including Night Tram;
- “a disability action plan;
- “upgrading stop facilities including improved lighting and signage;
- “traffic management improvements to reduce running times and improve service reliability;
- “improved effectiveness of automatic vehicle monitoring in controlling on-time performance;
- increase driver commitment to on-time running, announcements and presentation;
- “improving staff utilisation with new roster strategies, multi-skilling and team work; and
- “safety sampling surveys and driver refresher training programmes”.

MetTrains

5.131 MetTrains, in its September 1994 future directions document “*MetTrains Towards 2001*”, stated that it was “... committed to increasing efficiency and increasing patronage by achieving very high levels of customer satisfaction”.

5.132 MetTrains identified its primary goals as:

- “excellent timetable delivery;
- “enhanced market development;
- “excellent customer services;
- “development of staff potential;
- “effective risk management;
- “effective revenue collection;
- “effective cost management; and
- “effective asset management”.

5.133 The above plans reflect the future direction of public transport in Victoria as envisaged by MetTram and MetTrains prior to the Government’s announcement of its intention to privatise public transport services.

5.134 At the date of audit, the PTC had not formulated any specific plans relating to fleet development or the future upgrading of infrastructure, although the organisation has recognised for some time that such plans would be necessary.

5.135 While such plans are yet to be developed, budgetary submissions by the Department have indicated the need for the following enhancements to the public transport system:

- new trains capable of faster speeds;
- high speed infrastructure to exploit faster trains;
- suburban rail extensions to serve growth areas;
- advanced real-time public transport information systems;
- correction of unduly complex point and crossing work at junctions;
- straightening extensively curved sections of track; and
- computer-based systems to replace older signalling technology;

5.136 To date, no specific action has been taken in these areas.

5.137 Audit acknowledges that the Government’s proposed privatisation framework may require private operators to purchase their own vehicles and upgrade infrastructure to their own specifications. Nevertheless, such a situation does not obviate the importance of the Department having in place an overall strategy for future vehicle purchases and infrastructure upgrades.

Part 6

Cleanliness in the public transport system

OVERVIEW

6.1 All transport operators within the PTC are committed to cleanliness of vehicles and facilities however, to date, acceptable standards on cleanliness which are consistent with passenger expectations have not been developed. In addition, with the exception of V/Line Passenger, minimal effort has been made to confirm that passengers are satisfied with cleanliness of vehicles and stations.

6.2 Future contractual arrangements with private sector operators should include provision for the carrying out of periodic surveys of passenger satisfaction with cleanliness, covering all aspects of service such as stations and waiting areas in addition to vehicles.

6.3 There would be merit in the Department of Infrastructure developing a definition of standards of passenger comfort expected in travel and for these standards to be incorporated within future contracts with private sector operators.

INTRODUCTION

6.4 Cleanliness of public transport facilities including trams, trains, train stations, passenger facilities and other infrastructure visible to the public is an important factor in attracting patronage as well as providing comfort for existing patrons.

6.5 To this end, it is important that public transport operators have in place high level cleanliness standards and monitor the public's satisfaction with such standards. This Part of the Report addresses the adequacy of the cleanliness standards in place for public transport and the extent to which public satisfaction with these standards is measured by the PTC.

ADEQUACY OF CLEANLINESS STANDARDS

6.6 Rather than setting cleanliness standards, the PTC's train operators have tended to establish cleaning schedules to ensure that vehicles and facilities are cleaned regularly. The schedules provide, in effect, a checklist of the various activities to be undertaken and the frequency of the activities. Consequently, these schedules do not necessarily provide information on the state of the cleanliness of the vehicles and buildings. In fact, they provide information on cleaning tasks to be undertaken on the assumption that if the tasks are undertaken, the cleanliness will be satisfactory.

6.7 With the exception of V/Line Passenger's regional in-house operations, all other transport operators monitor cleaning activities, irrespective of whether such activities are conducted in-house or are contracted externally, to ensure that specific tasks are undertaken in accordance with schedules. In the case of V/Line Passenger's regional locations, where cleaning is undertaken by in-house staff, customer surveys have disclosed a high level of public dissatisfaction with the standard of cleanliness. Poor performance in this area can largely be attributed to the fact that the standard of cleanliness displayed is left to individual judgement by station managers, rather than in accordance with established cleaning standards.

6.8 MetTram has established a measurement of cleanliness for cleaning contractors engaged for its tram fleet. The standard of cleanliness is measured by random checks on 39 separate points in a tram. MetTram's 1997 business report recorded scores between 80 and 100 per cent for trams stabled at the various depots.

6.9 While it could be assumed that, based on the above result, trams are kept reasonably clean, audit considered that the method of establishing cleanliness was defective in that:

- The interiors of trams were assessed as to their cleanliness, however, no attention was given to the exterior of trams;
- Random checks of cleanliness take into account a selection of trams which have just been cleaned at workshops as well as trams in service. Clearly, trams departing straight from workshops could be expected to be clean and should not be included in random checks as this does not reflect the proper extent of cleanliness of trams from the public perspective; and
- The 39 point check places equal weight on driver cabins as well as passenger areas, despite the fact that passenger areas are what the public judge the overall cleanliness of trams to be.

6.10 The above cleanliness measure for trams is included in the contract between MetTram and the cleaning company and is also the basis for MetTram reporting cleanliness to the PTC. However, MetTram acknowledges that, although the measure produces a favourable result, it is not necessarily a true reflection of the cleanliness of trams. A more stringent internal MetTram measure, using the above process but focusing only on trams in service prior to cleaning, consistently gives scores of less than 60 per cent. In addition, MetTram does not know whether cleanliness in service is meeting customer requirements, with its last customer survey in 1995 indicating only a mild level of customer satisfaction with tram and tram stop cleanliness.

6.11 MetTrains developed a system for measuring the cleanliness of train carriages by randomly selecting carriages and then measuring the cleanliness levels on a 1 to 6 point scoring system incorporating the following aspects:

- littering in carriages;
- walls and fittings;
- lights and ceilings;
- windows and doors;
- seats; and
- floors and carpets.

6.12 This approach allows MetTrains to make some judgment about the cleanliness of carriages. The information gained from this method of evaluating cleanliness of carriages indicates that the cleanliness targets set out in MetTrains' agreement with the PTC have been consistently achieved over the past 2 years.

6.13 The job of keeping public transport vehicles clean is a difficult one made even more so by a small percentage of travellers whose anti-social behaviour results in littering and vandalism. Information provided by the MetTrains 1997 cleanliness scoring survey showed that most of the problem with keeping carriages clean can be attributed to the high levels of littering by patrons, particularly on afternoon services, and to vandalism.

6.14 Audit established that Met Trains did not have a systematic approach for evaluating the cleanliness of stations, with this aspect left mostly to the discretion of station staff. Accordingly, cleanliness standards varied markedly between stations, potentially contributing to a poor public image of public transport facilities. Apart from the internal measurement for train cleanliness described previously, MetTrains does not measure customer satisfaction with vehicle and station cleanliness and may not be fully aware of the impact cleanliness has on patronage.



A well presented premium station.
(Reproduced with the permission of the Public Transport Corporation.)

6.15 The importance of cleanliness on public transport systems is recognised in overseas countries. For example, a station cleanliness check introduced by the Bay Area Rapid Transit (BART) system in San Francisco utilised the assessment system outlined in Table 6A below.

TABLE 6A
FORMAT FOR STATION CLEANLINESS EVALUATION
USED BY THE BART SYSTEM IN SAN FRANCISCO, USA

Rating (score)	Description
Immaculate (5)	Clean station entrances, concourse level and platform level. No apparent litter, cigarette butts or overflowing trash cans.
Clean (4)	Light littering, cigarette butts, candy wrappers etc. on floor.
Satisfactory (3)	Light littering as for number 4 rating, discarded newspaper apparent. Spill stains on floors, lightly soiled ceilings or walls.
Moderately dirty (2)	Generally dirty appearance. Overflowing trash cans, littering as in number 3, but more widespread. Spills, dirt and new staining apparent on floor.
Extremely dirty (1)	Station categorised as very dirty. Trash and spills as per number 2. However, more garbage cans are overflowing, numerous spills, strewn garbage.

Source: Du Plessis, M.K. (1984) "Monitoring Quality of Services from the Passengers' Perspective". *Transportation Research Record*, 992, pp 28 to 31

6.16 It is also relevant that service agreements between the Department and the PTC do not include specified cleanliness standards or a requirement to measure the adequacy of cleanliness through customer satisfaction surveys.

6.17 While the PTC's transport operators were committed to improving cleanliness, their evaluation of the extent to which the cleanliness of systems met community expectations warranted improvement. This aspect will become particularly relevant under the Government's planned privatisation regime when the contractual obligations will need to specify required levels of performance.

6.18 Audit has suggested to the PTC that it ensures common standards, for both in-house and outsourced cleaning services, are applied throughout the organisation so that levels of cleanliness are uniform.

MEASURING PUBLIC PERCEPTIONS AND EXPECTATIONS OF CLEANLINESS

6.19 It is important that the PTC's internal measurements of cleanliness are validated against passenger perceptions through surveys.

6.20 The passenger surveys conducted by the PTC have consistently disclosed that passengers place a high priority on cleanliness, as indicated by the following points raised in earlier surveys:

- respondents to a July 1977 V/Line Passenger survey rated cleanliness of stations, train cleanliness and toilet conditions at stations among the top 8 service elements most important to them;
- in October 1996, participants in a MetTrains survey assessed cleanliness as the second most important factor that needed attention in respect of train services; and
- a 1995-96 PTC survey found that MetTram travellers considered cleanliness to be the 4th most important of 14 aspects of tram service.

6.21 Future contractual arrangements with private operators should include provision for the carrying out of periodic surveys of passenger satisfaction with cleanliness, covering all aspects of service such as stations and waiting areas in addition to vehicles.

THE NEED TO CONSIDER THE COMFORT OF PASSENGERS

6.22 In delivering public transport services, transport operators should be aiming to provide a service that is not only clean, but also comfortable from the viewpoint of passengers.

6.23 The PTC does not measure the comfort standard of services such as the comfort and condition of seating. Audit considered that the operators tended to treat the matter of comfort as synonymous with cleanliness, with the view that if the vehicles are clean, passengers would feel comfortable.

6.24 The comfort of passengers, particularly on long distance routes both in the metropolitan area and the country can be a factor influencing patronage levels. Measurement of comfort could involve passenger surveys taking into account factors such as:

- the comfort and condition of seating;
- sufficiency of space between seats;
- the frequency of crowding during peak travelling times;
- the adequacy of standing space; and
- temperature and air flow factors.

6.25 Passenger comfort is recognised by some overseas transport operators and specific performance measures have been developed e.g. overcrowding in trains is measured in England by the number of standing passengers compared with those seated.

6.26 There would be merit in the Department of Infrastructure developing a definition of comfort standards expected in travel and for these standards to be incorporated within future contractual arrangements with private sector operators.

Part 7

Safety of the public transport system

OVERVIEW

7.1 Each of the PTC's transport operators has gained accreditation by the Public Transport Safety Directorate in respect of safety management and has safety management systems in place. These systems provide a framework for an integrated approach to safety management, although the nature and the emphasis of the framework varies between operators. Generally, audit considered that these arrangements were adequate, despite some aspects warranting attention, such as better analysis of accident and incident information and the need for operators to undertake comprehensive risk management surveys.

7.2 The accountability framework for the performance of the existing operators for safety matters in relation to passengers and the PTC's workforce is generally considered poor by audit. The service agreements between the Department and the PTC do not specifically address safety requirements nor do annual reports to the Parliament provide adequate information on the measurement of safety standards utilised by operators. Safety is a prominent consideration for both the workforce and the public, and future contracts with private operators will need to make adequate recognition of this aspect of transport operations.

7.3 Based on information provided by transit police, the levels of reported crime against persons using public transport are low by comparison with the incidence of crime in private residential situations, notwithstanding the greater amount of time likely to be spent by passengers in their homes. While it is necessary to accept that in any public transport system there will always be some incidence of crime, the challenge for transport operators is to minimise the incidence of crime through effective safety management.

7.4 Also, reported crime associated with public transport is very low in comparison with the number of passenger boardings every year. Nevertheless, because there remains a strong public perception that travel on public transport at night is unsafe, transport operators should take action to address this aspect of public perception of safety which impacts upon patronage.

INTRODUCTION

7.5 The public transport environment is a complex one, involving the movement of large numbers of people around a widespread rail and road network, and a heavy engineering workplace. The Public Transport Reform Program aimed, among other things, to establish a safe public transport system.

7.6 In its January 1993 public transport reform policy statement, the Government stated that *"the safety of customers is of fundamental concern to the Government and it is to this end that the PTC has devised a comprehensive strategy to enhance passenger safety, particularly for women and the elderly"*. Major safety initiatives identified in the policy statement included the replacement of transit patrol officers with Victoria Police, improved lighting, new payphones and closed circuit televisions for stations, and establishment of an independent rail safety board.

7.7 From the perspective of passengers, safety directly involves personal safety in travelling on public transport as well as the reliability of transport vehicles. It follows therefore that the perceptions of passengers on safety in the public transport system can be a significant factor in retaining and further increasing patronage.

IMPORTANCE OF AN INTEGRATED APPROACH TO SAFETY

7.8 An integrated approach to safety within the public transport system should encompass:

- a safety management system which identifies strategic goals, relevant risk factors and strategies to achieve goals and minimise risks;
- a rigorous process for documenting and investigating all accidents and incidents involving safety;
- performance measures which can assess the effectiveness of risk management strategies in achieving safety goals; and
- achievement of accreditation under the Australian Industry Standard dealing with Railway Safety Management.

A safety management system

7.9 An appropriate safety management system ensures that all safety-related processes and procedures are documented, thereby providing staff with a basis for addressing any safety situation consistently and according to the policies of the organisation. The existence of a safety management system also allows the PTC to implement processes and procedures in an atmosphere of continuous improvement aimed at reducing injuries and maintaining productivity.

7.10 A safety strategy is the strategic means of implementing the requirements of a safety management system. A documented safety strategy allows an organisation to formalise and plan its approach to the management of safety matters. Without a formal safety plan, an organisation may find itself lacking direction in safety matters.

7.11 Each of the operators within the PTC had in place a documented safety strategy to direct the focus of their organisations to safety matters. The safety strategy adopted by V/Line Passenger is quite comprehensive, incorporating its legal and moral responsibilities to passengers, employees and the wider community. MetTram's safety strategy, while comprehensive in some respects in relation to MetTram operations, does not explicitly document public safety requirements in terms of personal safety on trams and at tram stops, such as the safe boarding and alighting of passengers from trams.

7.12 MetTrains has developed a safety strategy document which audit considered was limited in scope and only addressed key safety matters in the broadest of terms. Audit acknowledged, however, that, despite the limited scope of this key document, there was a comprehensive range of supplementary documents and other strategies dedicated to safety matters.

7.13 In reviewing the documentation supporting the safety strategies of the various operators within the PTC, documentary evidence was not available to audit to demonstrate that comprehensive risk management surveys had been carried out by operators. A comprehensive risk management survey would identify risks, measure the probability of an unwanted event and take into account all potential consequences to safety. While MetTram had utilised a standardised risk analysis methodology to develop comprehensive risk analyses in some parts of its operations, these showed a predominant emphasis on worker and workplace safety and did not explicitly address passenger travel safety.

7.14 The need for comprehensive risk management surveys especially applies to those events where the probability of an accident may be considered low, but the outcome can be very serious. For example, level crossing accidents may be infrequent (13 serious incidents occurred in the 1997 calendar year) but can have serious consequences such as the death and/or injury of those persons involved. Despite this position, the funding for related improvement works has in the past been determined on the basis that the low incidence of level crossing accidents does not warrant high levels of expenditure to avoid their occurrence. In the development of risk management strategies, it is important to focus on the potential outcome of an accident rather than on the probability of its occurrence.

7.15 Other sources of safety risk to transport operators include the consequences of inadequate training and lack of monitoring of adherence to safety practices. As an example, the non-release of handbrakes while trains are in movement can result in damage to vehicles, causing wheels to overheat and leading in extreme cases, to derailments. Trains do not have handbrake warning mechanisms such as the warning lights that are fitted in motor vehicles. Audit was advised that in the past the frequency of handbrake problems became so great that MetTrains implemented a special program around 1995 to repair wheel damage on up to 29 trains each month. An effective risk management strategy would identify at an early stage the high incidence of handbrake repairs, the risks posed by the non-release of handbrakes and the consequences to public and workforce safety.

7.16 All operators need to undertake comprehensive risk management surveys and ensure that documented safety strategies cover the full range of safety responsibilities for staff, passengers and the public. Benefit could also be gained from operators strongly promoting to the public their efforts to address safety concerns, in order to engender confidence in public transport.

Rigorous documentation and investigation of accidents and incidents

7.17 Each of the PTC's operators is required to ensure that all reported accidents and incidents involving passengers and staff are properly recorded, investigated and reported to the Department's Public Transport Safety Directorate. This information is valuable not only because it documents specific situations, but because it allows an operator to identify specific trends and emerging risks. By way of illustration, a series of incidents involving passengers jammed in train doors led to MetTrains identifying a design fault with train doors, leading to its rectification by the manufacturer.

7.18 MetTrains has a very good framework in place, with its Safety Standards Branch and Police Liaison, Security and Investigations Branch investigating and reporting on all accidents and incidents in the rail system to senior management. Audit observed that the MetTrains management team displayed a high level of understanding of safety matters and viewed it very much as a shared responsibility with staff;

7.19 V/Line Passenger's accident and incident statistics are collected by its Operations Division, however, the information is not regularly analysed and presented to the senior management team. Consequently, some members of the senior management team will have only limited knowledge of safety matters.

7.20 MetTram has exhibited a strong commitment to safety as evidenced by its establishment of a Safety Coordinating Committee which meets fortnightly to analyse all accident reports and determine actions to be taken.

7.21 Under the Government's planned privatisation framework, the Department of Infrastructure will be responsible for ensuring that private sector operators properly manage safety matters, including high level scrutiny of all reported incidents. As part of this responsibility, it will be important for the Department to verify that adequate documentation on safety incidents is not only prepared by operators but utilised as key input in the development of strategies to minimise re-occurrence of similar incidents.

Performance measures which can assess the effectiveness of risk management strategies in achieving safety goals

7.22 In order to adequately assess progress in managing safety matters, it is important that transport operators have in place suitable performance measures for assessing the effectiveness of risk management strategies in achieving safety goals.

7.23 Audit encountered difficulty in obtaining meaningful information on safety performance from MetTram, MetTrains and V/Line Passenger, as summary information was not maintained. This inability to readily obtain information on safety matters is a direct reflection on the failure of the operators to accurately monitor their performance on safety issues, despite the critical importance of safety for passengers and the workforce.

7.24 The development of performance measures needs to be linked with the development of safety strategies as discussed in the earlier paragraphs. The collection of accident and incident information should provide a comprehensive database of safety information which can be used to monitor performance. However, analysis of the information needs to be such that it accurately depicts trends, patterns and locations where safety issues are prominent. For example, employee absenteeism rates on account of sick leave attributable to the workplace do not present the full safety picture. To be of greater value, the information needs to be broken down further so that specific skill groups or work units are identified in relation to the common reasons for absenteeism.

7.25 The Department of Infrastructure has the legislative power to manage safety requirements. If the Department is to be in a position to effectively implement its legislative responsibility in relation to the safety performance of future private sector operators, it is imperative that standardised management information systems are developed and used in the monitoring of operators' performance.

Achievement of accreditation under the Australian Industry Standard dealing with railway safety management

7.26 As previously mentioned, one of the major safety initiatives identified in the Government's January 1993 public transport reform policy statement included the establishment of an independent rail safety board.

7.27 Implementation of this initiative occurred in February 1996 with the formation of the Public Transport Safety Directorate within the Department. The Directorate assumed responsibility for rail safety accreditation for all public transport operations throughout Victoria. The Victorian Public Transport Safety Accreditation Panel, appointed by the Government in 1996, grants accreditation to public transport operators on the recommendation of the Directorate.

7.28 The Directorate is not a policing body and cannot enforce safety standards. However, it ensures that safety standards are adopted by the operators and identifies any deficiencies in agreed safety management systems. The Directorate monitors compliance by operators with the Australian Industry Standard AS 4292.1 1995, *Railway Safety Management*.

7.29 Each of the operators has established documented safety management systems which satisfy the requirements of the Directorate and has achieved accreditation. The granting of accreditation demonstrates the commitment of the PTC's transport operators to high safety standards.

PASSENGER SAFETY

7.30 Confidence in the safety of the public transport system is a critical factor for all passengers. In the PTC's 1995-96 customer satisfaction survey, "personal safety" was rated the third most important factor after "frequency" and "reliability" by regular tram users, and the most important factor by occasional users. This feedback indicates safety is a key factor in encouraging greater use of trams. In addition, a similar MetTrains survey of passengers disclosed that safety came second only to the question of reliability in terms of what passengers thought was most important about using trains.

Extent of incidents involving passengers and members of the public

7.31 For the calendar year 1997, MetTrains reported 24 serious and 334 minor personal injuries to passengers and members of the public which, in the context of the PTC's computation of over 110 million passenger boardings for the same period, is not statistically significant. The bulk of the minor injuries consisted of injuries sustained by slipping or tripping on obstructions around station areas, or from boarding or alighting from carriages.

7.32 V/Line Passenger recorded 134 incidents involving passengers and members of the public in 1996-97 compared with 7.3 million passenger boardings.

7.33 Information on personal injuries was not readily available in respect of tram services.

7.34 Both MetTrains and MetTram have made major efforts through a range of initiatives to ensure public safety. Measures introduced by MetTram to improve passenger safety include:

- automatic controls to prevent trams moving with doors open or doors closing while passengers are boarding or alighting;
- hazard lights;
- onboard announcements and a capability to broadcast safety announcements from the operations centre to one or more trams;
- flip-out door indicators on trams;
- studies of safety zones on all routes, with modifications where necessary; and
- participation in a road safety-oriented research program, the "Monash University multi-action pedestrian program".



*A central safety zone for passengers awaiting a tram.
(Reproduced with the permission of the Public Transport Corporation.)*

7.35 A very prominent public safety issue involves accidents at rail crossings, particularly where deaths occur at crossings without boom gates. At the date of the performance audit, the PTC was in the process of installing boom gates at the 3 remaining metropolitan crossings without gates.

7.36 On the basis of reported and recorded accidents, Victoria's public transport system can be considered quite safe in terms of the safety of passengers and other members of the public.

7.37 Because of the age and deterioration of the infrastructure, the introduction of driver-only trams and trains and reductions in station staff, it will be important that future private operators be required to rigorously monitor public safety.

7.38 Audit considers that contracts with private operators need to provide for the inclusion of passenger safety performance measures and that these measures are monitored by the Department of Infrastructure. To effectively meet their public accountability obligations, individual operators need to report annually to the Parliament on their performance against passenger safety standards.

Safety from crime

Role of the transit police and the PTC in crime prevention

7.39 Responsibility for public safety in Victoria's public transport system, in the context of safety from assaults and other crimes, rests with the individual transport operators and the Transit Division of Victoria Police. The Transit Division, comprising 266 sworn police officers (transit police), covers public transport across the whole of Victoria.

7.40 The mission of Victoria Police in relation to its Transit Division is to ensure the safety and security of all persons using public transport with a focus on:

- prevention of crimes against the person;
- providing a visible police presence; and
- imparting confidence that the system is safe to the public.

7.41 Transit police provide MetTrains with offence statistics and MetTrains makes extensive use of this information for the purpose of improving public safety. Audit observed extensive documentation in MetTrains analysing the information provided by transit police and identifying offence trends connected to the MetTrains system. This information has been helpful to MetTrains in its decision making on such matters as the upgrading of security at stations, the staffing of stations at night for a period of time after the departure of the last scheduled train and the need for public safety information programs. While equivalent information is available from transit police for the other operators within the PTC, audit established that they had not availed themselves of the benefits to be gained from this information.

7.42 It was also evident that only very limited efforts were made by all operators within the PTC to obtain public input on safety measures which could be implemented.

7.43 Service agreements between the Department and the PTC do not incorporate targets for personal public safety and security because it is seen as a responsibility of Victoria Police. Audit acknowledges that the Transit Division of Victoria Police, as experts in security and surveillance matters, has prime responsibility for public safety, including the targeting of areas where incidents occur and collating of relevant information.

7.44 Nevertheless, the PTC still needs to accept its basic role in providing for public safety on public transport including those aspects that do not rest with the Victoria Police. The implementation of this role should encompass the setting of targets in relation to matters such as security systems, lighting and public information on safety within the transport system.

Levels of crime on the public transport system

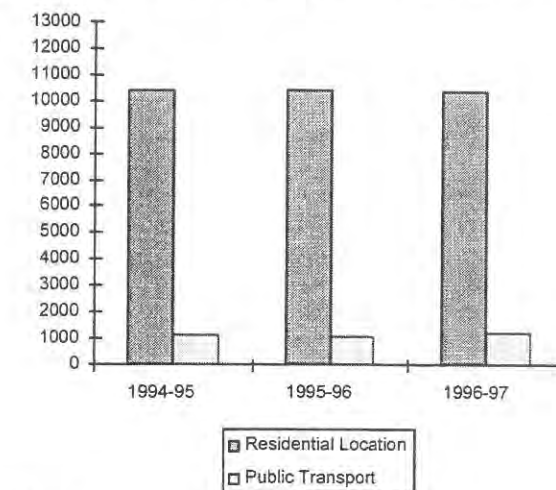
7.45 In the PTC's 1995-96 customer satisfaction survey, "personal safety" was rated the third most important factor after "frequency" and "reliability" by regular tram users, and the most important factor by occasional users. This feedback indicates personal safety, including safety from criminal acts, is a key factor in encouraging greater public use of trams. In addition, a similar MetTrains survey of passengers disclosed that safety came second only to reliability in terms of what passengers thought was most important about using trains.

7.46 In contrast to the suburban area, customer surveys of country rail and coach services show that passengers do not view safety to be of prime importance. This situation could be attributable in part to the fact that the presence of conductors on each country service can increase the perception of safety by passengers. In addition, conductors are in a position to intervene in potentially serious situations.

7.47 Transit police provided audit with a summary of offences reported over recent years which allows a comparison of the incidence of reported crime connected to the public transport system with crime associated with private residential locations.

7.48 Chart 7A shows the comparison between crimes against the person committed on the public transport system compared to private residential areas between 1994-95 and 1996-97.

CHART 7A
LEVELS OF REPORTED CRIME ON PUBLIC TRANSPORT
AND IN RESIDENTIAL SITUATIONS, 1994-95 TO 1996-97



Source: Victoria Police.

7.49 Transit police advised audit that there is a correlation between the incidence of crime in residential situations and on public transport. It is clear from the information presented in Chart 7A that the levels of reported crime against persons using public transport are consistently low by comparison with the incidence of crime in private residential situations, notwithstanding the greater amount of time likely to be spent by passengers in their homes.

7.50 It is necessary to accept that in any public transport system there will always be some incidence of crime. It is also clear that the incidence of crime in the public transport system, as shown in Chart 7A, is very low having regard to the annual number of passenger boardings, calculated by the PTC to be in excess of 200 million. Nevertheless, the challenge for transport operators is to minimise the incidence of crime through effective safety management.

Public perceptions of safety in travelling at night

7.51 One of the findings of the Parliament's Crime Prevention Committee in its November 1993 Report *Developing a Safer Public Transport System* was that "the biggest problem facing the Public Transport System was a public perception that it is not safe to travel on public transport at night". In reality, as evidenced from the information provided to audit by transit police, the incidence of reported crime at night is very low.

7.52 Nevertheless, passengers' perception of insecurity has a very substantial impact upon the level of travel at night and this is an area where significant opportunities have existed for transport operators to increase patronage through marketing the safety of the transport system outside of peak periods.

7.53 Through its now completed Premium Station Program, which involved the upgrading of 51 metropolitan train stations, MetTrains has substantially improved the comfort and security of these stations, action which has contributed to the overall general safety of the metropolitan train system (the PTC advised that additional premium stations will be completed under a separate Government initiative). In addition, 177 train stations have now been upgraded to include closed-circuit television surveillance, telephones, and push-button intercoms for information and assistance. Other initiatives undertaken by MetTrains have been:

- an education program (Travel-on) provided to schools;
- staffing of premium stations until 30 minutes after the final train at night; and
- the upgrading of lighting levels at 152 stations.

7.54 Audit suggested to MetTrains that consideration could also be given to the installation of a direct communication link for passengers to contact the train driver if assistance is needed. This aspect is particularly relevant following the advent of automatic ticketing and driver only trains in that there are now no station staff on many stations or guards on trains who, in the past, have provided a feeling of security for passengers and an avenue for seeking help and reporting incidents.



*Security monitoring of surveillance cameras at MetTrain station.
(Reproduced with the permission of the Public Transport Corporation.)*

7.55 Audit acknowledges the considerable efforts of MetTrains in addressing passenger safety issues concerning travel at night. However, the perception of a lack of safety during night time travel using public transport remains a major issue with the general public. In this regard, transport operators need to identify contemporary strategies which specifically deal with this public perception of safety. Of benefit would be a public awareness campaign that gives prominence to the initiatives taken to address safety and thereby creating a safer travelling environment for night time passengers.

7.56 In summary, ongoing efforts need to be taken by the Department of Infrastructure, in consultation with future private sector operators, to develop further strategies which are aimed at effectively addressing public perceptions of safety.

Importance of a cohesive relationship between operators and transit police

7.57 The Crime Prevention Committee's November 1993 Report, mentioned in an earlier paragraph, also found that there appeared to be little or no teamwork, co-operation, co-ordination or integration of Victoria Police and the PTC. Since that Report, the transit officers formerly employed by the PTC have been replaced by officers from the Transit Division of Victoria Police.

7.58 The relationship between the transit police and MetTrains is now very positive according to information provided to audit from both organisations. In addition, MetTram conducts monthly meetings with Transit Police to discuss security and passenger safety issues.

7.59 Unlike MetTrains, which has established a comprehensive suite of protocols for ongoing liaison with transit police, the other public transport operators had not established similar protocols. As the relationship between public transport operators and police is very important, especially in the context of any serious incidents, it would be highly desirable for the other operators to establish protocols to structure their relationship with Victoria Police and to work very closely with Victoria Police to reduce crime on the public transport system.

EMPLOYEE SAFETY

7.60 The 1996-97 service agreement between the Department and the PTC specified that accreditation with the Public Transport Safety Directorate was to be obtained by all transport operators. While, as mentioned in an earlier paragraph, each operator has gained such accreditation, no performance measures were specified in the agreement to assist with performance measurement of safety standards achieved by the PTC's operators. Further, the PTC's 1996-97 Annual Report did not contain any safety performance measures covering either its workforce or the public, although the report did refer to the following initiatives designed to improve the PTC's health and safety performance:

- training of staff in basic and advanced risk management techniques;
- training in system safety and accident investigation; and
- the attendance of 182 staff at a supervisory and safety representatives training course.

7.61 The Annual Report also made reference to an across-the-board decrease in employee injuries by 21.5 per cent in 1996-97, following on from a 17 per cent reduction in 1995-96 and a 19 per cent reduction in 1994-95.

7.62 In respect of the reported information dealing with MetTrains, MetTram and V/Line Passenger, employee safety is managed with an emphasis on monitoring levels of WorkCover claims and absenteeism. Based on the information provided to audit on WorkCover claims and unscheduled absenteeism, MetTrains experienced a high level of WorkCover claims in 1995-96 and 1996-97. Absenteeism levels were between 4.1 and 6.7 per cent, in numerous months, compared with the 4 per cent target set by MetTrains for unscheduled absenteeism.

7.63 Information documented by V/Line Passenger displayed an improvement in the number of work hours lost on account of injury or work related illness. WorkCover claims declined from 4 118 hours in 1995-96 to 3 601 hours in 1996-97. The number of reported incidents involving staff fell from 44 in 1995-96 to 36 in 1996-97. Unscheduled absenteeism was 3.3 per cent in 1995-96 and 3.8 per cent in 1996-97.

7.64 Audit acknowledges that the above statistical information provides prima facie evidence of a generally acceptable performance in relation to workplace injuries and absenteeism. However, audit considered the statistical information provided also needs to be supplemented by performance measures covering safety performance in a public transport industry.

7.65 Drawing on specialist advice, audit identified a range of potential performance measures dealing with employee safety which could be considered by the PTC's transport operators as detailed in Table 7B.

**TABLE 7B
POTENTIAL EMPLOYEE SAFETY PERFORMANCE MEASURES
FOR PUBLIC TRANSPORT OPERATORS**

- Number of workplace accidents per set number of employees separated by division or job function
- Number of workplace fatalities per set number of employees separated by division or job function
- Incidence of work related illnesses per set number of employees separated by division or job function
- Employee attendance/absentee rate separated by division or job function

Source: Victorian Auditor-General's Office.

7.66 The current requirement that all public transport operators obtain accreditation from the Public Transport Safety Directorate is not in itself totally adequate in terms of public accountability and does not substitute for the publication of actual performance information. Future contracts with private sector operators should specify performance requirements in safety matters expected of operators and provide for this information to be made publicly available in annual reports. Such action would also assist in enhancing public confidence in the public transport system.

Part 8

Efficiency of public transport

OVERVIEW

8.1 One of the Government's objectives under the Public Transport Reform Program was to deliver an efficient transport service for both city and country travellers, and to transform the system into a service that meets the changing needs of customers.

8.2 The proximity of the public transport network to existing and planned populated areas is a key criterion to be satisfied if public transport services are to be viewed as efficiently meeting the travel requirements of the whole community. Notwithstanding achievements made under the reform program, the current public transport system does not efficiently meet the needs of all areas of Melbourne, particularly its growth areas, and significant capital upgrading of the transport network will be necessary to address this position.

8.3 The number and frequency of services as documented in published timetables are also important efficiency issues, and addressing these areas is a key priority which has been expressed to the Public Transport Corporation (PTC) by both tram and train travellers. The level of public transport services has increased to some extent during the reform program. However, the PTC is precluded from meeting any demand for additional suburban train and tram services in peak periods due to extensive vehicle maintenance requirements which restrict the availability of extra rolling stock.

8.4 The timeliness of travel is a further area warranting attention. Public transport has distinct advantages in many areas when compared with private means of transport. However, such advantages are undermined by the inadequate speeds and excessive travel times of transport services. Audit considers that gaining new patronage in population growth areas will be difficult and even maintaining current patronage (which has increased in recent years) will be at risk unless action is taken to improve the timeliness of public transport travel.

8.5 Attracting new patronage to public transport in the future will also require the formulation and implementation of suitable marketing programs which promote the distinctive advantages of public transport and address any factors which deter travellers from using public transport. In addition, the ability to support major increases in patronage will depend in the short-term upon increased vehicle availability and, within the next 5 to 10 years, upon the taking of action to upgrade infrastructure and replace aged rolling stock with modern, faster vehicles.

8.6 From a financial viewpoint, there has been a substantial reduction in the operating costs of public transport during the reform program. However, income from fare revenue has not increased in real terms. Continuing improvement in the cost recovery performance of public transport services in the planned future privatised environment will require consideration of a number of important factors. These factors include the impact of concessionary travel, the means of apportioning revenue between private operators, management of subsidies for poorly patronised services and controlling fare evasion within an automated ticketing environment.

OVERVIEW - continued

8.7 With respect to maintenance activities, strategies implemented by the PTC such as the rationalisation of workshops, improved work practices, refurbishment of aged vehicles and a shift from reactive to preventative maintenance have contributed to improved efficiency of the vehicle fleet. In the longer-term, it will become increasingly difficult to sustain adequate vehicle availability as the older vehicles in the fleets become more expensive to maintain and parts more difficult to acquire. In this regard, vehicle replacement programs need to be formulated in the near future, particularly in respect to Hitachi trains, Z class trams and the V/Line locomotive fleet. Despite the growing obsolescence of these elements of the existing fleets, the PTC has not yet developed a long-term fleet replacement strategy for any of its services.

8.8 Finally, given its stated privatisation intentions, the Government is faced with the task of articulating a detailed implementation strategy for capital enhancements to the network and the nature of the role of private operators in the future in assuming financial responsibility for network expansions.

INTRODUCTION

8.9 This Part of the Report examines the level of efficiency of public transport services since the commencement of the reform program from the perspective of:

- travellers in terms of whether services are meeting their needs through the availability of a suitable network, appropriate timetables and satisfactory travel times; and
- public transport operations having regard to movements in cost-recovery ratios and patronage, the level of fleet utilisation, the soundness of maintenance practices and the adequacy of staff rostering.

8.10 As mentioned in Part 2 of this Report, one of the key goals of the reform program was to progress the efficiency of public transport services to world class status.

EFFICIENCY OF SERVICES FROM THE PERSPECTIVE OF TRAVELLERS**Suitability of the public transport network**

8.11 As explained in Part 2, public transport rail-based services in Melbourne and Victoria are provided within an extensive network of train and tram lines, routes, stations and stops. The proximity of this network to existing and planned populated areas is a key criterion which needs to be satisfied if public transport services can be viewed as efficiently meeting the travel requirements of the community.

8.12 The Government, in its September 1996 policy discussion paper *Transporting Melbourne*, recognised the requirement to "... develop the transport network in growth municipalities to facilitate access and develop strong links with the metropolitan area (for example through station location and extension of railway electrification)".

8.13 During the earlier period of the transport reform program, the PTC carried out the following 2 extensions to the suburban network:

- electrification of the Dandenong-Cranbourne train line to extend the suburban train system to that area, which was completed in 1995 at a cost of \$27 million; and
- extension in 1995 of the East Preston tram line beyond Bundoora to service the growing outer suburban area north of Melbourne.

8.14 The above projects were funded under the Building Better Cities Program established by the former Australian Government in 1991. The management of Victorian projects under that Program was examined in the Auditor-General's Special Report No. 45 *Building Better Cities: A joint government approach to urban development*, tabled in the Parliament in November 1996.

8.15 With regard to country passenger rail services, several of the State's poorly performing regional rail services were replaced with coach services under the reform program. These changes led in all cases to reduced patronage levels. As an example, the replacement of train services on the Albury-Wodonga route with a combination of train and coach services added over an hour to the journey and resulted in a significant loss of patronage (comment on contracting out of country passenger services within Victoria was included in the Auditor-General's *Report on Ministerial Portfolios*, May 1995). A total train service utilising the modern Sprinter trains has since been re-instated on the Albury-Wodonga route.

8.16 Sprinter trains were also used in 1996-97 for the re-introduction of train services to Echuca after a period of 15 years without a train service.

8.17 When considering the above actions in the context of the adequacy of the transport network in meeting passenger needs, audit was informed by the PTC that:

- There are several existing opportunities to improve the tram system through connections to railway stations (examples include extensions of the Mont Albert tram line to Box Hill station and of the East Malvern line to East Malvern station);
- Opportunities also exist for extending tram routes to major suburban shopping centres such as the centres at Chadstone and Highpoint;
- Further electrification of rail lines is necessary to extend suburban rail services into several developing outer metropolitan areas such as Sydenham, South Morang, Somerton and Cranbourne East; and

- Significant capital upgrading of the network will be required before higher speed services can be provided to more distant commuters in Melbourne's growing outer suburbs and satellite cities. In this regard, the building of a third track on some trains lines will be necessary to increase the number of express services and the installation of modern signalling technology would permit closer scheduling of trains and support higher train speeds.

8.18 While the strategic paper *Transporting Melbourne* does address, at the conceptual level, the desirability of ensuring that the public transport network continues to keep pace with population growth patterns, the 2 extensions identified in the above paragraph represent the only expansion of the network within Victoria for many years. Despite the high level significance mentioned in the strategic paper, to date there have been no major funding allocations or action plans covering any further enhancements to the network.

8.19 In short, the current public transport system does not efficiently meet the needs of all areas of Melbourne, and particularly its growth areas. Extensions to the existing system to meet these needs will involve large levels of capital expenditure in future years. Against this background and having regard to its stated privatisation intentions, the Government is faced with the task of articulating a detailed implementation strategy for capital enhancements to the network and the nature of the role of private operators in the future in assuming financial responsibility for network expansions.

Appropriateness of public transport timetables

8.20 From a passenger viewpoint, the number and frequency of services within the public transport network as documented in timetables is clearly an important efficiency issue. The PTC's 1995-96 customer satisfaction survey, previously referred to in Part 5 of this Report, found that increasing the frequency of services was a key priority of both tram and train travellers.

8.21 The Government acknowledged at the beginning of the reform program that there was a need to increase the frequency of services.

8.22 Because of excessive maintenance demands of vehicles, the PTC was initially unable to provide sufficient trains to operate to then-existing timetables.

8.23 This position was rectified in August 1993.

8.24 As well as restoring full services, train timetables were also progressively improved through such actions as:

- reducing from 40 minutes to 30 minutes the intervals between suburban rail services during off-peak periods and at weekends;
- introducing additional suburban train services in peak times by extending the peak periods, e.g. the evening peak period was extended to 7.30 p.m.; and
- providing regular Sunday city loop services from February 1997.

8.25 These initiatives have increased the level of MetTrains services and provided passengers with greater flexibility. The extent of additional services as reflected in train timetables is demonstrated by the fact that the total number of train kilometres operated each year has increased by 23 per cent from 12.3 million kilometres in 1991-92 to 15.1 million kilometres in 1996-97.

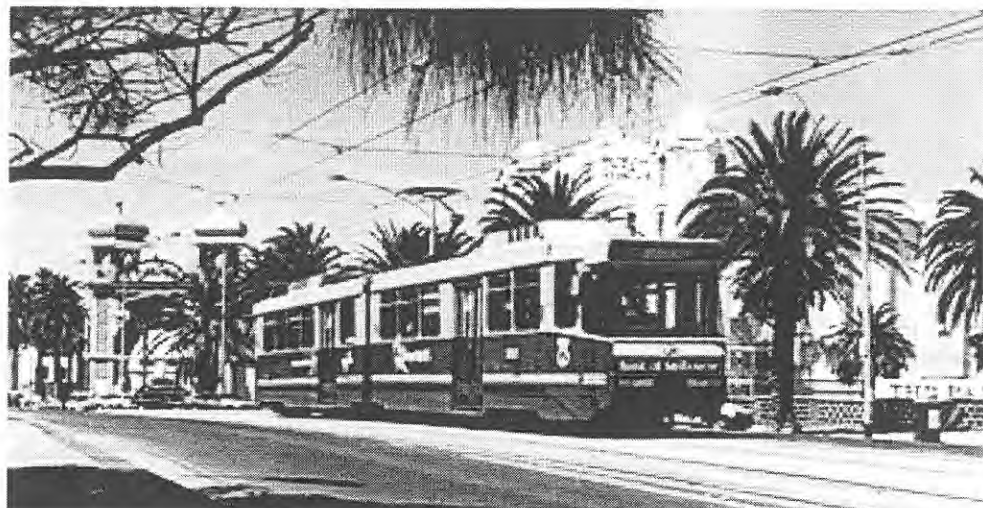
8.26 Nevertheless, MetTrains continues to be restricted from increasing the number of train services in peak periods because of the high level of train maintenance activities which limits the number of available trains, as mentioned in later paragraphs.

8.27 With respect to tram services, an unsatisfactory situation prevailed at the start of the reform program in that the adverse impact of maintenance activities prevented the PTC from actually providing the level of services identified in tram timetables. In response to this situation, the PTC, early in the reform program, revised tram timetables to reflect the level of services which it was capable of providing, as described in the earlier Part 5 of this Report.

8.28 Since that early establishment of revised timetables, apart from 3 specific actions, namely, the extension of the East Preston route to Bundoora (referred to in an earlier paragraph), introduction of the City Circle tourist service and implementation of late night tram services serving key inner city suburbs, there has been no increase in the level of tram services. Similar to the situation with trains, MetTram has been restricted from increasing the number of tram services in peak periods because of the limited availability of trams due to a high level of maintenance activities.

8.29 For 1991-92, PTC records indicated that the tram service operated a total of 22.5 million kilometres. This level dropped to 20.5 million kilometres in 1993-94 and moved to 21.9 million kilometres during both 1995-96 and 1996-97. In other words, the level of tram services remained static during the reform program.

8.30 In making this point, audit recognises that the actual carrying capacity of trams has increased with the introduction between 1984 and 1994 of the articulated B class trams which have a capacity of 75 seated passengers, over 50 per cent more than that of other types of trams. With B class trams now comprising about 30 per cent of the main fleet, the total impact has been an increase of over 15 per cent in maximum passenger capacity during peak periods.



*B class articulated tram with increased seating capacity.
(Reproduced with the permission of the Public Transport Corporation.)*

8.31 Currently, the PTC includes in its annual report to the Parliament the aggregate level of kilometres travelled by each service for the preceding year. Audit considers that performance information in the annual report in respect of both tram and train services would be more meaningful by inclusion of a performance measure showing total kilometres scheduled both during peak and off-peak periods according to timetables compared with the actual service kilometres travelled each year. Explanations could then be detailed in the annual report on the reasons for any variation between planned and actual kilometres.

8.32 From a longer-term perspective, the following factors indicate a need to schedule additional services:

- Patronage has risen in the latter years of the reform program. While suburban train services for non-peak periods have been increased, PTC loading counts indicate excessive levels of crowding on some peak services;
- Customer surveys have indicated dissatisfaction with levels of crowding and the frequency of trams in peak periods; and
- The growth of population in Melbourne's outer suburbs points to the desirability of extending the suburban rail network.

8.33 In summary, the level of public transport services has increased to some extent during the reform program. However, the PTC is precluded from meeting the demand for additional suburban train and tram services in peak periods due to extensive vehicle maintenance requirements.

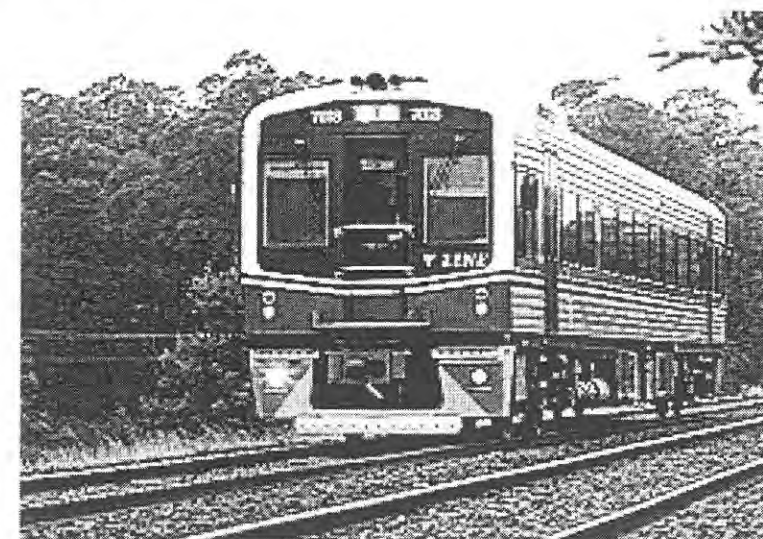
Importance of satisfactory travel times

8.34 Achieving satisfactory travel times for users of public transport is particularly important, as the time spent on public transport constitutes only a part of their total travel time, after taking into account the need to commute to and from a train station or tram stop and any waiting times.

8.35 V/Line Passenger customer satisfaction surveys, undertaken regularly on all services, have revealed that approximately 75 per cent of inter-urban travellers (mostly commuting between Melbourne and outlying regional centres close to Melbourne such as Geelong or Bacchus Marsh) are satisfied with travel times, and that approximately 85 per cent of other regional travellers find travel times satisfactory.

8.36 Some indication of the importance of travel times can be gleaned from the fact that patronage dropped sharply when some services between Melbourne and Albury-Wodonga were downgraded to coach services, adding an hour extra travel time. This service degradation caused a loss of confidence by passengers in all services on the line which was shown in a general drop in patronage. When rail services were resumed in 1996 using Sprinter trains, patronage quickly returned. However, the overall patronage loss on all services, caused by the original degradation has not yet been fully recovered.

8.37 Travel times of V/Line Passenger to the closer regional centres have been reduced since the introduction of Sprinter trains on selected services in December 1993 and some upgrading of rail track. By way of an example, the average travel time between Melbourne and Bendigo has improved from 2 hours to 1 hour 45 minutes. Also, the Sprinter train service introduced between Melbourne and Albury-Wodonga resulted in a travel time of 3 hours 20 minutes, about 20 minutes quicker than the previous train service.



*V/Line "Sprinter" diesel railcar.
(Reproduced with the permission of the Public Transport Corporation.)*

8.38 The ability of the PTC to further reduce travel times of V/Line Passenger trains is restricted by the fact that much of the rail track used by V/Line services has speed limitations. The maximum rail speed limit is 110 kilometres per hour with limits of 80 kilometres per hour or less on some stretches.

8.39 In terms of suburban services, the following 2 factors identified during the audit indicate that there is scope for the PTC to improve travel times:

- A survey of suburban *train* travellers conducted by MetTrains in October 1996 identified the need for faster train services as a key issue. MetTrains informed audit that travellers had also expressed a similar view in its previous surveys; and
- While recognising that *tram* times will never be equivalent to car travel times, tram travel times compare very unfavourably with car times and are deteriorating on nearly all tram routes, a position attributed by the PTC to increasing traffic density.

8.40 On the latter point, Table 8A illustrates the variations in travel times scheduled on 6 popular tram routes since 1974.

**TABLE 8A
SCHEDULED TRAVEL TIMES FOR SELECTED
TRAM ROUTES, 1974 TO 1998
(minutes)**

Tram route	1974	1984	1994	1998
Route 8 - Toorak	37	37	44	48
Route 19 - North Coburg	35	40	40	40
Route 42 (109) - Mont Albert	47	47	58	58
Route 59 - Aerodrome	44	44	48	48
Route 64 - East Brighton	52	52	62	67
Route 75 - Burwood	56	56	54	60
Route 86 - East Preston	45	49	49	56

Note: The times relate to afternoon peak schedules. Where routes have been extended, 1998 figures are for the original, shorter routes.

Source: Public Transport Corporation.

8.41 Public transport has many distinctive advantages when compared with private means of transport. However, such advantages are undermined by the inadequate speeds and excessive travel times of transport services. Audit considers that gaining new patronage in population growth areas will be difficult and even maintaining current patronage will be at risk unless action is taken to improve the timeliness of public transport travel.

IMPROVING COST RECOVERY AND INCREASING PATRONAGE

Significant improvements in cost recovery

8.42 The overall cost recovery of PTC-operated services, expressed as a ratio of revenue to operating costs, improved significantly during the period of the reform program. As a direct consequence, there has been a reduction in the level of taxpayers' annual subsidy to public transport, as a proportion of the PTC's operating costs.

8.43 Table 8B shows the movement in the PTC's revenue to operating cost ratio and in the ratio of taxpayers' subsidy to operating costs which occurred over the 4 year period from 1991-92 up to and including 1995-96. The information presented in the table reflects the apportionment by the PTC of revenue and costs across its 3 passenger transport operations.

**TABLE 8B
MOVEMENTS IN THE PTC'S REVENUE TO OPERATING COSTS RATIO
AND TAXPAYERS' SUBSIDY TO OPERATING COSTS RATIO, 1991-92 TO 1995-96**

	Revenue/costs ratio		Taxpayers' subsidy/costs ratio		Movement in the 2 ratios
	1991-92	1995-96	1991-92	1995-96	
MetTrains	44.0%	65.6%	56.0%	34.4%	21.6%
MetTram	41.9%	59.7%	58.1%	40.3%	17.8%
V/Line Passenger	38.5%	52.6%	61.5%	47.4%	14.1%

Source: Public Transport Corporation.

8.44 The key factor contributing to the favourable trend in the ratios presented in Table 8B was a substantial reduction in the PTC's operating costs, as reflected in the wide range of expenditure savings under the reform actions described in Part 4 of this Report. In other words, only marginal revenue gains occurred during the period.

8.45 The Government faces the task, under its planned privatisation strategies, of ensuring that any arrangements entered into with private transport operators build on its past cost reduction achievements and bring about further improvements in the operational efficiency of future public transport services.

8.46 Some of the issues which will require attention in the future management of public transport contracts include assessing the impact of concessionary travel, determining the means of apportioning revenue between private operators, managing subsidies for poorly patronised services, controlling fare evasion within an automated ticketing environment and raising the level of patronage.

Assessing the impact of concessionary travel on public transport

8.47 Under government policy, holders of health care cards, people aged over 60 years and students are eligible to benefit from fare concessions when using public transport. The provision of such concessions constitutes an important community service obligation of government.

8.48 In 1996-97, the PTC received an amount of \$57.8 million as the Government's contribution towards fare concessions.

8.49 In the past, the PTC has not been in a position to accurately calculate the annual impact of concessional travel on its fare revenue and whether the contribution it receives each year from government represents a full reimbursement to it of related revenue. This situation has arisen mainly because the current system does not provide for a breakdown of concessional ticket sales.

8.50 The PTC advised audit that it estimated approximately half of all tickets sold were concessional in nature and that the annual contribution it received from government for fare concessions covered only about 50 per cent of the gap between concessional revenue and full fare value.

8.51 Given the financial significance of fare concessions, the subject is likely to be addressed by the Government in its future negotiations with potential private sector providers of public transport services. Some of the options which could be considered in this area include:

- requiring potential operators to specify in their competitive tenders the cost/revenue relationship which would apply to concessional fares in their operational environment;
- negotiating with private sector bidders on an aggregate cost basis with no specific attention to individual cost items such as concessional fares, i.e. the management risk for total costs passes to the successful bidder; or
- directly compensating future operators for all or part of any annual revenue gap arising from fare concessions, based upon a combination of ticket sale analyses, surveys and historical data.

8.52 Irrespective of the final position reached with the successful private sector bidders on the management of fare concessions, it will be important from an accountability perspective that adequate details of the financial arrangements relating to fare concessions are periodically communicated to the Parliament by the Department.

Determining the means of apportioning revenue between private operators

8.53 Melbourne's current ticketing structure can be described as multi-modal in that passengers can travel throughout Melbourne on trains, trams and buses utilising the one ticket. In addition, tickets can be purchased for set time periods, i.e. for short-term travel over 2 hours and for longer travel periods such as daily, weekly, monthly and yearly, with ticket holders able to engage in unlimited trips during the period at no additional cost.

8.54 In the past, the PTC has been unable to accurately apportion fare revenue across its 3 suburban transport services (trains, trams and buses) because of the above characteristics of the ticketing structure. It has, for internal management purposes only, nominally apportioned revenue to the 3 services on the basis of patronage as determined from periodic passenger surveys and ticket sales.

8.55 From discussions with the Transport Reform Unit of the Department of Treasury and Finance, audit understands that the apportionment of revenue to future private sector transport operators will be based solely on patronage in terms of passenger boardings and passenger kilometres. The Unit anticipates that, when the automatic ticketing system is fully operational, additional data will be available to support revenue apportionment.

8.56 The important difference in this area in a privatised environment will be that revenue is actually distributed to operators rather than nominally allocated as is currently the case with the PTC. In this situation, the size of the revenue dollar pool can only increase through additional ticket sales (increased patronage does not necessarily mean increased revenue).

8.57 A significant issue likely to be addressed, therefore, in the development of the privatisation framework is the establishment of a revenue distribution system which is seen not only as fair and equitable by all transport operators but as also providing sufficient incentive for attracting new travellers to the public transport system. In addition, in recognition of the Government's aim to increase the use of public transport, whatever approach is ultimately followed should also incorporate the means to highlight, with appropriate penalties, any operators who are not making an identifiable effort to increase ticket sales.

Managing subsidies for poorly patronised services

8.58 The Government's transport policy aims to provide public transport services equitably to meet the needs of the community, notwithstanding differences across services in patronage levels or profitability.

8.59 Table 8C below lists 3 suburban train lines which are recorded within the PTC as recovering by way of revenue a far lower proportion of their operating costs than MetTrain's average cost recovery ratio of 65.6 per cent during 1995-96. Similar calculations have not been prepared by MetTram due to the difficulty of determining detailed patronage figures for individual routes.

TABLE 8C
COST RECOVERY RATIOS OF SELECTED METTRAINS LINES FOR 1995-96

Line	Cost recovery ratios	Line operating cost (a)
	(%)	(\$'000)
Werribee	28.6	15 362
Upfield	32.3	11 861
Williamstown	37.2	6 349
Total operating costs of all MetTrains lines		218 150

(a) Line operating costs which do not include corporate overheads.

Source: Public Transport Corporation.

8.60 In terms of equitably meeting the needs of the community, it is generally not feasible for the Government to discontinue services on poor performing lines or routes or to substitute other modes of transport.

8.61 The Transport Reform Unit of the Department of Treasury and Finance informed audit that, in the planned privatisation framework, it is intended that the private sector operators have some flexibility to vary service levels provided overall aggregate service levels are maintained across each business. Audit considers that it will be important that the private operators be motivated, through appropriate incentives, to develop strategies aimed at achieving higher levels of operational efficiency on poorly patronised lines and routes.

Controlling fare evasion within an automated ticketing environment

8.62 As mentioned in Part 4 of this Report dealing with strategies which have led to a reduction in the Government's annual public transport subsidy, it will be important for the PTC to take effective action in 2 key areas, namely:

- successful implementation of the automatic ticketing system; and
- development of a strategy to control and accurately monitor fare evasion within the automated ticketing environment.

8.63 Part 4 also stated that these issues will be addressed by audit during the course of a separate performance audit, currently underway, which deals specifically with the automatic ticketing system.

Raising the level of patronage

Increasing the use of the public transport system

8.64 Given the significant investment in Victoria's public transport system (valued at over \$4 billion in the PTC's annual report for 1997), it is desirable that efforts are made to encourage maximum use of the system. In launching its strategic vision document, *Transporting Melbourne*, the Government identified an aim to increase public transport patronage by up to 50 per cent over the next 15 years.

8.65 Successive service agreements between the PTC and the Government have required the PTC to achieve "year-on-year" patronage growth in each of its passenger services. This situation complements MetTrain's September 1994 future directions document *MetTrain Towards 2001*, which stated that it was "... committed to increasing efficiency and increasing patronage by achieving very high levels of customer satisfaction".

8.66 Table 8D shows the levels of patronage for suburban train and tram services and for V/Line Passenger over the period 1992-93 to 1996-97. These levels have been estimated by the PTC on the basis of passenger surveys and ticket sales.

TABLE 8D
PUBLIC TRANSPORT PATRONAGE LEVELS, 1992-93 TO 1996-97
(millions of passenger boardings)

	1992-93	1993-94	1994-95	1995-96	1996-97
MetTrains	105.9	100.9	105.4	109.2	112.6
MetTram	100.9	104.0	108.8	114.2	115.4
V/Line Passenger	6.2	6.4	7.0	7.2	7.3
Total	213.0	211.3	221.2	230.6	235.3

Source: Annual Reports of the Public Transport Corporation.

8.67 The information compiled by the PTC, as presented in Table 8D, shows that patronage levels on trams and trains in Victoria have increased progressively during the reform program. In this regard, the total number of passengers carried in 1996-97 was about 10 per cent higher than the position in 1992-93 and, according to the PTC, is now at its highest level since 1975-76.

8.68 The increase in V/Line Passenger patronage shown in Table 8D was partly due to holiday and weekend packages and special initiatives such as the hiring of trains to private organisations.

8.69 Audit found that, during the past 5 years, the PTC's service operators have focused primarily on cutting costs and improving services, which reflected an intention to rebuild patronage through providing a more reliable system. However, with some minor exceptions, the operators have not developed specific strategies designed to increase patronage and utilisation of services. Audit acknowledges that to a large extent management information has been deficient in providing the necessary information on which to design strategies.

8.70 It is only recently that limited marketing efforts have been made to build on the strengths of public transport as a means of increasing patronage. An example of recent action was the "Elvis" advertisement program which attempted, through the message "*Elvis isn't dead - he's stuck in a traffic jam*", displayed on billboards on major roads, to convey that public transport is more efficient than private car travel.

8.71 During the reform program, the PTC has sought to improve safety standards on trains and at stations through initiatives such as better security lighting, video surveillance and establishment of "premium stations" which provide a higher level of safety. Despite these initiatives, very little marketing of the improved safety standards on public transport at night has taken place. In addition, little marketing emphasis has been placed on the inherent safety of trams.

8.72 In developing strategies to increase public transport patronage, it will be important to determine the reasons:

- why many passengers like using public transport, such as stress-free travel, and to develop marketing strategies around those reasons; and
- why other people use private cars in preference to public transport, such as door-to-door convenience, personal safety and timeliness or negative perceptions formed of public transport, e.g. threatening behaviours, which need to be overcome in order to motivate them to use public transport.

8.73 It would also be helpful to explore marketing opportunities through strategic collaboration with agencies such as Tourism Victoria, Parks Victoria, Melbourne City Council and Arts Victoria.

8.74 The key issue from this point on, in terms of attracting new patronage, will be the formulation and actual implementation of suitable marketing programs for public transport. Such programs need to be aimed at promoting the distinctive advantages of public transport and addressing any factors identified as deterring travellers from using public transport.

Opportunities to attract patronage through the introduction of new fare types

8.75 The imbalance in demand for public transport between peak and off-peak periods results in the system becoming relatively underutilised for much of each day and at weekends. The current ticket structure is not conducive to the promotion of travel in off-peak periods. Strategies such as making available discounted fares in non-peak periods which could be attractive to some travellers, e.g. shoppers, shift workers and employees under flexible working arrangements, have not been implemented.

8.76 Although bus services were not considered in this performance audit, the National Bus Company has introduced specific "bus-only" tickets for use on its buses for short trips. These tickets can be cheaper than buying multi-modal tickets under the existing fare system. In addition, MetTram has short trip tickets which are restricted to use on trams within Melbourne's central business district. Opportunities may exist to extend this concept to suburbs.

8.77 The Government has announced that the multi-modal ticketing system will continue to be used in its planned privatised environment for public transport. The Department indicated to audit that scope will remain for the introduction by private operators of innovative ticket types and fare structures within the new environment.

LEVEL OF FLEET UTILISATION

8.78 The level of fleet utilisation is a critical factor in the provision of highly efficient transport services. Avenues for achieving efficiency in the use of vehicle fleets include:

- maximising the availability of vehicles for service delivery;
- optimising travel speeds of vehicles; and
- planning to exploit technological advances through the acquisition of new vehicles.

Maximising the availability of vehicles for service delivery

8.79 Efficient fleet management is concerned with maximising the percentage of vehicles in the fleet which are available for service delivery, or conversely minimising the size of the fleet needed to support service requirements while performing adequate maintenance activities.

8.80 During recent years, the number of trains and trams available for the provision of services has fluctuated between 80 to 85 per cent of the fleet size. For example, during 1996-97 on average, 125 trains were available from a fleet of 151 trains for suburban services, and around 390 trams from the prime fleet of 472.

8.81 The level of availability in the 2 services is in large part set as a balance between achieving service targets and allowing for vehicles to undergo maintenance and the major refurbishment and design modification projects, as mentioned previously in Part 5 of this Report. When these projects are completed and as a consequence of improved train maintenance and fault management strategies, the PTC anticipates an increase in fleet availability.

8.82 MetTram is aiming to increase the number of trams available for service delivery to 90 per cent (which would be equivalent to around 425 trams) by the end of 1998. If achieved, this situation would allow services to be delivered in future without reliance on reserve trams, which do not meet operational requirements in respect of automatic ticketing.

8.83 With regard to the availability of trains, audit was advised by MetTrains that it also expects to exceed 90 per cent availability by the end of 1998 when the major refurbishment programs are finished. Attainment of this target would allow MetTrains to provide 135 vehicles to meet existing schedule demands (including the provision of sufficient standby vehicles) and provide a capacity to increase peak services in the future.

Optimising travel speeds of vehicles

8.84 The importance of optimising travel speeds of vehicles is illustrated by the fact that quicker travel and shorter trip times allow more services to be provided with fewer vehicles.

8.85 The impact of vehicle speeds on the capacity to deliver services is particularly relevant with tram services, where trip times have progressively increased due to traffic density, a position which is likely to cause a need to increase the number of trams required to maintain services.

8.86 Other factors influencing the travel speeds of trams and trains include:

- the actual speed, acceleration and braking characteristics of vehicles;
- the capability of infrastructure, including tracks, signals and points, to support higher levels of speeds;
- "bunching" in trams involving several trams banked up behind each other with only the front tram full, causing excessive times for passengers to board and alight;
- limitations on the speed of V/Line Passenger trains when operating in the suburban rail system within metropolitan boundaries; and
- a limited ability for MetTrains to provide express services because few lines have a third track.

8.87 If vehicle speeds are to be improved in the future under a privatised environment, the Department of Infrastructure will need to negotiate with private operators on mechanisms to address these factors and to reach agreement upon the funding of any necessary capital initiatives.

Planning to exploit technological advances through the acquisition of new vehicles

8.88 All vehicle fleets have a significant proportion of vehicles which are approaching the limit of their useful lives and will need replacement in coming years.

8.89 As examples, Hitachi trains, which comprise 37 per cent of the suburban train fleet, were purchased between 1972 and 1980; Z class trams, comprising 46 per cent of the tram fleet were acquired between 1975 and 1984; and one-third of V/Line diesel locomotives and 59 per cent of its carriages were manufactured prior to 1960.

8.90 Another factor in relation to V/Line is that 67 per cent of its fleet comprises locomotive and carriage trains which are regarded within the industry as inappropriate for much of V/Line's current business needs. In this regard, the power of a locomotive is vastly underutilised in pulling the small number of carriages needed for InterCity services from the larger regional centres in Victoria. In addition, such trains are not ideally suited for V/Line's InterUrban commuter services to Melbourne. Locomotives are also maintenance intensive and expensive to operate.



*V/Line locomotive train and carriages.
(Reproduced with the permission of the Public Transport Corporation.)*

8.91 In contrast, diesel railcar trains, such as the Sprinter trains which have been introduced in some V/Line services, are capable of providing faster and more frequent services with lower operating and maintenance costs. The advantage of diesel railcar trains in providing more frequent, fast and economical passenger services in regional areas has been recognised in New South Wales and many overseas countries. Diesel railcar trains are far cheaper to run and maintain than locomotives.

8.92 Audit recognises that the refurbishment programs referred to in Part 5 of this Report are aimed at extending the life of the vehicle fleets. However, these programs should be regarded as short-term measures in that much of each fleet will need to be replaced over the next 5 to 10 years by modern, more efficient and economic vehicles in order to improve operational efficiency.

8.93 Despite the growing obsolescence of existing vehicle fleets, audit established that the PTC did not have a long-term fleet development strategy for any of its services. It is acknowledged that the attention of the PTC has been focused on addressing the objectives of the reform program. However, audit considers that fleet renewal has now emerged as a critical factor in the State's ability to continue to provide a high quality public transport system.

8.94 It is not yet clear how issues such as fleet ownership and the need to replace substantial elements of the fleets within the foreseeable future are to be addressed under the Government's privatisation strategies. Audit was informed by the Transport Reform Unit within the Department of Treasury and Finance that it is likely that private operators will be engaged under fixed-term arrangements at the end of which new operators could be appointed. If these circumstances do eventuate, the establishment of mechanisms, including an overall fleet development strategy, for ensuring continued provision of quality services, utilising modern and efficient vehicles, will clearly be important.

SOUNDNESS OF MAINTENANCE PRACTICES

8.95 It is generally acknowledged by all of the PTC's service operators that, prior to the reform program, there were excessive staffing levels in workshops, poor productivity and a heavy concentration on reactive maintenance as distinct from preventative maintenance. In addition, minimal attention was given to the need to return vehicles to active service as soon as possible.

8.96 The Auditor-General's *Report on Ministerial Portfolios*, May 1992, included the results of a major audit of the management of workshops within the PTC. In relation to maintenance practices, the Report concluded:

- in respect of trains:

"The Corporation needs to resolve the current problems, particularly the level and quality of the rail workshops' maintenance output, if it is to achieve sustained improvement in the reliability of the rail transport system"; and

- in respect of trams:

"The combination of an ageing tram fleet and deficiencies in preventative overhaul maintenance for trams has serious implications in terms of the operations of the tram network. Without a radical change to current management strategies for maintenance of trams, the future reliability of the tram network is uncertain".

8.97 As indicated in Part 4 of this Report, reform action dealing with workshops carried out subsequent to the May 1992 Auditor-General's Report made the greatest contribution (\$75.8 million) to achievement of savings of \$245 million.

8.98 Specifically, the reform program brought about major changes in the management of workshops, the closure and relocation of certain workshops and the outsourcing of maintenance activities previously conducted in-house.

8.99 The problem of an ageing tram fleet, raised in the earlier Auditor-General's Report was largely resolved by retiring the majority of the older W class trams, leaving a relatively modern tram fleet.

8.100 Strategies to improve fleet maintenance processes have been introduced during the reform program in respect of:

- *Reactive maintenance practices*

The reform program has resulted in a shift to focusing on maximising vehicle availability for service from the previous position where vehicles spent long times in workshops. As an example of improved reactive maintenance practice, faulty components in both trams and trains are generally now able to be replaced immediately from serviceable units in stock, with the faulty components repaired or replaced at a later date. As a consequence, vehicles are returned to active service in a much shorter period of time than previously was the case.

- *Fault management*

In order to maintain services to the maximum extent in the event of faults occurring, MetTrains in particular has developed a fault management strategy which allows trains to continue running in many situations where they would previously have been taken out of service. This strategy involves a temporary remedial action, leaving the fault to be addressed at the most convenient opportunity, usually during scheduled maintenance. The procedure is largely reliant on a high level of in-built component backup in trains. For example, a Comeng suburban train has 24 traction motors. If one or more of these motors break down, the train can continue operating without impediment.

A similar approach to fault management has been initiated with respect to trams, although there is limited scope because trams have a much lower level of component backup.

- *Addressing maintenance arrears and undertaking refurbishment projects*

At the start of the reform program, the PTC was forced to initiate major refurbishment projects on its vehicle fleets. Such work had been postponed for some years due to severe budget constraints, and led to a deteriorating position in the reliability and availability of vehicles. In this regard, Z class trams required complete overhauls to restore quality and reliability and bring them to a state where a preventive maintenance regime could be established. Hitachi trains required overhauls to correct structural problems with floors, doors and windows. A major carriage refurbishment program was also commenced for Comeng trains and V/Line Passenger trains.

Further essential maintenance work carried out on all suburban trains included the overhaul of bogies and a door overhaul program to ensure that enhanced safety standards were met for door mechanisms.

Refurbishment activities have contributed to a reduced incidence of faults in the train and tram fleets. When completed, these activities are expected to have extended the life of the fleets by several years. However, after 5 years, most of these programs are yet to be finalised, and re-active maintenance levels remain at a high level due to the level of breakdowns in aged rolling stock.

- *Preventative maintenance*

Regular planned maintenance is a key element of efficient maintenance practices. Prior to the reform program, comprehensive maintenance programs were not established for Victoria's trains and trams, largely because contractual arrangements with vehicle manufacturers had not included detailed plans for servicing and maintenance.

Fleet operations involved minimal preventative maintenance, limited to basic servicing every 20 000 kilometres, without recognition of the need to service major components at specified intervals or to replace key components well before faults or failures could be expected to develop. Vehicles were generally allowed to remain in service virtually until they broke down. In addition, maintenance activities were hampered by a shortage of spare parts due to past initiatives to cut costs by reducing inventory.

The resultant high incidence of breakdowns severely reduced efficiency, with vehicles breaking down frequently and remaining out of service for considerable periods of time.

During 1996-1997, MetTrains began to implement a comprehensive maintenance plan aimed at maximising the availability of vehicles in peak periods through both reducing the number of breakdowns and maximising the extent to which maintenance is performed outside peak periods. MetTram is also establishing similar maintenance regimes.

These improved maintenance strategies are beginning to yield results in terms of reduced incidence of faults and increased vehicle availability. Nevertheless, the incidence of faults is still high in all fleets, as a continuing consequence of the lack of preventative maintenance in prior years coupled with an ageing vehicle fleet. The high level of dependence on reactive maintenance to keep the train fleet running was clearly illustrated during 1997 when industrial action caused routine inspections of trains to be delayed. As a direct consequence, the train fleet began to display a high incidence of breakdowns leading to delays and cancellations of services, and reducing the fleet reliability to such an extent that, at the time of the audit, the PTC had been unable to restore the level of reliability to that which was in place over 12 months ago.

- *Addressing design faults*

The maintenance of all fleets has been adversely impacted by a range of deficiencies in the original design and construction of certain classes of vehicles. By way of illustration:

- Comeng trains, purchased between 1981 and 1989, have been beset by ongoing problems associated with the design of traction control systems, traction motors, doors, brakes, bogies, air conditioners, suspension systems and couplers;
- the tram fleet has suffered from problems with brakes on B and A2 class trams, and doors and power units on A class trams; and
- V/Line Sprinter trains had to be removed from service shortly after their initial introduction in 1991 due to failures to trigger boom gates. Although this problem has been overcome and Sprinter trains have been re-introduced into service, there is a high fault incidence mainly due to unreliable componentry and electrical circuitry.

The PTC has developed modifications which it considers address the major design faults and is currently conducting trials of redesigned traction units in Comeng trains and modified braking systems in B and A2 trams. Audit understands that MetTram no longer considers there are any major design deficiencies that warrant detailed attention. V/Line Passenger is progressively upgrading unreliable components on Sprinter trains

- *Vehicle maintenance histories*

Vehicle maintenance histories are important to record information concerning maintenance plans, all maintenance tasks undertaken and faults occurring on individual vehicles and components.

MetTram introduced, in 1996, a computer-based maintenance history system and is progressively upgrading it to incorporate all relevant information. Audit considered that the system was a significant advancement on the previous systems which did not provide all necessary information for maintenance purposes.

For suburban trains, while several computerised systems exist in respect of different aspects of the maintenance function, these systems are not integrated, and fail to provide simple access to complete information on maintenance and faults for all vehicles in the fleet. Audit understands that MetTrains developed tender specifications for an integrated system. However, with the impending privatisation of transport operations including the division of the MetTrains operations into 2 separate businesses, the tender did not proceed.

8.101 The PTC has made significant progress in introducing preventative maintenance strategies into its fleet management practices and addressing major design flaws which have reduced efficiency. In a future privatised operating situation, it will be important to ensure that public transport continues to benefit from progressive improvements in efficiency which should flow from the PTC's positive achievements.

8.102 In the short-term, it may be attractive for private operators to reduce expenditure on preventative maintenance. However, from the longer-term viewpoint and given that the ownership of the vehicles under franchise arrangements may continue with the Government, it would not be in the Government's interest to allow these vehicles to deteriorate unnecessarily or become prematurely unserviceable.

8.103 In respect of continuing design problems, the potential value which should result from design modifications under trial needs to be taken into account if a decision is taken to include fleets in privatisation strategies. In addition, the cost-effectiveness of any further expenditure on vehicles in respect of outstanding design problems needs to be assessed in the light of the need to replace much of the fleet over the next decade.

8.104 The introduction of computerised, fully integrated maintenance systems for all transport operations would provide considerable benefits in terms of fleet reliability, efficiency and extended useful life. With privatised operations, the use of such systems would enable the Department of Infrastructure to monitor the extent to which private operators are maintaining vehicle fleets in an appropriate manner. This matter will assume particular relevance if the Government retains ownership of the vehicle fleet, in which instance penalty provisions for inadequate maintenance could be included in contractual arrangements.

ADEQUACY OF STAFF ROSTERING

8.105 As mentioned in Part 4 of this Report, a distinctive feature of the pursuit of expenditure savings under the reform program was the magnitude of staff reductions. Despite these reductions, audit was informed by the PTC that there is further scope for productivity gains through renegotiating rostering arrangements.

8.106 Within MetTram, past rostering arrangements have involved drivers having long break periods between 2 shifts, possibly up to 4 hours. MetTram has recognised the potential to increase productivity by redesigning its rosters. It is gradually introducing structural change along with the implementation of the automatic ticketing system. Negotiations are also under way with staff to introduce an employment framework which will reduce break times, permit staff to have increased leisure time at home and allow pay increases without any reduction in actual hours worked.

8.107 Audit was informed by the PTC that opportunities also existed to improve staff management and productivity levels within MetTrains by addressing a number of current practices which hinder efficient staff rostering. Details of some of these restrictive practices are presented below:

- Train drivers traditionally return to their nominated depot for a lunch break. Such travelling time, for which drivers are paid, can be considerable;
- There are limits on how many times per shift a driver can drive a train through the city loop. This agreement arose many years ago due to the health risk arising from the level of noise from Hitachi trains;
- There are limitations to the distance any driver can drive in that a driver cannot cover more than 200 kilometres per day;
- The bulk of driving work must be done during the first half of a shift and must involve a certain percentage of express running;
- Train drivers traditionally do not travel on the same route all day;
- There is an informal "pecking order" among train drivers that has to be respected by rostering staff, e.g., the older more experienced drivers are not rostered for the really early or late shifts; and
- Week-end shifts cannot be changed from an 8 hour to a 6 hour shift, even if rostering indicates that a 6 hour shift would be enough to satisfy schedules.

8.108 The February 1996 consultancy report to the Department of Treasury and Finance on *Reform of the Public Transport Corporation* also found that there were opportunities to reduce costs and improve productivity within public transport services through addressing rostering practices.

8.109 To date, the level of savings which could result from productivity gains from improved rostering arrangements has not been quantified. Also, the extent to which such savings can actually be realised will depend largely upon successful negotiation of appropriate changes to work practices with employees.

8.110 The question of staff rostering will clearly be an issue requiring attention in the development of privatisation strategies.

Part 9

**Planned
privatisation
environment for
public transport
in Victoria**

OVERVIEW

9.1 After having achieved annual savings of \$245 million and largely restoring Victoria's transport system to a safe, reliable and efficient service, the next stage of the Government's public transport strategy involves the privatisation of transport operators. Under this process, franchises will be offered to private operators for periods ranging between 7 and 15 years.

9.2 The Government has expectations that, through innovative strategies and marketing expertise, private transport operators will be able to further reduce costs (and as a consequence the Government's public transport subsidy), improve services, and contribute to the cost of replacing and improving transport infrastructure and rolling stock.

9.3 After 6 years of cost-cutting and rationalisation of operations, particularly with workshops, audit considered there was limited scope for further large savings to be achieved in an environment where a substantial proportion of existing rolling stock will need replacement over the next few years. The ability of private operators to increase patronage and profitability, and at the same time contribute to large capital programs will need to be recognised in contractual arrangements after taking into account the Government's 12 Guarantees for Public Transport Passengers.

9.4 Since the release of the Government's 1996 visionary document, *Transporting Melbourne*, the Department has been directing attention towards the development of comprehensive future plans for the public transport system. The need for such plans is now critical in order to provide a basis for determining the overall priorities for capital investment in the State's public transport system and the level of involvement by private operators in providing the necessary capital.

9.5 Prospective tenderers for franchises will need to be provided with sufficient relevant detail as to the status of the transport system, so that submitted bids accurately reflect the costs to be incurred by them in providing quality services and adequately maintaining the State's public transport assets.

9.6 The content of contracts will largely determine the success of a privatised public transport system. If contracts are not specific enough in setting out the obligations of private operators, the quality of service offered to the travelling public may well suffer. Nevertheless, contracts should not be unduly prescriptive, in order that operators have scope to display innovation in the delivery and nature of services offered to the public.

9.7 Finally, audit has identified 7 main factors which will be critical for attracting new patronage to public transport services. Several of these factors will involve major capital expenditure.

**THE GOVERNMENT'S
PRIVATISATION PLANS FOR PUBLIC TRANSPORT IN VICTORIA**

9.8 The *Rail Corporations (Amendment) Act 1997*, which received Royal Assent in December 1997, provides for the corporatisation of the Public Transport Corporation's (PTC's) tram services and suburban and country passenger train services.

9.9 Under this legislation, MetTrains is to be divided into 2 State business corporations which the Government has named as Hillside Trains and Bayside Trains. MetTram will be similarly restructured into 2 State business corporations to be known as Yarra Trams and Swanston Trams. The Government has announced that the 4 corporations would become operative from 1 July 1998. It is also the Government's intention that the corporatisation of V/Line Passenger take effect from 1 July 1998.

9.10 Around the same time as the Act received assent, the Government announced its plans to proceed with the privatisation of all public transport in Victoria within a short period after the business operations of the PTC have been corporatised. In this regard, it indicated that all 5 corporatised entities would be sold as individual franchises, with re-tendering for each business to occur at the end of the franchise period. Franchise periods are expected to range between 7 and 15 years.

9.11 At the date of preparation of this Report, legislation was before the Parliament to abolish the PTC Board and replace it with an administrator in the lead-up to privatisation.

9.12 The preliminary steps for the planned corporatisation action were occurring at the date of preparation of this Report. In addition, while formal dates for the sale of the 5 businesses to private sector operators have not yet been determined, the Minister has announced that the Government expected the privatisation process to be completed by March 1999.

9.13 A key objective of the Government's privatisation reforms, as outlined by the Minister, is "*to provide the best possible services for public transport users at least cost to taxpayers*".

9.14 On 8 April 1998, the Government announced a 12 point package of guarantees designed to protect passenger rights and improve service quality on Victoria's trams and trains under a privatised transport system. The Government's announcement indicated that these guarantees will be enshrined in legally binding long-term contracts with any future private sector operators. Appendix A of this Report sets out the 12 guarantees provided by the Government.

9.15 The Government's final position on the future responsibility for and ownership of infrastructure, i.e. tracks, signals, stations etc. within the privatisation framework has not yet been determined.

9.16 However, with regard to suburban train and tram infrastructure, audit was advised by the Transport Reform Unit within the Department of Treasury and Finance that stations may well be leased to the private operators. Where assets are to be jointly used by more than one operator, the lease will be held by one operator but will contain conditions allowing access by other operators. As an example, the current intention is for Bayside Trains to have responsibility for the city loop, with access to be provided to Hillside Trains.

9.17 Currently, Victorian Rail Track (VicTrack), a government business enterprise established in July 1996 under the *Rail Corporations Act 1996*, has the responsibility for all country rail track other than interstate track. The Minister has recently announced, under the planned privatisation arrangements for V/Line Freight, that V/Line Freight will lease the non-metropolitan intrastate infrastructure from VicTrack and have responsibility for its maintenance, management and train control. The Minister also indicated that V/Line Passenger will have statutory access rights to run its services over the track on fair terms. It is unclear at this stage whether VicTrack will ultimately have ownership of the metropolitan rail track network and control access by the private operators.

9.18 Public transport has been privatised elsewhere in the world, notably Great Britain and the lessons to be learnt from these experiences have been examined by the Government. There are nevertheless certain unique features of Victoria's public transport system, such as multi-modal ticketing which will present challenges in the future environment of multiple private operators.

9.19 Due to the complexities of much of what the Government intends to achieve with the privatisation of transport operations, it is likely to be some time before it is in a position to reach finality on the ultimate shape of privatisation arrangements.

**THE IMPACT OF THE REFORM PROGRAM
UPON THE PRIVATISATION OF THE PUBLIC TRANSPORT SYSTEM**

9.20 Throughout this Report, audit has detailed the impact of the Public Transport Reform Program on Victoria's public transport system. The Reform Program has been very successful in achieving a reduction of at least \$245 million in the Government's annual public transport subsidy, mainly as a result of significant downsizing in the PTC's workforce, rationalisation of workshops, outsourcing of many activities including MetBus operations and the replacement of several country rail services with coach services.

9.21 The Government's 1998-99 budget papers discuss the probable impact of accrual accounting on the recorded level of the annual public transport subsidy. In this regard, the Government estimates that the change from cash-based accounting will mean that the 1998-99 operating subsidy to the PTC is likely to be around \$783 million. This estimate represents an increase of \$580 million over the 1997-98 cash-based subsidy of \$203 million. The Government indicated that this difference does not represent any additional public expenditure and is solely attributable to the accounting change, which requires, inter alia, recognition of capital-related costs of the PTC.

9.22 The consultants considered that "the greatest opportunities for further cost reduction were in tram operations". The introduction of automatic ticketing, involving the replacement of tram conductors, was identified as the predominant source of expected savings. Major savings were also predicted with train operations, mainly in the form of efficiency gains from further staff reductions and elimination of restrictive work practices. The extent to which potential savings in this area can be realised will depend largely upon successful negotiation with employees on appropriate changes to work practices, many of which have been longstanding with the approval of successive governments over many years.

9.23 Further savings in maintenance costs in respect of suburban trains were also projected by the consultants through a reduced reliance on reactive maintenance as the impact of the PTC's improved preventative maintenance strategies becomes evident. The extent to which such further savings may be realised in the future needs to be considered in the context of the substantial changes that have already occurred with maintenance practices within the PTC. As identified in earlier Parts of this Report, these changes have included rationalisation of workshops, improved maintenance practices and progressive refurbishment of fleets. However, the reality is that, with an ageing train fleet with many vehicles approaching the end of their useful lives, a high level of reactive maintenance will continue until the fleet is substantially modernised.

9.24 With regard to capital costs, despite the success of the Reform Program in reducing annual operating costs, there is an increasingly urgent need to inject large capital sums into the public transport system for:

- the replacement of ageing fleets;
- extensions of the suburban system to service outer growth areas; and
- major capital works to replace ageing infrastructure, such as suburban signalling systems, country rail tracks and some power stations for the tram network.

9.25 Relatively few major infrastructure upgrades were undertaken during the Reform Program, and the Government is looking towards private investment from future transport operators under its privatisation plans to service capital needs, particularly in relation to rolling stock replacement.

9.26 Since the release of the Government's 1996 visionary document, *Transporting Melbourne*, the Department has been directing attention towards the development of comprehensive future plans for the public transport system. Such plans are necessary in order to provide a basis for determining the overall priorities for capital investment in the State's public transport system and the level of involvement by private operators in providing the necessary capital.

MANAGEMENT OF FRANCHISES IN THE PUBLIC INTEREST

9.27 The franchising of public transport operations in Victoria has the potential to provide benefits for all parties involved, including the Government, private operators and the public. The transfer of operational control to the private sector must not, however, be looked upon as a panacea for all the problems with the existing system, notably the need for huge capital outlays in the future. The entering into contracts will require high level skills within the Department of Infrastructure in contract management, including the assessing of performance of operators. In this regard, while the Government can contract out most of the risks associated with operating a transport system, the ultimate responsibility for public transport remains with the Government. Accordingly, there is an obligation to ensure that the future planning of public transport in Victoria and the risks and potential exposures arising from private operations are managed by the Government in the interests of the public.

Tendering for franchises

9.28 Potential tenderers for franchises have a right to be provided with as much detail as possible in order to make informed bids. With operations that are to be franchised, the bids will essentially revolve around what level of public subsidy is needed to operate the system while at the same time providing a reasonable return to the operator. Tenderers also have to take into account the Government's guarantees, for instance that fares will continue to be controlled by the Government and are not to increase beyond the rate of inflation. In addition, minimum service levels are to be maintained and any timetable changes will have to be approved by the Minister.

9.29 As mentioned in an earlier paragraph, an additional, but extremely important factor from the viewpoint of tenderers, will be the extent to which the Government will require successful bidders to inject capital into infrastructure and vehicle replacement. Where a franchise term is for a relatively short period of time, e.g. 7 years, it would probably be unreasonable to expect an operator to commit to major capital outlays as such expenditure might not be recovered over such a short period. Nevertheless, the extent to which an operator was prepared to contribute to capital programs, such as station upgrades, would obviously be a factor to be taken into account in the evaluation of tenders.

9.30 In order for future potential tenderers to make informed bids, it will be important for the status and condition of the existing transport network to be clearly identified in tender specifications. Audit considers that key information documented in specifications would include:

- age, condition and capacity of vehicle fleet;
- maintenance arrears in vehicles and infrastructure;
- condition of infrastructure including the assessed impact of any identified deficiencies on services, e.g. how the suitability of signalling and quality of tracks impact on train and tram speeds;
- VicTrack's priorities for upgrading trackwork over the next 5 to 10 years;
- opportunities for service expansion; and
- financial data on individual routes, especially where patronage is low.

9.31 In addition to the above information, which relates primarily to the status of the infrastructure and its capacity to provide improved services, prospective tenderers will need to be thoroughly conversant with the industrial relations environment within the transport system. Over many years, there have been a range of industrial agreements entered into by the PTC, a large number of which have allowed for the trade-off of allowances and work practices in return for wage increases and improved conditions.

9.32 In summary, prospective tenderers will need to be provided with sufficient relevant detail as to the status of the system, so that submitted bids accurately reflect the costs to be incurred by them in providing quality services and at the same time adequately maintaining the State's public transport assets. Failure to provide tenderers with the level of required detail could ultimately jeopardise the success of privatised operations.

Adequacy of contracts

9.33 The content of contracts will also largely determine the success of a privatised public transport system. If contracts are not specific in setting out the obligations of private operators, the quality of service offered to patrons may suffer. Nevertheless, contracts should not be unduly prescriptive in order that operators have scope to display innovation in the delivery and nature of services offered to the public.

9.34 As indicated in Part 8 of this Report, matters associated with concessional travel on public transport will need to be adequately addressed in the contractual arrangements entered into between the Department and private sector providers of public transport services. Determining the level of compensation to operators for concessional travel is likely to be a very difficult task. While accurate information is not currently available on the extent of concessional travel, the PTC has estimated that such travel represents up to 50 per cent of total ticket sales.

9.35 In Part 8, audit identified that some of the options which could be considered in this area include:

- requiring potential operators to specify in their competitive tenders the cost/revenue relationship which would apply to concessional fares in their operational environment;
- negotiating with private sector bidders on an aggregate cost basis with no specific attention to individual cost items such as concessional fares, i.e. the management risk for total costs passes to the successful bidder; or
- directly compensating future operators for all or part of any annual revenue gap arising from fare concessions, based upon a combination of ticket sale analyses, surveys and historical data.

9.36 Audit also mentioned that, irrespective of the final position reached with the successful private sector bidders on the management of fare concessions, it will be important from an accountability perspective that adequate details of the financial arrangements relating to fare concessions are periodically communicated to the Parliament by the Department.

9.37 The Government's guarantees for public transport provide for the retention of the multi-modal ticketing system, regulation of fares and minimum service levels. Given the extent of this regulation, it will be important to ensure that the contractual arrangements provide incentives to private operators to increase patronage in order to improve profitability and thus enhance their capacity to contribute to capital projects.

9.38 Contractual conditions should also ensure that cost reductions by operators as a means of improving profitability are not achieved by compromising on safety standards, maintenance levels or cleanliness. Specifically in terms of safety, it would be a desirable requirement for operators to be accredited by the Public Transport Safety Directorate within the Department of Infrastructure. However, accreditation, quality control mechanisms and self-regulation do not, in themselves, ensure that quality standards are met. Accordingly, contractual arrangements will need to allow for some form of external scrutiny to protect the interests of the travelling public. In Britain, a Regulator-General performs this role, in addition to regulating fares and service standards. Audit was advised by the Transport Reform Unit within the Department of Treasury and Finance that the Department of Infrastructure will be responsible for monitoring compliance by operators with contractual conditions.

9.39 With regard to the delivery of services by private transport operators the contracts should contain suitably stringent performance standards that operators will be expected to meet. These standards could cover punctuality, reliability, limitations on cancellation of services, provision of minimum service levels, cleanliness, safety and co-ordination with other modes of transport provided by other operators, such as buses. Under the Government's public transport guarantees, private operators will face penalties "if their performance slips". However, to date, the details of the performance standards which are to apply to private operators have not been published by the Government.

9.40 With respect to the standards expected to apply to transport operators, the Minister has announced that *"a new customers' charter for public transport will ensure that services will improve"*. Such a charter would be useful in reinforcing to the public their expectations of private sector operators in terms of reliability, punctuality and quality of transport services. A customers' charter could also contain provisions for dissatisfied passengers to report non-compliance with performance standards to the Department of Infrastructure or other appropriate authority for resolution.

9.41 It will also be desirable for the contractual provisions to include targets and incentives for operators to increase patronage and improve services, in line with the Government's overall policy direction.

ATTRACTING NEW PATRONAGE TO PUBLIC TRANSPORT SERVICES

9.42 In addition to achieving reduced operating costs, the Government expects that private transport operators will use their expertise and marketing skills in attracting additional new patronage and thus bring about a further reduction in the Government's subsidy for public transport.

9.43 In audit opinion, the 7 main factors which will be critical for bringing about new patronage growth are:

- extension of the suburban rail system to service outer growth areas of Melbourne;
- modernisation of the existing vehicle fleet particularly in respect of the Hitachi train fleet;
- providing more express trains and additional tracks dedicated to express services from the outer suburbs of Melbourne;
- achieving better quality regional train services through the introduction of more Sprinter-style trains and upgrading tracks to enable higher train speeds;
- improving the reliability and speed of trams through improved traffic management;
- better integration between the various modes of travel and more feeder services involving buses to co-ordinate with train services; and
- systematic marketing to capitalise on the distinctive advantages of public transport over private car travel.

9.44 Other matters to be considered include the restrictions imposed by existing infrastructure such as speed limitations due to antiquated signalling systems.

9.45 Several of the above factors will involve major capital expenditure. The Minister has stated that *"As they go about bidding, private operators will know that their only chance of winning is to guarantee improved services, to undertake new investment and to come up with proposals which provide outstanding value for Victorian taxpayers. Operators will be required to invest in rolling stock"*. It will clearly be important that contract periods are of sufficient length for private operators to be in a position to recoup outlays and to achieve reasonable returns on capital.

USE OF ASSETS BY FRANCHISED OPERATORS

9.46 At the end of the franchise period, it is the Government's intention that the franchise will be retendered. Irrespective of whether the existing operator is successful in retaining the tender, it will be in the Government's interest to ensure that all assets are properly maintained during the franchise period. Questions concerning the maintenance of assets will be especially important where franchises are for a short period, such as 7 years, where there would be a temptation for operators to maximise the use of assets, and undertake minimum maintenance in order to improve their profitability without a commitment to asset replacement.

9.47 Conversely, if operators were to undertake excessive capital expenditure on modernising fleets and infrastructure, the Government could be faced with the prospect at the end of the franchise period with reimbursing the operators for their investment in the event that they do not continue with the franchise.

9.48 The Transport Reform Unit within the Department of Treasury and Finance has indicated that it may be necessary to undertake *engineering audits* to establish the status of all assets to be assigned to franchisees. Such audits would provide protection for both parties regarding the condition of assets, including their estimated useful lives and maintenance requirements. It will also be important for contractual terms to provide for all assets to be properly maintained, for major replacements to be approved by the Government and for independent inspection of assets by the Department of Infrastructure during the course of contracts.

9.49 Prior to the expiration of franchises, contractual conditions will need to provide for engineering checks to be undertaken in terms of determining the overall quality and condition of infrastructure that was leased, in circumstances where control of the assets will revert back to the Government.

Appendix A

**The Government's
Twelve guarantees
for public transport
passengers**

THE GOVERNMENT'S TWELVE GUARANTEES FOR PUBLIC TRANSPORT PASSENGERS, April 1998

Services

Train and tram service levels will be maintained and expanded. The full existing passenger network of operational tram and train lines throughout Victoria will remain in operation throughout the term of the franchise contracts. Any changes to timetables will have to be approved by the Minister for Transport.

Fares

The Government will provide legal guarantees that throughout the term of each franchise, fares will not increase above the rate of inflation.

Concessions

All concessions including pensioners, senior citizens, students, those in need will continue with to be provided.

Ticketing

Multi-modal tickets will continue. The Government will require operators to continue to provide multi-modal Met tickets on Melbourne's trains, trams and buses. Travel on Melbourne's city circle tram route will continue to be free of charge.

Performance

Train and tram operators will be required at least to maintain existing levels of punctuality and reliability, and will face penalty payments if performance slips.

Customer service

Private operators will be obliged to take action if station cleanliness, staff conduct, on-train catering and other key measures do not meet set State performance standards.

Information

To ensure operators are accountable to their customers, information about the punctuality and reliability of trains and trams will be published and updated every 3 months.

Compensation

Private operators will be required to compensate passengers for poor service, through free extensions to long-term periodical tickets.

Overcrowding

Any operator whose trains are too crowded will be required by the Government to take corrective action and will be penalised.

Safety

The Public Transport Corporation's current high safety standards will be maintained, and each new operator will be required to get detailed accreditation from the Department of Infrastructure. Operators will be required to work closely with the police to reduce crime on the public transport system.

Accessibility

The Government is clear that the rights of all passengers should be recognised and respected, and therefore private operators will be required to demonstrate that they are catering properly for people with special needs and disabilities.

Heritage

Melbourne's full operational fleet of 53 W Class trams will be kept in service and these trams will retain its famous livery.

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17 Integrated Education for Children with Disabilities	May 1992
18 Bayside Development	May 1992
19 Salinity	March 1993
20 National Tennis Centre Trust / Zoological Board of Victoria	April 1993
21 Visiting Medical Officer Arrangements	April 1993
22 Timber Industry Strategy	May 1993
23 Information Technology in the Public Sector	May 1993
24 Open Cut Production in the Latrobe Valley	May 1993
25 Aged Care	September 1993
26 Investment Management	November 1993
27 Management of Heritage Collections	November 1993
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