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Select Committee on Train Services

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Mr Shaun Leane – Deputy Chairman
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## List of Acronyms

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<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>DOT</td>
<td>Department of Transport</td>
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<tr>
<td>FMP</td>
<td>Fault Management Protocol</td>
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<td>GAMUT</td>
<td>Australasian Centre for the Governance and Management or Urban Transport</td>
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<td>MOU</td>
<td>Memorandum of Understanding</td>
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<td>MURL</td>
<td>Melbourne Underground Rail Loop</td>
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<td>OPR</td>
<td>Operational Performance Regime</td>
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<td>PSR</td>
<td>Passenger Service Requirement</td>
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<td>PTO</td>
<td>Public Transport Ombudsman</td>
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<td>Public Transport Safety Victoria</td>
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<td>PTUA</td>
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<td>RTBU</td>
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<td>TTA</td>
<td>Transport Ticketing Authority</td>
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Chairman’s Foreword

I am pleased to provide this first interim report of the Select Committee on Train Services. This report deals with the Committee’s initial investigations into the reasons for failures in metropolitan and V/Line train services. On 5 May 2010, the Legislative Council amended the Committee’s terms of reference to include an investigation into the impact of train service failures as a result of the Myki ticketing system. The Committee will present further report/s in relation to the Myki ticketing system up to 30 September 2010.

The Committee’s initial investigations found that Melbourne’s train operators, previously Connex and now Metro Trains Melbourne, together with the regional operator V/Line, have failed to consistently deliver reliable and punctual train services in line with their respective performance targets.

With respect to the metropolitan network, evidence illustrates that reasons for these failures include a lack of investment in infrastructure and fleet of trains, together with inadequate planning for the impact of patronage growth. Specific issues highlighted in this interim report include the high level of delays and cancellations during hot days over recent summers, inadequate air-conditioners on the Comeng trains, inadequate braking systems on the Siemens trains, various rail infrastructure failures, and a dispute between the Rail, Tram and Bus Union and Connex that resulted in service disruptions over the 2008/09 summer.

Many of the reasons for cancellations and delays experienced on the metropolitan network were also experienced on Victoria’s regional rail network. These include problems with infrastructure and rolling stock, extreme weather conditions, and conflicts between V/Line and metropolitan services in the metropolitan rail corridors.

In presenting this interim report, I wish to thank all submitters and witnesses for their invaluable evidence to date. In particular, I pass on appreciation to the Department of Transport for their continued co-operation, together with Metro Trains Melbourne and Connex. Appreciation is also extended to the Members and staff of the Select Committee for their deliberations and work during the course of the Inquiry.

As noted above, the Committee will be investigating the Myki ticketing system over the coming months with a final report to be tabled by 30 September 2010. The Committee may continue to keep a watching brief on matters raised in this first interim report.

Bruce Atkinson, MLC
Chairman
List of Findings

FINDING 3.1
Responsibility for delivery of Victoria's train services is fragmented across a range of Government authorities, private operators and independent statutory bodies. The Committee believes this fragmentation of responsibility may result in uncertainty in terms of the factors leading to and causes of failures in the provision of train services in Victoria.

FINDING 3.2
Evidence illustrates improvements could be made to the delivery of train services in Victoria by further streamlining of public transport governance responsibility.

FINDING 4.1
Melbourne’s train operators, previously Connex and now Metro Trains Melbourne, have failed to consistently deliver metropolitan trains on-time in line with their respective performance thresholds under the franchise contracts. In particular, train punctuality and reliability has been in significant decline over the summer months in 2008-09 and 2009-10.

FINDING 4.2
The largest single categories for cancellations and delays in Melbourne's train services are train and infrastructure faults, together with passenger interchange.

FINDING 4.3
Melbourne’s train network has experienced significant, sustained patronage growth over the past ten years which was not matched with an appropriate increase in services and infrastructure investment during this period. This has caused constraints on network capacity and adversely affected service reliability. The Committee believes the root cause of this failure is poor strategic planning and investment, despite growth being part of the original franchise agreements and the Victorian Government’s policy commitment of 20 per cent of mechanised trips on public transport by 2020.
FINDING 4.4
The Committee believes that planning for medium term growth can be catered for through better use of existing infrastructure, which is potentially the cheapest and fastest way to increase capacity.

FINDING 4.5
The number of trains currently in operation across the metropolitan network is insufficient to meet the existing and projected patronage levels. Despite plans to have 20 per cent of mechanised trips on public transport by 2020, the Government has been slow to invest in expanding the fleet of trains on the metropolitan network.

FINDING 4.6
The introduction of new X'Trapolis trains on the metropolitan network has been slower than projected in the Victorian Government’s transport plans and public announcements. Delays in the roll-out of the new train fleet has therefore not alleviated train delays and cancellations in the first quarter of 2010 as promised by the Victorian Government.

FINDING 4.7
The four different types of trains and the poor design of these trains for current needs is a direct outcome of the lack of strategic planning by successive governments.

FINDING 4.8
The deteriorating condition of Melbourne’s rail track infrastructure, particularly the wooden sleepers which contribute to track buckling in hot weather, have resulted in reduced train speeds leading to further delays and cancellations. The Committee notes the Government’s program of sleeper replacements is expected to alleviate this problem and should be completed as a high priority.

FINDING 4.9
Signal and power infrastructure failures on Melbourne’s train network have been a factor in the cause of service failures. This is particularly the case in hot weather conditions.

FINDING 4.10
The metropolitan rail network’s reliability requires all components to be maintained to the same standards along with an ability to continue operations in extreme conditions. Contingency planning is also required for extreme weather days, such as deploying technicians to key locations, to minimise any disruptions. This was
recognised by Metro in planning for the 2009-10 summer. When there are areas of
the network which have a high probability of failure, longer term solutions should also
be explored to improve train service reliability and punctuality.

FINDING 4.11
On evidence presented to it, the Committee formed the view that the November 2008
Oaks Day service disruptions to northern metropolitan lines were largely due to the
age and poor condition of rail infrastructure. However, the impact on patrons arose
due to the lack of the effective implementation of contingency planning. The service
disruptions and public safety issues could have been avoided if the rail infrastructure
had been upgraded earlier.

FINDING 4.12
Ongoing maintenance of the metropolitan train fleet is required to reduce potential
faults, and improve service reliability. While the Committee did not establish the life of
the current train fleet, considerations for future fleet numbers need to take into
account both the need for new trains to expand capacity and the replacement of
existing rolling stock.

FINDING 4.13
The braking system used on the Siemens trains is not appropriate for Melbourne’s
metropolitan network. Failure to resolve this issue has caused significant
inconvenience and delays to passengers through service cancellations and speed
restrictions imposed on these trains.

FINDING 4.14
A failure by successive Victorian governments to ensure that air-conditioners on the
Comeng train fleet were upgraded to a required standard resulted in significant train
cancellations during the extreme weather conditions in January and February 2009.

FINDING 4.15
The Victorian Government and Metro Trains Melbourne should continue the current
program of upgrades so as to ensure that all metropolitan trains are equipped with
effective air-conditioner systems. These upgrades are required as a matter of priority
to ensure Melbourne’s train commuters receive a reliable service delivery in future
summers, including days of extreme high temperatures.
FINDING 4.16
New metropolitan train timetable changes to be introduced in June 2010 with further changes to be introduced in late 2010 may lead to improved service delivery and less overcrowding on Melbourne’s trains, particularly during peak periods.

FINDING 4.17
It is unclear from the evidence provided by Metro and the Department of Transport as to how new timetables are being planned in conjunction with V/Line services. This further illustrates disadvantages arising from the fragmentation of the management of train services, and in this case, services which share the same rail infrastructure.

FINDING 4.18
There needs to be greater coordination of the metropolitan train timetable with bus timetables to ensure timely and efficient connectivity.

FINDING 4.19
Metropolitan rail timetable changes should enable trains to run at a regular stopping pattern and frequency. Plans to separate metropolitan and V/Line rail services on some lines, as proposed in the Victorian Transport Plan, would support this objective.

FINDING 4.20
Metropolitan train commuters endured a poor standard of service delivery in the 2008-09 summer, when it was claimed that up to 80 per cent of disruptions could have been avoided with greater co-operation between the Rail, Tram and Bus Union and Connex with respect to adherence to the Fault Management Protocols. The dispute and resultant service disruptions occurred contrary to a Memorandum of Understanding signed by Connex and the union.

FINDING 4.21
Better contingency planning is required to minimise service disruptions when they occur. Such plans need to be mindful of the needs of commuters, in particular ill or distressed passengers.

FINDING 5.1
V/Line performance data illustrates that:

- V/Line punctuality and reliability is adversely affected during summer months when heat speed restrictions and other severe weather conditions can impact upon service delivery;
• interurban (short-distance) services are less reliable than intercity (long-distance) services;

• V/Line is consistently required to pay compensation to its customers as a result of not meeting performance targets; and

• the most reliable regional services appear to be on the Ararat line which consistently meets its targets even in the summer months.

FINDING 5.2
Conflicts within the metropolitan network account for one-quarter of all V/Line train delays. These conflicts limit paths available to V/Line services leading to trains running at slower speeds to accommodate metropolitan services.

FINDING 5.3
It is the responsibility of the Department of Transport to alleviate conflicts between V/Line and metropolitan services in the metropolitan corridors through improved planning and greater timetable co-ordination with Metro in order to create additional V/Line paths into Melbourne.

FINDING 5.4
Completion of the Regional Rail Link project is designed to alleviate conflicts between metropolitan and V/Line services on the northern and western lines.

FINDING 5.5
Extreme weather conditions are a contributing factor in cancelled and delayed V/Line train services, particularly during the summer months. Heat speed restrictions and other weather conditions such as storms and bushfires can impact on service delivery. While weather conditions are outside the control of V/Line, it should continue to attempt to minimise service disruptions through early customer notifications, replacement coach services and continued infrastructure and fleet maintenance.

FINDING 5.6
Problems with infrastructure and rolling stock can account for up to 30 per cent of V/Line train delays and cancellations.

FINDING 5.7
Improvements to regional rail infrastructure and fleet are expected to reduce service failures arising from infrastructure and rolling stock.
FINDING 5.8
Driver/crew shortages are a factor in the reasons for V/Line train cancellations.

FINDING 5.9
Victoria’s regional passenger train network has experienced significant patronage growth in recent years. It is expected that further proposed investment in rail infrastructure and fleet, combined with timetable improvements, may alleviate overcrowding issues.

FINDING 5.10
The current institutional arrangements for V/Line result in a co-ordinated multimodal service to regional Victoria.
Chapter One: Introduction

1.1. Establishment of Select Committee

1. On 11 March 2009, the Legislative Council resolved to appoint a Select Committee of seven members to inquire into the factors leading to and causes of failures in the provision of metropolitan and V/Line train services. The Committee was required to present its final report to the Council no later than March 2010. A copy of the establishing resolution is provided in Appendix A.

2. In accordance with this resolution, the following members were appointed to the Committee:
   - Mr Bruce Atkinson (Liberal)
   - Mr Greg Barber (Greens)
   - Mr Damian Drum (Nationals)
   - Ms Jennifer Huppert (ALP)
   - Mr Shaun Leane (ALP)
   - Mr Edward O'Donohue (Liberal)
   - Mr Matt Viney (ALP)

3. The Committee held its first meeting on 31 March 2009 and elected Mr Bruce Atkinson as Chairman and Mr Shaun Leane as Deputy Chairman.

4. The Inquiry process and rules governing the function and powers of the Committee are set out in the establishing resolution together with relevant standing orders and practices of the Legislative Council.

1.2. Initial Extension of Reporting Date

5. On 4 February 2010, the Legislative Council agreed to extend the Committee’s final reporting date to May 2010. The Committee sought this extension to allow for receipt of documents from Metro Trains Melbourne (Metro) and to conduct further public hearings.
1.3 Extension of Terms of Reference and Reporting Date

6. On 5 May 2010, the Legislative Council resolved to amend the Committee's terms of reference as follows:

That a select Committee of seven members be appointed to inquire into the factors leading to and causes of failures in the provision of metropolitan and V/Line train services, including the impact on those services as a result of the purchase, operation and implementation and oversight by Government of the 'Myki' ticketing system in Victoria, including an examination of performance, costs and integration of the 'Myki' ticketing system.

Further, the Council resolved that the Committee present its final report to the Council no later than 30 September 2010.

7. This first interim report is based on evidence gathered in relation to the initial reference. Further report/s in relation to the Myki ticketing system will be presented up to 30 September 2010.

1.4. Inquiry Process

8. The Committee's Inquiry and gathering of evidence to date comprised three processes:

- call for written submissions;
- conduct of public hearings; and
- call for certain documents.

1.4.1 Written Submissions

9. The Committee advertised its terms of reference calling for written submissions in accordance with the requirements of the establishing resolution. Advertisements were placed in the Age, Herald-Sun, MX, Weekly Times and eight major regional newspapers in mid-April 2009. Written invitations to make a submission were also sent to a wide range of stakeholders, including government agencies, private organisations, public transport academics and user groups.

10. The initial closing date for submissions was 1 June 2009. However, following a number of requests to make a late submission, the deadline was extended
to 17 July 2009. The Committee received a total of 73 written submissions (see Appendix B).

1.4.2 Public Hearings

11. On 21 July 2009, the Committee received evidence from the Department of Transport (DOT) and Connex in the first round of public hearings.

12. Further hearings were held on 22 September, 5 and 6 October and 9 December 2009. Witnesses for these hearings were selected by the Committee based on written submissions received and the need to gather evidence from other key stakeholders and experts in the delivery of train services and related matters.

13. Following the commencement of a new metropolitan train operator, Metro Trains Melbourne (Metro) on 30 November 2009, and the appointment of a new Minister for Public Transport in January 2010, the Committee conducted a further day of public hearings on 2 March 2010 with evidence received from Metro, the Minister for Public Transport, and Department of Transport.

14. A full list of witnesses who have appeared before the Committee to date is provided in Appendix C. Full transcripts of public hearings, answers to question taken on notice and copies of all written submission are located on the Committee’s website: www.parliament.vic.gov.au/council/trainservices/

1.4.3 Request for Documents

15. In addition to evidence received in written submissions and public hearings, the Committee requested a number of documents and data from the Department of Transport, Connex and Metro. These documents included:

- a list of all delayed and cancelled Connex services over the six month period from 1 October 2008 to 31 March 2009;
- a Weekly Operational Notice dated 12 May 2009, detailing the temporary speed restrictions in operation on all Connex and V/Line tracks;
- Connex and V/Line monthly performance reports to the Department of Transport for the six month period 1 October 2008 to 31 March 2009;
- train loading surveys for November 2008 and May 2009;
Memorandum of Understanding (MOU) signed by Connex and the Rail, Tram and Bus Union (RTBU) in June 2008;

- copy of the collective agreement for Connex staff dated July 2009 for the period 2009-2012; and

- a list of all delayed and cancelled Metro services from 30 November 2009 to 5 February 2010.

1.4.4 Focus of Initial Investigations

16. The original terms of reference for this Inquiry did not limit the focus of the Committee’s investigations to a specified period in which failures in the provision of metropolitan and V/Line train services have occurred.

17. While the timing of the establishment of the Select Committee Inquiry followed a period of significant delays and cancellations of Melbourne’s train services over the 2008-09 summer, the Committee’s evidence illustrates longer-term underlying factors leading to a failure in service delivery. These issues are discussed in Chapter Four.

18. The focus of the original Inquiry was also specifically on train services, not public transport more broadly. The Committee therefore did not examine bus or tram services but notes that these forms of public transport, together with road users and pedestrians generally, may impact upon train service delivery.

19. As outlined in Chapter Five, V/Line is responsible for the delivery of passenger and freight transport services in regional Victoria. While the Committee’s Terms of Reference did not preclude an investigation into any potential failures in freight rail services, the evidence received during the Inquiry and focus of the Committee’s investigations has been limited to passenger rail services.
Chapter Two:
Overview of Victoria’s Rail Network History

One interesting picture about the supremely reliable railways around the world in the major cities is that they are largely built for purpose. Singapore and Hong Kong have been built to be large-capacity carriers. Our metropolitan railway is a railway of history and has slowly developed over time and been put under pressure. We still have mixed operations on it with freight trains on it. We are trying to use it for so many things, whereas to build a completely new system built for capacity would have a lot of advantages, although it would be expensive.¹

Prof Graham Currie, Chair of Public Transport, Institute of Transport Studies, Monash University

20. In order to understand existing failures in rail services, it is necessary to briefly outline developments in Victoria’s rail network, including an outline of various State Government transport plans to accommodate passenger growth and to improve infrastructure.

21. Victoria’s rail network consists of four parts:

- the metropolitan network, the majority of which is electrified;
- the country passenger network;
- the standard gauge interstate lines; and
- the freight network, which principally services the grain industry.

22. The boundary between the metropolitan and regional network is amorphous, as the two networks overlap and share the same infrastructure. Further, the boundary between these systems continually changes as the metropolitan area expands. Lines which once operated regional services have been, or are being, electrified and service frequencies increased.

2.1 The Metropolitan Network

23. Melbourne’s rail network began with the opening of the line between what is now Port Melbourne and Flinders Street in 1854, initially operating both passenger and freight services. By 1890 the metropolitan network had expanded to include 18 lines, despite Melbourne only having a population of approximately 500,000. The electrification of the metropolitan network commenced in 1919 and continues today, as the network expands into growth areas.

¹ Prof Graham Currie, Chair of Public Transport, Institute of Transport Studies, Monash University, Transcript of Evidence, 5 October 2009, 141.
24. After reaching a peak in the 1940s, rail patronage declined as car ownership increased. While this decline continued into the 1960s and beyond, the 1969 Victorian Government Transportation Plan predicted that train patronage would increase from 381,679 trips in 1964 to 663,000 in 1985. In reality however, between 1950 and 1980, Melbourne regressed from having one of the highest rates of public transport use in the world to one of the lowest.2

25. The 1969 Victorian Transportation Plan has substantially influenced the State’s current rail network. This plan proposed a number of measures to increase the efficiency and capacity of the network including constructing new metropolitan lines and upgrading rolling stock. One of the principle recommendations adopted from this plan was the construction of the Melbourne Underground Rail Loop (MURL).

26. The MURL was designed to ease commuter congestion at Flinders Street. The loop linked the existing surface-level and elevated lines with four underground lines. The first sod was turned in 1971, with tunnelling commencing in 1972. At the same time, a further viaduct was constructed between Flinders Street and Spencer Street (now Southern Cross) Stations between 1975 and 1978. Power was turned on and testing commenced in 1980 with the loop tunnels and stations opened progressively between 1981 and 1985. Although the loop was essentially built as planned, the additional lines to East Doncaster and between Huntingdale-Ferntree Gully and Frankston-Dandenong were never built. This occurred for a number of reasons including economics and declining patronage. The declining patronage meant that the MURL never operated as proposed in the 1969 Transportation Plan as services were reduced.

27. The 1980 Victorian Transport Study found that equipment used by VicRail was obsolete, noting the main deficiencies included signalling equipment, rolling stock, communications equipment, servicing facilities and staff amenities. This study proposed a number of network changes and upgrades including closing eight lines due to poor patronage while upgrading the remaining system. While only two of the lines were closed, being replaced with a light rail service, upgrades included the commissioning of the Comeng trains in the 1980s. The Comeng trains, still in use, were the first trains on

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the network to have air conditioning for passengers. In Chapter Four, the Committee discusses the operating specifications for the Comeng train air conditioners during extreme heat.

28. In addition to the new rolling stock, multi-modal ticketing was introduced in 1980, making it easier for passengers to transfer between different modes of transport.\(^3\) The patronage decline was arrested in the 1980s, with an increase recorded in 1986. Despite this increase in patronage, transport planning for this period predicted that motor vehicles would continue to be the preferred mode of transport for both individuals and industry because of the greater mobility and access afforded.\(^4\)

29. Following a period of under-investment in Victoria’s train system, a consultancy commissioned by the Government in 1996 suggested that further savings could be realised through the introduction of automated ticketing, more efficient scheduling of services and a program of preventative maintenance on infrastructure. This consultancy report also recommended that transport services should be corporatised to realise further efficiencies. This recommendation was based on experience elsewhere that suggested this would be the most efficient means of improving cost efficiency and service delivery.\(^5\)

30. Initially the metropolitan train network was corporatised in 1998 and divided into two units. In 1999 the Victorian Government awarded franchises to National Express Group Australia and Connex (Veolia Transport) for fifteen years. A ten year contract was also awarded to National Express Group Australia to operate V/Line passenger services. These franchises were to result in improved services, increased patronage and reduced subsidies without a corresponding fare increase. In reality the patronage targets were not initially met by the operators resulting in revenue shortfalls. Although the franchise contracts were revised this did not prevent National Express withdrawing from all its contracts in late 2002. Later, franchises dramatically increased the level of subsidy and removed patronage growth targets.

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\(^3\) Victorian Government, *Written Submission* (56) 7.


Connex subsequently entered into a new franchise agreement taking over control of the entire metropolitan train network in 2004.

31. Sixty-five new six-car metropolitan trains have been delivered progressively since 2002. Another 38 are now being delivered with the first three on track and more in commissioning and testing.

32. Since 2004, metropolitan rail patronage has increased dramatically which has placed considerable pressure on the rail network’s efficiency. Chapter Four details the extent and implications of the recent patronage growth.

33. The current and future provision of rail services has been outlined by the Government in two transport policies – Meeting our Transport Challenges in 2006 and the 2008 Victorian Transport Plan. Both policy documents have sought to improve network efficiency through a number of modernisation and renewal projects. However, there appears to be a lack of consistency in the content of these policies reflecting failures in the strategic planning function.

34. Across both the metropolitan and regional networks there are currently works underway, including:

- upgrading signalling;
- duplicating or triplicating some sections of lines;
- level crossing upgrades and/or removal;
- new rolling stock to be purchased;
- improving or constructing new train stabling facilities; and
- constructing new stations and upgrading existing stations.

35. Projects proposed, underway or recently completed, specifically for the metropolitan network, include:

- construction of up to 50 kilometres of new track, two new stations and station upgrades as part of the Regional Rail Link project;
- construction of five new stations at Caroline Springs, Williams Landing, Lynbrook, and Cardinia Road near Pakenham and Coolaroo;
• construction of additional track near Laverton to create more capacity for services to run along the Werribee line;

• construction of additional track and a new station at Westall to create more capacity for services along the Dandenong line;

• electrification of the rail line to Sunbury;

• extension of the metropolitan network to South Morang with a new station;

• delivery of 38 new X’Trapolis trains with three now on track, three more in commissioning and testing, and more arriving;

• extra track and stabling at Craigieburn to improve the efficiency of services for the northern suburbs;

• construction of Melbourne Metro, a new rail tunnel that will allow 40 additional trains to run on the system every hour, the equivalent of building another 40-freeway lanes in and out of Melbourne;

• electrification of the rail line to Melton;

• extension of the rail network to Cranbourne East with a new railway station; and

• upgrades to both North Melbourne and Southern Cross Stations.

36. In June 2009 the Victorian Government announced that Metro Trains Melbourne (Metro) would take over the management of the metropolitan train network from Connex (Veolia Transport). Metro is a consortium of three organisations – Hong Kong’s MTR Corporation, John Holland Group and UGL Rail. The initial contract is for eight years, with the possibility of a seven year extension. The new franchise agreement increases the amount spent on maintenance by 50 per cent in comparison to the previous agreement. Metro have proposed that train punctuality will be improved and cancellations reduced by the introduction of a proactive and preventative approach to infrastructure and rolling stock maintenance. Metro commenced operation of the metropolitan rail system on 30 November 2009. The Committee notes that financial penalties for failure to meet punctuality targets have been weakened under the new franchise agreement.
2.2 The Regional Network

37. Victoria’s regional rail network was created to transport both people and agricultural products, mainly grain. The regional network expanded progressively, consisting of main lines with several branch lines. By the 1930s most parts of Victoria were connected to the rail network with plans to expand Victoria’s network into the New South Wales Riverina district. However, increasing competition from motor vehicles and declining populations in smaller rural towns caused rail patronage and freight transportation to decline, resulting in the progressive closure of branch lines from the 1950s to a point where these rural lines were virtually eliminated by the 1980s.

38. Although Sprinter trains were introduced into service in the 1990s, generally this period has been described as a period of under investment and service cuts for the regional network. For example, in 1993 regional train services between Sale-Bairnsdale, Shepparton-Cobram, Ararat-Dimboola, and Ballarat-Mildura were discontinued, and replaced with bus services.

39. The Secretary of the Department of Transport commented on the underinvestment in the network infrastructure during this period:

> When the regional fast rail project began — and I know there was a lot of criticism of that project because of its cost — one of the reasons it was so much more expensive was that it was having to make good a decade or more of neglect in terms of maintenance and renewal of the system. We would go out there and we would find every second sleeper was rotten to the core and had to be replaced. That had not been factored into the original costing of regional fast rail, so a lot of the effort in that project was simply about bringing the infrastructure up to modern standards, let alone running it at higher speeds or with higher frequencies or whatever.\

40. Following the introduction of the Sprinter trains, patronage on V/Line services increased from 6,516,000 in 1993-94 to 7,016,000 in 1995-96. This increase has been attributed to the faster speeds that these trains could travel at in comparison to the locomotives previously used. This offered passengers faster and shorter travel times. Further, as the trains were completing their journeys in a shorter time, it became possible to increase service frequencies on some lines.

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6 Mr Jim Betts, Secretary, Department of Transport, *Transcript of Evidence*, 21 July 2009, 25.
41. V/Line services were privatised in 1999 to National Express, one of the metropolitan train franchisees. Franchising arrangements similar to the metropolitan franchises outlined previously were implemented in relation to V/Line passenger services. National Express withdrew from providing V/Line services in late 2002 at the same time it withdrew from its suburban contract. The State Government subsequently resumed operations for V/Line services. Given the impending delivery of the Regional Fast Rail project it was decided to retain V/Line in public control.

42. Since 2000 a number of upgrades have occurred on the regional rail network, following the implementation of the Regional Fast Rail Project including track, sleeper, signal and level crossing upgrades; and the introduction of 38 new VLocity trains (travelling at speeds up to 160km/h).

43. Further improvements to regional train services in recent years include the reopening of the Ararat and Bairnsdale lines and an expansion in weekly services.

44. Further upgrades are proposed or underway for the regional network, as part of the 2006 Meeting our Transport Challenges paper and the 2008 Victorian Transport Plan, including:

- plans to construct a new line separating metropolitan and north-western regional services (Regional Rail Link);
- plans to upgrade the Ballarat, Bendigo, Geelong and Latrobe Valley rail corridors; and
- plans to restore train services to Maryborough.

45. A discussion on regional train services, including details of further improvements is provided in Chapter Five.
Chapter Three: Responsibility for Delivery of Victoria’s Train Services

‘Let me be clear — the government is accountable for the performance of the public transport system. We plan the system, we fund it, we regulate it and we choose the private sector firms with whom we partner. The buck stops here. That does not mean that every train, tram and bus has to be driven by a public servant. But the ultimate accountability is clear and undisputed.’

Mr Jim Betts, Secretary, Department of Transport

46. The public are entitled to a clear understanding of the reasons for train delays and cancellations including who is responsible for ensuring any future service failures are minimised. The above quote from the Secretary of the Department of Transport clearly records it is the Government who is ultimately responsible and accountable for the performance of train services. The Committee’s evidence however, indicates there are a range of responsibilities for the delivery of train services (and the train system more broadly) in Victoria, which are dispersed among various Government and non-government bodies. These bodies include the train operators, Metro Trains Melbourne (previously Connex), and V/Line. Other bodies, such as Public Transport Safety Victoria (PTSV), Transport Ticketing Authority (TTA), Metlink, and the Public Transport Ombudsman also have specific roles and responsibilities within the public transport system.

47. Train delays and cancellations are often seen by the general public as being the fault of the train operators. However, as outlined throughout this report, it is clear the factors leading to service failures will vary, as will responsibilities for performance, depending on the circumstances including whether the service failure was an isolated incident or part of a longer term issue.

48. The Committee notes that when the Government announced in June 2009 that Metro was the successful tenderer to operate Melbourne’s train network for the next eight years, key public transport commentators, including the Public Transport Users Association (PTUA) and transport planning academic Dr Paul Mees, publicly commented that out-going operator Connex had been a scapegoat for service failures. Evidence provided to the Committee by the PTUA, Dr Mees and others, suggests the network failures were instead

1 Ibid, 2.
2 Clay Lucas & Jason Dowling “Safer, cleaner and on time” The Age 25 June 2009
mainly due to lack of Government infrastructure investment and planning (see Chapter Four).

49. In further evidence, Professor Graham Currie, Chair in Public Transport, Institute of Transport Studies, Monash University, held the view that there is no clear evidence to suggest the operator is solely to blame for service failures:

There has been much debate within the media suggesting it is the performance of the rail operator, Connex, which is to blame for the performance problems of the metropolitan railways. In my opinion there is no publicly available information which can be used to either prove or disprove that the rail operator is the cause of these issues.³

50. Professor Currie considered the major problem is likely to be long-term lack of investment in railway infrastructure.⁴

51. This chapter outlines the various roles and responsibilities for the delivery of train services in Victoria and highlights evidence from key public transport academics and interest groups that suggest the delivery of Victoria’s train services is fragmented and would be improved by centralising responsibility into a single transport authority.

3.1 Department of Transport - Public Transport Division

52. Responsibility for the delivery of Victoria’s metropolitan and regional train services ultimately rest with the Victorian Government through the Minister for Public Transport and the Public Transport Division within the Department of Transport.

53. The Department of Transport (previously named Department of Infrastructure) derives its functions and powers from the Transport Act 1983.

Section 2 of the Act states the objectives of the Department are:

(a) to improve the efficiency and effectiveness of transport facilities and networks to meet the needs of the community; and

(b) to ensure that a public transport system is provided in Victoria that is efficient, effective, safe and reliable and has due recognition for the needs and interests of the users of that system and the taxpayers of Victoria; and

³ Prof Graham Currie, Chair in Public Transport, Institute of Transport Studies, Monash University, Transcripts of Evidence, 5 October 2009, 138.

⁴ Ibid.
(c) to ensure the achievement of optimum overall transport outcomes by undertaking integrated transport planning and integrated transport system and service development linked to the overall planning strategies and other policies of the Government.5

54. The Public Transport Division within the Department is responsible for coordinating and monitoring public transport services in Victoria and, together with the Roads and Ports Division, delivers projects and initiatives under the $38 billion Victorian Transport Plan. The Public Transport Division also has a leadership role in developing and improving all parts of the State's bus, train, tram and taxi networks.6

55. As outlined in the previous chapter, the current metropolitan train franchise model was implemented in April 2004. Notwithstanding the Department of Transport Secretary's statement at the start of this Chapter that the Government has ultimate accountability, the Government and the private operator, share specific responsibilities for the delivery of train services. The key responsibilities of the Government, undertaken by the Public Transport Division are:

- ensuring essential community access to public transport services, including for people with mobility impairment;
- managing contracts with public transport operators;
- monitoring performance targets and service standards of public transport operators;
- long term planning for the public transport system, including implementation of the Victorian Transport Plan;
- ensuring the safety of the public transport system, in conjunction with Public Transport Safety Victoria;
- approval of timetable changes and regulation of fares and concessions; and
- development of a new smartcard ticketing system ('Myki').

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5 Transport Act 1983 (Vic).
3.2 **Train Operators**

### 3.2.1 Metro/Connex

56. Chapter Two details the history of the metropolitan train franchise including the commencement of the franchise agreement in 1999, the single-operator Connex franchise from 2004, and the new franchise with Metro.

57. From 30 November 2009, Metro commenced operating Melbourne’s train network with similar responsibilities to the previous operator Connex. Under the franchise agreement, the train operator is responsible for the day-to-day operation of the metropolitan train services in line with the Passenger Service Requirement (PSR). The PSR is a statement of the minimum level of train services that the franchisee is required to operate under the terms of the agreement.

58. The existing agreement stipulates that the operator is obligated to deliver on time performance (no more than 59 seconds early, and no more than 4:59 minutes late), system-wide, of no less than 92 per cent. The operator is also obligated to deliver no less than 98 per cent of scheduled train services, and significantly reduce any time spent by passengers waiting due to a delay, over a 1998 benchmark. Chapter Four outlines the extent to which service delivery outcomes were achieved during the past 18 months.

59. The Government provides financial incentives for the operator to run better services. This is known as the Operational Performance Regime (OPR) and the value of cancellations and each minute of late running vary according to each train service depending on the number of customers using a particular service at a particular time of day, day of the week and direction of travel. The total values each month are compared to a target level in order to determine the extent of penalty or bonus payment. Customers are eligible for compensation if the operator does not meet its target monthly network performance thresholds.7

60. As part of its franchise agreement, the operator is required to submit monthly operational performance reports to the Department of Transport outlining a

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range of performance issues including operations performance, safety, asset management, customer services, and incident reporting.

61. The train operator is also required to publish monthly performance results at railway stations and on the operator’s website. The Department of Transport publishes the monthly *Track Record*, and a more detailed quarterly bulletin, providing information about public transport performance results.

62. Other responsibilities of the operator include:
   - customer service including face-to-face ticket sales, passenger safety and station staff;
   - employment and management of staff;
   - maintenance and cleaning of vehicles, stations and infrastructure;
   - development of new timetables; and
   - marketing of train services.

63. The above list and examples below, demonstrate how the train operator’s responsibilities are often shared or reliant upon the involvement of another body.
   - Infrastructure maintenance is reliant upon Victorian Government investment.
   - New timetables are developed by the operator but approved by the Department of Transport.
   - Train operation safety is regulated by Public Transport Safety Victoria while passenger safety and security is carried out by Metro (formerly Connex) who works in conjunction with the Transit Police Division of Victoria.
   - Marketing of train services is carried out in conjunction with Metlink including sale of tickets.
   - Management of staff is also reliant upon adherence to the collective agreement and support of the Rail, Tram and Bus Union.
64. During a public hearing, Connex Executive Chairman, Mr Jonathan Metcalfe, noted the perceived public confusion over responsibility for train service failures and accepted the operator’s responsibilities:

We recognise clearly what our responsibility is, and that is to operate the system. We are very clear about our duties and our responsibilities to deliver a service, so we are not in the business of blaming others. … I recognise there is a perception that the different parties blame each other. I can assure you that we certainly do not see it that way. We are clear about our responsibilities, and we also put our hands up when we get it wrong. There are times when we get it wrong and we put our hands up and accept that.8

65. In further evidence to the Committee, Metro Chief Executive Officer, Mr Andrew Lezala, noted that the structure of the previous franchise may have made it difficult to identify which party was responsible in the event of a network failure. He advised that the structure under the current franchise is to have one company responsible for all activities.

The previous franchise was structured with three separate companies providing the overall core services – Connex Rail Operations, Mainco Infrastructure Maintenance, UMTL Rolling Stock Maintenance. … To have three separate companies delivering does not always lead to the best outcome when things are not going so well. … In Metro all of those activities – customer service, train operations, cleaning, maintenance, renewals – are in one hand.9

66. Chapter Four discusses how the breakdown of the air conditioners on the Comeng trains during the extreme heat in January 2009 contributed to the failure of train services. In its evidence to the Committee, the Department of Transport commented on the level of responsibility the operator at the time, Connex, had to upgrade its air conditioners.

There is no specific obligation in Connex’s franchise agreement that it must upgrade its Comeng air conditioners; there is, however, an obligation in Connex’s franchise agreement that it should run its services on time and reliably and to minimise cancellations.10

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8 Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009, 46.
9 Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, Transcript of Evidence, 2 March 2010, 255.
10 Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009, 6.
3.2.2 V/Line

67. On 4 May 2007, the Victorian Government assumed responsibility for both the V/Line network and services following the buy-back of the network from Pacific National. V/Line operates as a state-owned entity reporting to the Minister for Public Transport and the Treasurer and operates under a franchise agreement with the Department of Transport.

68. V/Line operate train services along five main regional lines:
   - Bendigo to Swan Hill and Echuca;
   - Ballarat to Ararat;
   - Geelong to Warrnambool;
   - Seymour to Shepparton and Albury-Wodonga; and
   - Gippsland to Traralgon and Bairnsdale.

69. There is also a network of V/Line branded coach services throughout Victoria and into New South Wales and South Australia. Some of these coach services are contracted by V/Line to private operators.

70. In its evidence to the Inquiry, V/Line outlined how it serves three key markets.

   The first is commuters leaving outer lying areas of Melbourne such as Melton and Sunbury, and the main regional cities such as Ballarat, Bendigo and Geelong and the surrounding country townships. The second is the discretionary market, who travel from main regional hubs as well as outer regional areas such as Warrnambool, Bairnsdale and the Wimmera for a range of reasons such as medical appointments, visiting family and friends, study or entertainment. The third market is the Melburnian market — people who want and need to travel to regional Victoria for work, leisure and to see family members.\(^\text{11}\)

71. Similar to the metropolitan operator, under the franchise agreement V/Line is required to provide the Department of Transport with monthly reports on its operations.

72. Chapter Five deals with the performance of Victoria’s regional passenger rail network.

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\(^{11}\) Mr Rob Barnett, Chief Executive Officer, V/Line Transcript of Evidence, 6 October 2009, 230.
3.3 Metlink

73. Metlink was established in 2004 as a private, not-for-profit organisation to deliver marketing and customer information for customers of the Victorian public transport network. The organisation operates under a service agreement with the Department of Transport and is co-owned by Melbourne's train and tram operators with stakeholders including the Director of Public Transport, V/Line Passenger and all metropolitan and regional bus operators through the Bus Association Victoria.

74. In preparation for giving evidence to the Committee’s Inquiry, Metlink outlined its role and responsibility:

On behalf of public transport operators and the Department of Transport, Metlink delivers coordinated and centralised train, tram and bus information to make travelling around Melbourne and Victoria easier. Clear and concise public transport information is available through our multimodal website, online journey planner, one-stop-shop call centre, consistent and integrated signage, awareness campaigns and printed customer information.¹²

75. Metlink's equivalent services are delivered to regional Victoria through Viclink.

76. In October 2009, Metlink’s Chief Executive Officer advised the Committee his organisation’s role will continue under the new franchise arrangement:

It is fully intended that Metlink’s role continue under the new franchises that are about to commence. Our shareholding, currently held by Connex and Yarra Trams, will transfer to the new franchisees semi-automatically. It is a condition of their franchise that they take on the Metlink concept, if you like, and in that sense, shareholding as well. Our function will more or less continue through the new franchises just as it has in the current franchises since 2004.¹³

3.4 Transport Ticketing Authority

77. The Transport Ticketing Authority (TAA) was established in June 2003 with a dual role of overseeing Victoria's Metcard public transport ticketing system contract and to procure and manage the new myki ticketing system.

78. As a body formed under the State Owned Enterprises Act 1992 (SOE Act), the TTA reports to the Minister for Public Transport on transport policy

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¹²  Extract from Metlink 2008 Annual Review, correspondence to Select Committee, 02/09/09.
¹³  Mr Bernie Carolan, Chief Executive Officer, Metlink, Transcript of Evidence, 6 October 2009, 208.
matters and to the Treasurer for matters pertaining to the State Owned Enterprises Act.

79. The Committee invited the TTA to give evidence in relation to its original terms of reference, however the Authority declined the invitation noting it is not responsible for managing or overseeing any public transport services and was not clear on how the Committee’s investigations related to the TTA’s functions. The Authority stressed there is no suggestion that failures in the provision of train services are linked to any aspect of the ticketing systems for those services.14

80. The Committee subsequently accepted the TTA’s decision not to contribute to the initial Inquiry, however notes that a successful public transport ticketing system is a vital component to the success of the overall transport system. The Public Transport Ombudsman’s 2009 Annual Report highlights a common complaint received by its Office relates to ticketing, including faulty tickets and machines, refunds, replacements, information and conditions.15

81. As indicated in Chapter One, the Legislative Council amended the Committee’s terms of reference in May 2010 to include an investigation into impact on train services as a result of the purchase, operation and implementation and oversight by Government of the ‘Myki’ ticketing system in Victoria, including an examination of performance, costs and integration of the ‘Myki’ ticketing system.

82. The Committee will therefore be investigating the role of the TTA, Metlink and the Myki ticketing system in its subsequent report(s).

3.5 Public Transport Safety Victoria

83. The Director, Public Transport Safety (Safety Director) is an independent statutory office established under the Transport Act 1983. Public Transport Safety Victoria (PTSV) exists to support the Safety Director in the performance of the Safety Director's functions. The Safety Director is responsible for administering a range of legislation directed toward the promotion of safety in train, tram and bus operations in Victoria. The Safety

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14 Letter from Mr Gary Thwaites, Chief Executive Officer, Transport Ticketing Authority to Select Committee, 7 September 2009.
Director reports directly to the Minister for Public Transport, however, subject to some limited exceptions, the Safety Director is not subject to the direction and/or control of the Minister.

84. PTSV is responsible for, among other things:

- the safety accreditation of rail and bus operators throughout Victoria;
- monitoring the development, implementation and continuous improvement of operators’ safety management systems; and
- monitoring compliance through a rigorous system of compliance inspections and audits.

85. PTSV also:

- provides specialist advice to the Minister for Public Transport on operational and technical safety issues;
- provides practical guidance to public transport operators on operational and technical matters;
- monitors incident and accident data; and
- represents Victoria in the development of national rail and bus safety legislation that will enable a consistent approach to safety regulation.

86. The Committee received evidence from PTSV in relation to its investigations into rail infrastructure failures on Oaks Day 2008, which is detailed in Chapter Four.

3.6 Public Transport Ombudsman

87. The Public Transport Ombudsman (PTO) was established in 2004 as an independent board with a role to ‘receive, investigate and resolve complaints about the provision of public transport services provided by public transport operators that are members of the Public Transport Ombudsman Scheme’. The PTO itself has no responsibilities in the provision of train services other than in the resolution of individual disputes.

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16 Mr Simon Cohen, Public Transport Ombudsman, Written Submission (No. 25) 1.
88. The current composition of the PTO Board is:

- three Consumer Directors who are appointed by the Minister for Transport and who represent the interests of public transport users;
- three Industry Directors who are appointed by members of the scheme, Bus Association Victoria, Metro (formerly Connex) and Yarra Trams; and
- an independent Chairperson appointed by the Minister for Transport.

89. The major complaints made to the PTO relate to transport infringement notices which are referred to the Department of Transport for action. The other five major complaints relate to:

- infrastructure and rollingstock – complaints about public transport vehicles, stations and tracks, and most commonly in relation to announcements, safety and security, overcrowding and the impact on residents and others of maintenance works and public transport operations;
- authorised officers – complaints about conduct (intimidation, use of force), communication and the exercise of discretion;
- service delivery – complaints about punctuality, cancellations, disruptions, and the failure of operators to pick up or set down passengers;
- customer service officers, station attendants and conductors – with issues about behaviour, passenger safety and security, and the handling of complaints; and
- ticketing – including about faulty tickets and machines, refunds, replacements, information and conditions.\(^\text{17}\)

90. The PTO provided a written submission to the Inquiry outlining its role and highlighting particular matters it has dealt with in relation to train service-related complaints illustrating the importance of providing timely and relevant information to commuters about delays or disruptions. In particular, the PTO gave evidence that compensation codes for delayed public transport services

are quite restrictive, resulting in people who make complaints being dissatisfied where they have been significantly inconvenienced by service disruptions and are not eligible for compensation.

### 3.7 The Rail, Tram and Bus Union

91. The Victorian Branch of the Rail, Tram and Bus Union (RTBU) also has an important responsibility to ensure adherence to operating protocols and agreed efficiency measures. The union represents staff in all aspects of the rail industry (together with trams and buses) including drivers, station staff, signal and track maintenance.

92. As discussed in Chapter Four of this report, a dispute between the RTBU and Connex lead to significant service disruption during the 2008-09 summer. The RTBU has since accepted a new Collective Agreement in which reformed Fault Management Protocols and efficiency measures have been implemented to ensure improved service efficiency.

### 3.8 Governance Issues

93. As illustrated below, there is a body of evidence that suggests the existing responsibility for delivery of train services, including customer support, is fragmented and may be enhanced by integration under a single authority.

94. The fragmentation of the existing system is well illustrated by the various avenues a train customer has when providing feedback or making a complaint.

95. If a customer has a complaint about train services, reliability, security, passenger comfort or personal safety they should contact the train operators. Alternatively, Metlink is also able to receive such complaints.

96. Public Transport Safety Victoria has a responsibility to handle complaints about public transport safety, including operations, infrastructure and incidents. However, in many cases PTSV will advise a complainant to contact the operator in the first instance.

97. If the public have concerns over broader public transport policy and improvements they need to contact the Public Transport Division within the Department of Transport. As outlined in Chapter Four for example, if trains
are cancelled due to failed air conditioners, passengers may have complained to the train operator but the ultimate responsibility for this service failure lies with the Government.

98. Complaints regarding ticketing issues can be directed to Metro and V/Line but also through Metlink. Further complaints are directed to the Public Transport Ombudsman for review.

99. In its submission to the Inquiry, the Metropolitan Transport Forum, a public transport advocacy group representing 18 metropolitan local governments, linked the fragmentation of responsibility with rail service delivery:

At the heart of issues regarding rail services are the institutional structure and arrangements for the responsible authorities. The fragmented nature of rail operations and management presents a confused picture of roles and responsibilities that reduces accountability and constructive engagement. The division into a number of authorities reduces focus on the main role of rail; instead each agency will tend to focus only on its particular charter. These appear poorly integrated within the rail context, let alone interfacing sensibly with other departments such as those concerned with land use planning, health, housing, social welfare or environment.\(^\text{18}\)

100. Dr Paul Mees, Senior Lecturer in transport planning at RMIT, was critical of the franchise system in his evidence to the Inquiry:

They [the franchise agreements of 1999 and 2004] have created confused and complex lines of accountability, along with secrecy arising from commercial-in-confidence issues. The result is that nobody is accountable for delivering a quality rail service.\(^\text{19}\)

101. Dr Mees went on to call for a replacement of the current franchise system with a regional public transport authority, similar to the system that exists in Perth and overseas cities like Zurich and Vancouver.\(^\text{20}\)

102. The Australasian Centre for the Governance and Management of Urban Transport (GAMUT) also believed the existing franchise model lacked accountability and responsibility:

Recognise the failure of the ‘partnership’ and ‘franchising’ privatisation models to provide clear lines of accountability and responsibility for service planning, timetabling or maintenance and capital works programs; and, if private sector

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\(^{18}\) Metropolitan Transport Forum, *Written Submission* (No. 50), 4.

\(^{19}\) Dr Paul Mees, *Written Submission* (No, 18) 4.

\(^{20}\) *Ibid* 5.
involvement in service provision is to continue, develop a more robust ‘subcontracting’ model.21

103. The PTUA further highlighted the need for a central public transport body, again demonstrating the success of the Perth system and those of other cities internationally:

In 2005, a team of experts from the University of Toronto reviewed the factors that contribute to best practice’ in urban transport and concluded that the most critical requirement is effective governance—more important even than finance, infrastructure and urban land-use planning. And not coincidentally, this is borne out when one investigates the management arrangements for public transport in all the cities that have been most successful in growing patronage and mode share in the past two decades — for example Vancouver, Copenhagen, Madrid, and even Perth in Australia.

Common to all these cities is a set of management arrangements for public transport that may be called the Transport Community model, the characteristics of which are:

- a strong, independent public planning authority, with a mandate to deliver service for the benefit of passengers;
- central coordination of routes, timetables and infrastructure planning;
- tight integration of separate transport modes into a single network; and
- procurement of services from public and private operators through ‘gross cost’ (fee for service) contracts.

The essential feature of such an arrangement is that there is one body that bears ultimate responsibility for all aspects of the system: from the state of the infrastructure to the frequency and reliability of service, the cleanliness of vehicles and the level of crowding. While other entities operate the actual services, these entities are contractors, and not franchisees. This is most evident in that when a passenger is dissatisfied with any aspect of the system, it is taken up with the authority, not with the operator.22

104. The PTUA believes the franchise system creates an environment where the operator and the Government can avoid total responsibility for a service failure. The PTUA illustrated its point by reference to the service failures caused by the failed air-conditioners:

Particularly relevant to the deliberations of this Committee is the fact that under franchising, governments and franchisees are free to avoid any difficult issue by passing the buck. Suppose for example that a lot of trains are being cancelled due to air-conditioning failures. The Government argues that the issue is due to inadequate maintenance of air-conditioners and is therefore the operator’s responsibility. The operator argues that the air-conditioners were poorly specified when the rolling stock was procured by the government, and so the problem is the government’s to fix. One or other party may then observe that as the franchise contracts are silent on the matter of air-conditioners, there may be no need for anyone to act at all. Armed with all the legal arguments, the issue can be drawn out until the onset of cooler weather, and then safely buried to

21 Dr John Stone, Project Officer, Australasian Centre for the Governance and Management of Urban Transport (GAMUT) Written Submission (No. 34) 2.
22 Public Transport Users Association Written Submission (No. 32) 6.
both parties’ mutual satisfaction. The only loser from this cosy state of affairs is the passenger, who conveniently lacks any power of intervention.23

105. An August 2009 Senate Committee Report into Investment of Commonwealth and State funds in public passenger transport infrastructure and services commented that:

In evidence to this inquiry the key element of good governance was usually said to be a single regional public transport authority with the power and responsibility to plan and deliver the city’s public transport service in an integrated way under a single brand (whether or not service provision is contracted out).24

106. The Report highlighted evidence from witnesses who also contributed to the Victorian Select Committee Inquiry, including the PTUA, Dr Paul Mees, and Dr John Stone.

107. The Committee believes the existing public transport governance arrangements in Victoria could be streamlined and improved. The recent plans to streamline the role of Metlink and Transport Ticketing Authority highlight the need for less fragmentation.

FINDING 3.1
Responsibility for delivery of Victoria’s train services is fragmented across a range of Government authorities, private operators and independent statutory bodies. The Committee believes this fragmentation of responsibility may result in uncertainty in terms of the factors leading to and causes of failures in the provision of train services in Victoria.

FINDING 3.2
Evidence illustrates improvements could be made to the delivery of train services in Victoria by further streamlining of public transport governance responsibility.

23 Ibid, 7.
Chapter Four: Metropolitan Rail Network Failures

Based on my own experience of planning railways and also from particular experience of the Victorian railway context I believe a major problem has been the long term lack of investment in railway infrastructure. I feel this issue is the principal cause of the punctuality and reliability trends … To this must be added the considerable pressures which have resulted from increased patronage of the railway system.¹

Prof Graham Currie, Chair of Public Transport, Institute of Transport Studies, Monash University

108. Chapter One notes the Committee’s terms of reference are not limited to a particular timeframe or event with respect to causes of failures in train services. Clearly however, the timing of the Committee’s establishment in March 2009 followed a period of significant service failures, particularly on the metropolitan network. These network failures included a series of infrastructure failures on Oaks Day November 2008, failures attributed to industrial action and various operational problems during the last two summers. These specific failures, together with longer term ongoing reasons for service failure are examined throughout this Chapter.

4.1 Recent Cancellations and Delays

4.1.1 October 2008 to March 2009

109. In order to understand the range of reasons for failures in the metropolitan train system, the Committee requested Connex provide it with data relating to train delays and cancellations for a six month period from October 2008 to March 2009. This period included the heatwave in January 2009 and the associated extensive cancellations.

110. Connex provided this information to the Committee with a request that the data would not be released publicly, stating:

This data is collected to assist the running of the rail network and is not suitable for public consumption. In itself, the data does not provide any meaningful analysis as to the root causes of late and cancelled trains. The requested information would prove meaningless, if not misleading, were it to be released publicly or if conclusions were to be drawn based on this data alone.²

¹ Prof Graham Currie, Chair in Public Transport, Institute of Transport Studies, Monash University, Written Submission (No 20) 3.
² Letter from Mr Jonathan Metcalfe, Chairman, Connex to Select Committee, 7 May 2009.
111. The Committee has not released the data publicly based on Connex's request and notes that the formal written submission by Connex provided an analysis of reasons for late and cancelled trains.

112. In broad terms however, the data highlights that the main causes of cancelled and delayed trains were ongoing issues that occur on a daily basis throughout the year, albeit with variations from month to month. To this end, the statistics also illustrate the significant increase in service failures during the summer months of January and February 2009, which are discussed in detail throughout this Chapter.

113. The most common cause of service failure is within the fault classification. For the purpose of data definitions, ‘fault’ includes doors failing to open or close, brake faults/problems, faulty whistle, faulty air conditioner, and faulty coupler. In general, for the six month period, faults accounted for approximately one-quarter of all delays and cancellations across the metropolitan network. However, this proportion increased to over one-third during the problems experienced in January and February 2009.

114. While Connex stressed that no meaningful conclusions could be drawn from the data, the Committee’s evidence throughout the Inquiry and referred to in this Chapter, highlights that train faults, including maintenance and adherence to fault management protocols, remain the major reason for service failures.

115. The second most prevalent cause of delays and cancellations related to passenger interchange. This includes delays with passengers loading or unloading (dwell time), delays caused by large groups such as schools and delays caused by wheelchair traffic. Sections in this Chapter deal with increased patronage growth and network congestion.

116. Generally, the data suggested that the third most prevalent cause of delays to Metropolitan services was identified as ‘V/Line trains’. These delays were caused by either defective trains, the late departure and/or presentation, shortage of trains, and conductor delays, resulting in V/Line missing its timetabled path through the metropolitan network. Conflicts between metropolitan and V/Line services will be discussed in Chapter Five.
Other service failures include the following:

- signal infrastructure failures;
- unruly passengers, damage, trespassers and ill passengers; and
- various other issues such as network congestion and limitations, driver shortage, event congestion and trains not in place.

4.1.2 30 November 2009 to 5 February 2010

Following the commencement of the new metropolitan train operator at the end of November 2009, and further summer service failures in January 2010, the Committee sought similar data from Metro in respect to all delayed and cancelled train services from 30 November 2009 to early February 2010.

Consistent with the above, Metro provided this data with a request that it not be released publicly. Again, the Committee provides the following broad summary of the data.

The data generally reflects the trends shown in the data provided by Connex for the previous summer months. Faults continue to be responsible for approximately one third of service failures, while passenger interchange continues to be the second most prevalent cause of delays and cancellations and V/Line services the next major cause of delays to metropolitan train services.

On 11 January 2010, when the temperature reached 43.6°C, faults were the major cause of delays and/or cancellations to train services. Approximately 40 per cent of all train cancellations on this day related to faulty air-conditioner units. The next largest cause of delays and/or cancellations were caused by speed restrictions and signalling failures.

Metro advised the Committee that its performance on 11 January 2010 was better when compared to the hottest day in 2009.

If we compare last summer with this summer, there were four weekdays that were over 38 degrees last summer. On those days, cancellations averaged 385 per day. The worst day was 30 January, a 45.1 degree day with 730 cancellations. This year we have had three days over 38 degrees. On these weekdays, cancellations averaged 117 and the worst day was 11 January at 43.6 degrees with 247 cancellations. On the day following, 12 January, we were able to field a significant number of the train fleet which that night had been the hottest night on record for 100 years, I believe, but we were able,
through the planning process and the work that had been done with the fault management protocol and the airconditioners to present significantly more trains on the second day, expecting it to be another very hot day, than was the case in the previous summer.3

123. The Committee notes that despite the service delays and cancellations caused by the heat, Metro’s performance for January 2010 resulted in 98.3 per cent of services being operated (target is 98 per cent), and punctuality of 86.9 per cent (target is 88 per cent).4

4.1.3 Service Delivery Outcomes

124. As discussed in the previous chapter, the train operators are required to meet performance thresholds for service reliability and punctuality, with compensation payable to customers when these performance thresholds are not met in any month. The thresholds relate to:

- Punctuality - measured as a percentage of on time arrivals at specified monitoring points.
- Reliability - measured as a proportion of the timetable that is actually delivered by the operators' services.

125. Under the existing franchise agreement with Metro, a train is defined as being 'on time' when it arrives at its destination no more than 59 seconds early and no more than four minutes and 59 seconds late. The previous contract with Connex however used a different definition – trains were 'on time' if they arrived no more than 59 seconds early and no more than five minutes and 59 seconds late. Metro is required to pay compensation when punctuality falls below 88 per cent. The graph below illustrates the Department of Transport’s data using both definitions of ‘on-time’ for comparative purposes. Graph 4.1 highlights that regardless of the definition used, train punctuality generally declines in the warmer months.

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3 Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, Transcript of Evidence, 2 March 2010, 257.
126. Metro is also required to deliver 98 per cent of services. Under the franchise contract, if a train completes a ‘short service’, either only completing part of its trip or bypassing the city loop, this is now included as a failure to deliver a service.

127. Graph 4.2 illustrates that the number of services either not delivered or cancelled tend to increase over the summer. This graph shows the percentage of services not delivered, which means compensation applies when services not delivered exceed two per cent. The spike in services not delivered in January-February 2009 will be discussed in further detail later in this report.
The Committee notes that between October 2008 and April 2010, the train operators (Connex and Metro) have been required to pay compensation on twelve occasions. The only months that compensation was not paid were October 2008, November 2008, December 2008, June 2009, July 2009, August 2009 and September 2009. Alarmingly, this means that approximately two-thirds of the time compensation is being paid because the train operator is unable to meet the designated performance thresholds. The compensation was generally paid because the operator failed to meet the required punctuality level. However, in January and February 2009, due to the extreme heat which resulted in extensive service cancellations, the operator also failed to meet the required reliability level. This suggests that the metropolitan train network is generally only able to offer a reliable and punctual service when the weather is cooler from May to October.

Of further concern is the fact that Metro has failed to meet its 88 per cent punctuality performance targets in each month since taking over the operation of the metropolitan network in December 2009. Metro’s punctuality levels have been 87.2 (Dec 09), 86.9 (Jan 10), 83.4 (Feb 10), 80.5 (Mar 10) and 84.5 (Apr 10). The most recent poor performance for April 2010 was not due to heat-related issues and represents no real improvement since April 2009. The trend of continued poor performance by Metro has occurred despite network improvements and upgrades over the past six months, including the introduction of additional trains.

The Committee notes that Metro is trying to reduce these problems through a number of programs such as preventative maintenance and introduction of passenger attendants at busy city stations during the peak periods. The Committee has been advised that the introduction of additional train services is expected to reduce ‘dwell times’.

**FINDING 4.1**

Melbourne’s train operators, previously Connex and now Metro Trains Melbourne, have failed to consistently deliver metropolitan trains on-time in line with their respective performance thresholds under the franchise contracts. In particular, train punctuality and reliability has been in significant decline over the summer months in 2008-09 and 2009-10.
4.2 Patronage Growth and Network Capacity

4.2.1 Extent and Impact of Patronage Growth

131. In their separate evidence to the Inquiry, the Department of Transport and Connex both highlighted the significant patronage growth experienced on Melbourne’s train network over the last four to five years as a reason for recent service failures. Data referred to in the preceding pages also indicate passenger interchange is a major reason for cancellations and delays.

132. The Engineers Australia *Infrastructure Report Card 2010: Victoria* suggested that Victoria’s metropolitan and intrastate rail networks had experienced significant growth over the last decade due to population growth, rising CBD employment, petrol price fluctuations and the global financial crisis.\(^5\) Taken together these factors have made public transport an attractive transport alternative. Given the above they predict that passenger growth will continue.\(^6\)

133. Connex’s written submission noted that since 1999, metropolitan patronage has grown by over 80 per cent to 214 million per annum whilst the fleet has expanded by only nine per cent.\(^7\)

134. The Victorian Government’s submission also noted:

> The unprecedented scale of the increasing load on the rail system in recent years has put an increasing strain on the system’s performance. Patronage on metropolitan trains has grown by more than 50 per cent in the last four years. This has meant an increase of 26,000 passengers being carried into central Melbourne every morning peak period (and home in the evening).\(^8\)

135. Mr Jim Betts, Secretary, Department of Transport, further commented on patronage growth and the impact of overcrowding on service reliability:

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\(^6\) Ibid, 30.

\(^7\) Connex Melbourne, *Written Submission* (No. 55)15.

Commuters are using the railways by choice and whilst there may be aspects of that service they do not like, there is no sign of any reduction in demand as time passes. To the contrary, we have seen a 50 per cent growth in rail patronage in Melbourne in the last four years, and 70 per cent growth on V/Line. We saw 12 per cent growth in metropolitan patronage in the last calendar year alone. That meant that the railways had to operate 12 per cent more efficiently in one year just to maintain its performance. More people means more overcrowding, which in turn means longer dwell times at stations. Hence it becomes harder to run punctually.9

136. The Department of Transport stated that Melbourne is now Australia’s public transport capital, with higher per capita patronage than any other city and that the rate of growth experienced on the metropolitan train network is leading Australia.10 Connex also highlighted interstate comparisons in patronage growth:

Turning to the issue of patronage growth, this chart (see Graph 4.3 below) shows graphically what has happened. In this particular case it is for the three years up until the end of 2008. What it shows is that compared to other Australian cities and other transport modes we have seen this exceptional level of growth. If we look at the last four years we have grown 47 per cent — from 145 million passenger numbers per year to 214.11

**Graph 4.3: Interstate Comparison of Train Patronage Growth**

![Graph showing patronage growth](image)

Source: Connex Presentation to the Committee, 21 July 2009.

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9  Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009 3.
137. The data in Graph 4.3 illustrates an interstate comparison of train patronage growth only. The Committee did not attempt to benchmark Melbourne’s train service reliability with other jurisdictions and notes there are no universally accepted benchmarks or performance indicators for public transport either within Australia or internationally.

138. The comparative figures used by the Department of Transport and Connex were disputed by public transport academic, Dr Paul Mees. Dr Mees did not dispute that patronage on Melbourne’s trains had increased, however he suggested that other Australian jurisdictions had experienced similar if not greater growth.

I went to the Bureau of Infrastructure, Transport and Regional Economics and ... in financial year 2007 per capita passenger journeys in Sydney were 138 and in Melbourne were 110. So we were nowhere near the Sydney figure. Although the Department of Transport told this Committee that we were the same in 2007 and we have since overtaken them.12

139. While there may be some doubt over the extent of growth in comparison to other jurisdictions it is clear that Melbourne has experienced high growth in recent years. This patronage growth was not confined to the metropolitan network, with V/Line also experiencing growth during this period. As will be discussed in Chapter Five, V/Line attributed the growth to fare decreases in 2007, petrol prices and faster services.13

140. The graphs below show patronage growth and service increases in Melbourne’s train network in recent years.

141. Graph 4.4 illustrates the extent to which patronage growth has increased over the last ten years. While there were modest increases between 1999-2000 and 2003-04, the number of passengers boarding metropolitan trains grew significantly from 2004-05 until 2008-09. Over this ten year period, the total number of passengers boarding metropolitan trains has almost doubled from 124.2 million in 1999-2000 to 213.9 million in 2008-09.

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12 Dr Paul Mees, Transcript of Evidence, 5 October 2009, 87.
13 Mr Rob Barnett, Chief Executive Office, V/Line, Transcript of Evidence, 6 October 2009, 231.
Graph 4.4: Patronage Growth


142. Graph 4.5 below shows the increase in the number of metropolitan train services between 1999 and 2009. Over this period a further 1,563 services have been added to the metropolitan timetable. While this equates to an increase of 14 per cent, given patronage over this same period has increased by 72 per cent, the Committee is not surprised that overcrowding is still occurring on metropolitan trains.

Graph 4.5: Increase in Weekly Train Services

Source: Connex Written Submission to Committee, 15.
143. Patronage growth on Melbourne trains has been attributed to a number of factors including population growth and increased petrol prices:

Population growth in Melbourne is a key factor — 1500 or so people are moving to Melbourne each week. The price of petrol had a very clear impact; the trend really started in 2005 when fuel hit $1 a litre, and that is certainly a factor. Patterns of residential growth, including where people choose to live and where they work, is also a factor. ... there is also a trend now towards people being much more environmentally conscious. There is a much greater awareness that rail travel and public transport travel is significantly more environmentally friendly than using cars and congesting road networks. 14

144. While the steep rise in petrol prices over the past several years has been attributed to increased train patronage, the Department of Transport noted that patronage has continued to grow irrespective of petrol price fluctuations:

Our initial assumption — and I think everybody had this initial assumption — was that this was about petrol price rises. The assumption was that if petrol prices went up, they would stabilise eventually and we would expect patronage growth to return to normal levels. But that has not happened. When petrol prices have gone up, public transport patronage has gone up. When petrol prices have gone down, public transport patronage has gone up. We really are seeing something quite unprecedented. 15

145. In its written submission, Connex noted that patronage growth had caused commuter congestion on both trains and platforms 16 and had also caused punctuality to decline as more people try to board trains causing an increase in the dwell time. 17 Train and platform congestion, leading to increased dwell times, also results in train congestion on tracks.

146. It is noted that metropolitan trains are only deemed to be overcrowded when the average passenger load per six-carriage train over an hour exceeds 798. 18 Clearly, patronage on many of the metropolitan trains in peak hours is well in excess of this figure.

147. The evidence of Connex and the Department of Transport stated that the dramatic growth in patronage was unexpected and unprecedented. Nevertheless, the Government and franchise operator have, over the past years, actively encouraged greater public transport use. The Committee

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14 Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009 45.
15 Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009 3.
16 Connex Melbourne, Written Submission (No. 55) 15.
17 Ibid, 17.
18 Victorian Government, Written Submission (56) 21.
notes that there has been a significant increase in patronage levels since 2004 and it is therefore of concern that the Government has only recently begun to increase investment in new trains following major operational problems in recent summers and the introduction of a new franchise.

148. The Committee received evidence that the growth in public transport usage should not have been entirely unexpected, given that when originally signed in 1999, the franchise contracts were built on patronage growth.\textsuperscript{19} Further, the November 2001 \textit{Growing Victoria Together} policy outlined the Victorian Government’s aim of increasing the proportion of trips in Melbourne taken on public transport as a percentage of travel by motorised means from 9 per cent to 20 per cent by the year 2020.\textsuperscript{20} The Committee notes that in 2008-09 it was estimated that 14.3 per cent of all personal motorised trips in metropolitan Melbourne were taken on public transport.\textsuperscript{21} During this period metropolitan public transport patronage rose by 9 per cent while the number of metropolitan services increased by 0.9 per cent to 142,109 services per week.\textsuperscript{22} Evidence from the Public Transport Users Association highlighted that the predicted patronage growth would require an expansion of the metropolitan train fleet.

\begin{quote}
We know that in 2003 the government drafted a document called Train Plan. They specifically forecast patronage growth, which meant that they were going to need to not just maintain the number of trains that they had but increase them over time.\textsuperscript{23}
\end{quote}

149. The increased role to be played by rail transportation was also emphasised by Metro who advised it aims to double the existing patronage levels on the metropolitan network:

\begin{quote}
Our overall plan is to double the patronage on the railway during the life of the franchise which requires a major increase in the system's capacity …\textsuperscript{24}
\end{quote}

\begin{footnotes}
\item[19] Dr John Stone, Project Officer, Australian Centre for the Governance and Management of Urban Transport (GAMUT) \textit{Transcript of Evidence}, 22 September 2009, 66.
\item[20]\texttt{www.dpc.vic.gov.au/CA256D800027B102/Lookup/GVTBooklet/$file/DPCbrochure.FA.pdf} accessed 12.05.2010 at 10.45 a.m.
\item[21]\texttt{budget.eyemedia.com.au/CA2576BD0016DD83/WebObj/BP2AppB/$File/BP2AppB.pdf} accessed 12.05.2010 at 10.45 a.m.
\item[22]\texttt{budget.eyemedia.com.au/CA2576BD0016DD83/WebObj/BP2AppB/$File/BP2AppB.pdf} accessed 12.05.2010 at 10.45 a.m. Budget Papers, Appendix B p 382
\item[24] Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, \textit{Transcript of Evidence}, 2 March 2010, 257.
\end{footnotes}
150. Metro suggested this objective could be achieved through improving maintenance, stabling facilities, track upgrades, the new trains currently on order and timetable changes. At the same time, Metro has acknowledged that overcrowding will be an ongoing problem, despite new trains being ordered:

Crowding will always be an issue of varying degrees during peak periods, as passenger numbers are expected to continue to increase. Metro is committed to the ongoing review and refinement of all aspects of train travel and introducing measures to make travel comfortable.  

151. Given that the ‘life of the franchise’ is eight years, it is clear that this capacity increase does not depend on the construction of the inner city rail tunnel, which is only now in the planning stages.

152. Following Metro’s evidence that it aims to double rail patronage, the Minister for Transport stopped short of endorsing this target, but re-emphasised that there is expected to be continued strong patronage growth and increased investment in the fleet and infrastructure. The Committee again notes that the Government’s policy of increasing public transport usage by 2020 to one-fifth of all motorised travel will represent a significant increase in rail patronage.

153. In 2008-09 train patronage was 213.9 million, patronage in 2009-10 is anticipated to reach 217.1 million, while the patronage target for 2010-11 is 226.9 million. Given current peak-hour rail services are already close to capacity, the Committee notes that this growth may occur through increasing off-peak patronage and improving peak-hour timetabling.

4.2.2 Network Capacity

154. The Committee’s evidence highlights that service failures are largely a result of rail patronage growth being at a sustained high level without a corresponding level of service growth. In short, a lack of infrastructure and

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26 www.abc.net.au/news/stories/2010/03/02/2834316.htm accessed 13.05.2010 at 3.20 p.m.
27 budget.eyemedia.com.au/CA2576BD0016DD83/WebObj/BP3Ch3DOT/$File/BP3Ch3DOT.pdf accessed 12.05.2010 at 10.45 a.m.
rolling stock investment to meet the high growth has lead to the recent poor standards of Melbourne’s rail network.

155. Of particular interest is the report on Victoria’s infrastructure by Engineers Australia which raised concern over the lack of investment in rail infrastructure:

During the 1990s and early 2000s, there was massive under-investment in railways, closure of rail lines and a decrease in government subsidy for operations and maintenance networks. This lead to a fall in the service levels on many rail lines and a massive backlog of maintenance.28

156. The Eastern Transport Coalition, which advocates for sustainable and integrated transport services across eastern Melbourne, also noted that Government initiatives to increase patronage have not been matched with increased investment:

In terms of the system, we think there is an inability of the system to cope with increases in patronage. The removal of zone 3 has seen a huge take-up of public transport, because that was quite an impost on people in those outer regions. However, we have got a situation now with that rail system capacity underinvestment where travel times are longer, trains are overcrowded and not appropriately maintained and have contributed to making car-based travel relatively more prominent in the east….29

157. The Department of Transport advised the Committee that when it became apparent that the patronage growth would continue, Connex and the Government jointly invested in the network and reviewed operations to expand network capacity.30

158. The Department noted that as patronage levels grow, additional services are required. While adding more trains increases capacity to carry passengers, it reduces the spare capacity for future services. In turn, congestion on the line becomes more difficult to manage, particularly when there are service interruptions such as an ill passenger.31

When the system is operating near the limits of its capacity, any delays rapidly cause knock-on effects for other services. The number of incidents causing disruption to services has remained stable over recent years, but delays measured in Passenger Weighted Minutes (PWMs) have more than doubled.

29 Cr Samantha Dunn, Chairperson, Eastern Transport Coalition, Transcript of Evidence, 22 September 2009 107.
30 Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009, 11.
31 Victorian Government, Written Submission (No. 56) 21 & 31.
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An incident on the system now has a greater “cascading” effect on services across the system than it did when the system was less heavily used.\footnote{Ibid 21.}

159. Although the Government and Connex invested to increase the metropolitan train network’s capacity, this expansion had clearly not kept pace with patronage growth. This was contained in the \textit{Infrastructure Report Card 2010: Victoria} by Engineers Australia which reported that Victoria’s metropolitan train network had reached capacity in many areas.\footnote{Engineers Australia, \textit{Infrastructure Report Card 2010: Victoria} [2010] 33.}

160. The Committee received evidence that better use of existing infrastructure would negate some of the current capacity constraints.

Better use of existing and disused infrastructure could be used to ease congestion problems between metropolitan trains and V/Line trains using the Geelong, Ballarat and Bendigo lines. V/Line trains coming in through Sunshine could use the Bunbury St tunnel cross the Maribyrnong and proceed to South Kensington.

There is room for a third track from Newport to Footscray over most of the easement. In fact there is a disused track over part of the distance. Perhaps there could be tracks from Newport to disused easements along the Maribyrnong.\footnote{Mr Graeme Madigan, \textit{Written Submission} (No. 16) 16.}

161. The Public Transport Users Association agreed with the suggestion that capacity could be increased by as much as 50 per cent from operational changes, such as:

- not changing train drivers at Flinders Street station;
- running more trains from Richmond, Jolimont and North Melbourne Stations direct to Flinders Street, rather than through the city loop, and
- better timetabling to spread peak passenger loads.\footnote{Mr Daniel Bowen, President, Public Transport Users Association. \textit{Transcript of Evidence}, 5 October 2009, 170.}

162. The train system’s capacity could be enhanced if existing infrastructure was utilised more efficiently. Upgrading computer and signalling systems would allow more trains to operate without compromising safety. It was suggested to the Committee that the current system could accommodate trains operating at 2 minute headways in the city, extending to 3-5 minutes on suburban tracks – currently suburban frequencies operate at between 3-15...
minute frequencies.\textsuperscript{36} Existing track, such as freight lines could be utilised during the peak to relieve network congestion. Freight services generally operate outside metropolitan passenger peak periods and are scheduled to operate around metropolitan passenger services without delaying them.\textsuperscript{37} As such there does not appear to be any significant impediment to freight infrastructure being used to deliver passenger services during the peak, which currently occurs in other states.

There is the Bunbury Street tunnel under Footscray station, double track. … If you go out to Footscray station in the middle of peak hour and stand there and look down over the tunnel, you can be there for three-quarters of an hour and not one train goes through in either direction because the peak time for freight trains is generally in the wee hours of the morning, or very late at night. It is a wonderful piece of infrastructure that is there. ‘Ah well’ they say, ‘but we cannot use national rail infrastructure for passenger trains’.\textsuperscript{38}

163. Capacity constraints are particularly acute on the northern lines and at North Melbourne Station.\textsuperscript{39} On this basis the Department of Transport has proposed the construction of the Footscray to Caulfield rail tunnel to provide greater capacity. However, the Committee received evidence that a cheaper way to expand capacity would involve improved project planning and better use of existing infrastructure. The northern group operate on six tracks between North Melbourne and Southern Cross. However, there are a further two sets of tracks which run from Southern Cross to South Kensington which are not used because they are not electrified and do not have platform access at North Melbourne. An additional platform could have been included as part of the North Melbourne Station upgrade, expanding the network’s capacity at minimal cost.\textsuperscript{40}

164. The Committee notes the Victorian Government has proposed to increase capacity of the train network through two main projects, separating metropolitan and V/Line services through the construction of the Regional Rail Link and the construction of a rail tunnel from Footscray to Caulfield for metropolitan trains.

\textsuperscript{36} Mr Bruce Sutherland, \textit{Supplementary Written Submission} (No 5) 1.
\textsuperscript{38} Dr Paul Mees, \textit{Transcript of Evidence}, 22 September 2009, 126.
\textsuperscript{39} Mr Hector McKenzie, Director Public Transport, Department of Transport, \textit{Transcript of Evidence}, 21 July 2009, 6.
\textsuperscript{40} Mr Graeme Madigan, \textit{Written Submission} (No. 16) 15.
Melbourne will soon be at the point where we cannot run more train services on key lines. ... Timetables are being recast to make them simpler and more frequent. New larger trains will be introduced. Key stations are being upgraded and provided with more staff to reduce delays to trains to keep them on time. Signalling is being upgraded and a new train control system will soon be commissioned with improved passenger information systems.

New tracks are being constructed to separate V/Line trains from metro trains and a new tunnel is being planned to expand the capacity at the heart of the rail system and enable all lines to carry their full capacity of trains.  

FINDING 4.3
Melbourne’s train network has experienced significant, sustained patronage growth over the past ten years which was not matched with an appropriate increase in services and infrastructure investment during this period. This has caused constraints on network capacity and adversely affected service reliability. The Committee believes the root cause of this failure is poor strategic planning and investment, despite growth being part of the original franchise agreements and the Victorian Government’s policy commitment of 20 per cent of mechanised trips on public transport by 2020.

4.2.3 Proposed Capacity Expansion (Footscray to Caulfield Rail Tunnel)

165. The Committee received conflicting evidence as to whether the proposed Footscray to Caulfield rail tunnel was required to solve Melbourne’s rail capacity constraints. Dr Paul Mees suggested that double the number of trains could be operated on the existing infrastructure if more efficient practices were used.

In Melbourne, 30 trains per track per hour would allow a total of 240 suburban trains an hour, well over double the 94 currently operated in the busiest hour. Vuchic recommends operating at around 80 per cent of theoretical capacity to maintain reliable operations: this would give 24 trains per track per hour, or 192 per hour across the whole system. This would still enable twice the current service level, and is considerably higher than the 145 suburban trains per hour the Department of Transport estimates would be possible after the proposed Caulfield-Footscray tunnel is built.  

166. Dr Mees highlighted that the proposed Footscray to Caulfield rail tunnel would involve significant engineering issues as the line would need to pass under both Flinders Street Station and the Yarra River. The route of the tunnel through the city would also need to avoid the existing underground

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42 Dr Paul Mees ‘Does Melbourne need another central city rail tunnel’ Written Submission (No 18) Attachment 1, 22.
loop. Consequently, the proposed tunnel would need to be deeper than the existing city loop, which creates problems moving a high volume of people in and out of the station. Dr Mees suggested the tunnel would need to be the equivalent of 10 to 12 stories underground, and as such, passenger interchange would involve passengers using lifts.43

167. Dr Mees further suggested that the $8.5 billion proposed for the Footscray to Caulfield tunnel could be better allocated to other rail projects, enhancing capacity and service reliability in a number of ways.

The $8.5 billion rail tunnel budget alone could pay for:
- elimination of all rail level crossings in greater Melbourne ($3 billion), plus
- new lines to East Doncaster, Rowville (via Monash), Mornington, Aurora, Mernda (via South Morang) and Melbourne Airport ($2 billion), plus
- electrification of lines to Melton (via Caroline Springs, and including track duplication), Sunbury and Cranbourne East, and duplication of single-track sections on the Cranbourne, Hurstbridge, Epping, Lilydale, Belgrave and Altona lines ($1 billion), plus
- doubling the size of the train fleet ($2 billion).44

168. In his evidence to the Committee, the Secretary of the Department of Transport, Mr Betts, suggested that although some may look at the network’s theoretical capacity to suggest there was unused capacity, on a practical level this was not true. He advised that when taken as a whole, certain sections of the network are currently at maximum capacity during the peak hour. Mr Betts acknowledged that the proposed Footscray to Caulfield rail tunnel is not required immediately, as there are projects to access extra capacity where it exists, but planning for the tunnel needs to occur now so that it can come on-line when needed.

... some commentators, particularly academic commentators, make the mistake of looking at the inner part of Melbourne and describing its theoretical capacity and saying, ‘Why can’t you just run more trains?’ The answer is that you cannot isolate a single part of the network and look at that; you have to look at the whole system because you have to look at the middle parts of the network and the outer parts of the network to see what the capacity of those is to actually deliver trains into the inner core.

The key capacity issue that we face at the moment is actually the section of line between Sunshine and Footscray, which is effectively full in the busiest part of the day. You cannot physically run additional trains on that infrastructure, ... We are not saying it is needed now. We are not saying there are not things that

43  Dr Paul Mees, Transcript of Evidence, 22 September 2009, 135.
44  Dr Paul Mees ‘Does Melbourne need another central city rail tunnel’ Written Submission (No 18) Attachment 1, 6.
we can do in the interim to squeeze the last bits of capacity out of the inner part of the system, but in the middle part of the [next] decade that tunnel will be needed, ...  

169. Mr Edward Dotson, a former General Manager of Planning for the Met, the predecessor of the Department of Transport, suggested to the Committee that while there would be a point at which the train system’s capacity would be reached, the proposed Footscray to Caulfield rail tunnel was not required at this point in time. Rather, capacity could be enhanced though more efficient operations:

In my recommendations I said that I thought the planning studies for the rail tunnel should include some analysis of what could be required in the medium term, which I put as 2010 to 2018, in order that the capacity could be increased on this system in parallel with the work being done for the east-west tunnel, and that any such improvements that were found to be feasible, economically viable and not likely to cause undue disruption during implementation and not made redundant by the construction of the tunnel should then be moved to a full feasibility study and business case assessment.46

FINDING 4.4
The Committee believes that planning for medium term growth can be catered for through better use of existing infrastructure, which is potentially the cheapest and fastest way to increase capacity.

4.2.4 Train Numbers and Design

170. The metropolitan train fleet currently comprises 165 six car sets and one three car set. This fleet consists of four train types, being Hitachi (7), Comeng (93.5), Siemens (36), and X’Trapolis trains (29).47 Each train has a different design, layout and generally require different parts and fittings. The 2008 Victorian Transport Plan has proposed to increase the train fleet by up to 70 new trains.

171. A problem with operating so many different types of trains on the metropolitan network is that it increases the amount of training required for both drivers and maintenance staff to both operate the equipment and to correctly identify and fix faults.

45  Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009, 31.
46  Mr Edward Dotson, Transcript of Evidence, 22 September 2009, 92.
47  Connex Melbourne, Written Submission (No. 55) 25.
There are four train types, each with different driver controls, operated on the Melbourne metropolitan network. Train drivers are required to switch between the train types at short intervals. As each train is remarkably different, particularly in the fault display, this can result in misunderstanding of fault reporting and incorrect operation.\(^{48}\)

172. Siemens did advise the Committee that it had undertaken a program to standardise the layout and displays of the driver’s cabs to reduce confusion when drivers switch between different types of trains.\(^{49}\)

173. The Committee received evidence that one of the causes of commuter overcrowding is a lack of trains on the network.\(^{50}\) In order to meet demand to train services, the Victorian Government has contracted to have 18 X-trapolis trains progressively rolled out from late 2009 until 2011, with a further 20 to be delivered after this date.\(^{51}\) The Government has also committed to acquire up to a further 32 ‘new generation trains’ with greater capacity.\(^{52}\)

174. In its written submission, the PTUA suggested that refurbishing the 52 six-car Hitachi trains, rather than retiring them, would have increased the size of the fleet and allowed for more capacity by enabling more train services to operate.\(^{53}\) When the Government predicted several years ago that patronage growth would occur, additional fleet was not ordered at that time. While the new trains currently on order will alleviate commuter overcrowding, it will reduce network capacity as there will be fewer spare paths for trains, potentially impacting on the system’s reliability.\(^{54}\)

175. The PTUA suggested to the Committee that the fleet design also contributed to overcrowding and long dwell times at platforms.

Overall the fleet suffers from an inappropriate design for crowded conditions. Siemens trains have only two sets of doors per carriage side, and an internal layout which encourages passengers to congregate around doorways, which increases delays at platforms. The southern Comeng carriages have similar

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\(^{48}\) Mr Paul Bennett, Director, Siemens Rail Services, Siemens, Transcript of Evidence, 6 October 2009, 219.

\(^{49}\) Mr Paul Bennett, Director, Siemens Rail Services, Transcript of Evidence, 6 October 2009 Siemens 220.

\(^{50}\) Mr Daniel Bowen, President, Public Transport Users Association. Transcript of Evidence, 5 October 2009, 168.

\(^{51}\) Victorian Government, Written Submission (No. 56) 41.

\(^{52}\) Ibid.

\(^{53}\) Public Transport Users Association, Written Submission (No. 32) 15.

\(^{54}\) Prof Graham Currie, Chair in Public Transport, Monash University, Transcript of Evidence, 5 October 2009, 140.
problems, and it is common on both these train types to see passengers boarding and alighting in single file, despite the width of the doorways.

All Comeng and X'Trapolis trains have internal layouts with narrow gangways, further discouraging passengers from moving away from the doorways. Siemens trains and others have a lack of handholds along the carriage, which means those passengers who do move all the way in risk falling if they are unable to find somewhere to hold onto.55

176. While new trains have been ordered, in an attempt to alleviate overcrowding, Connex developed a demonstration train with seats removed. The objective was to create additional standing room for 79 passengers through the removal of 44 seats.56 Some evidence to the Committee questioned the merits of increasing passenger densities and forcing passengers to stand:

… there are elements of it which are going to be difficult perhaps for the public to accept because we are probably looking at higher loads per train and higher numbers of people standing per train but, hopefully, more trains running per hour running faster so the standing time, if it does not increase, can maybe decrease. If you take an average metro system, you get on in the peak and you are standing up and you are very close pressed. That is not what people appear to want currently in the Melbourne system.57

177. The Victorian Transport Plan stated that the first of the new X'Trapolis trains would commence operational service from late 2009.58 After undergoing testing, the first of the new trains was officially entered into service on 31 December 2009, however it only completed two runs before being returned to the Newport rail repair yards as the train was experiencing software problems which meant it was not compatible with the other 29 X'Trapolis trains.

178. While the X'Trapolis trains were to be rolled-out at the rate of one a month,59 the Committee received evidence that the delivery, commissioning, and roll-out of the trains has taken longer than projected by the Government.

Mr O'DONOHUE—So the February train will arrive end of March and then about a month or for commissioning.
Mr LEZALA—Which is the February train?
Mr O'DONOHUE—Train 3.
Mr LEZALA—Right.
Mr O'DONOHUE—So the February train to arrive end of March.
Mr LEZALA—Train 3, end of March.

55 Public Transport Users Association, Written Submission (No. 32) 19.
56 Matt Johnston ‘Commuters get to try new look Connex trains’ Herald-Sun 13.03.2009.
Mr O’DONOHUE—Then a month or so for commissioning, subject to—

Mr LEZALA—Well, train 1 is in service; train 2 is now in commissioning; train 3 will be here by the end of March; train 4—are both cars on the ship or the first half?

Mr TATTON-JONES—The first half.

Mr LEZALA—So mid-April.

179. The Committee understands that the contract for the X’Trapolis trains requires 18 trains be delivered by 31 March 2011 and a further 20 trains be delivered progressively between April 2011 and March 2012. As at May 2010, three of the new trains have entered full revenue service, while a further three are undergoing commissioning. The Committee understands that these three trains should enter full service in June 2010.

180. The Committee notes that the introduction of the new trains was delayed due to several factors. The first train experienced problems with the electronic communication and digital display units, while the second train had to have the floors resurfaced as the flooring had lifted when the train was delivered. The delivery of the third train from Italy was also delayed. Further, the new trains can only enter revenue service once drivers have received training on their operation. This necessitates keeping at least one train out of revenue service to enable this to take place.60

181. Metro advised the Committee that problems and delays are generally experienced when commissioning new trains because, due to the size of the run, trains do not undergo extensive prototyping before they are manufactured. Care is taken over construction of the first couple of trains to ensure that all systems are compatible and operate correctly.61

FINDING 4.5

The number of trains currently in operation across the metropolitan network is insufficient to meet the existing and projected patronage levels. Despite plans to have 20 per cent of mechanised trips on public transport by 2020, the Government has been slow to invest in expanding the fleet of trains on the metropolitan network.

60 Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, Transcript of Evidence, 2 March 2010, 6.

61 Ibid, 268.
FINDING 4.6
The introduction of new X'Trapolis trains on the metropolitan network has been slower than projected in the Victorian Government’s transport plans and public announcements. Delays in the roll-out of the new train fleet has therefore not alleviated train delays and cancellations in the first quarter of 2010 as promised by the Victorian Government.

FINDING 4.7
The four different types of trains and the poor design of these trains for current needs is a direct outcome of the lack of strategic planning by successive governments.

4.3 Infrastructure Failures

182. In addition to a lack of expansion in the rail network capacity, the Committee’s evidence highlights numerous rail infrastructure failures have resulted in train delays and cancellations. These failures have largely been due to further inadequate investment in infrastructure upgrades and maintenance. Given it can take ten to twenty years to deliver new infrastructure, it was suggested to the Committee that such failures indicated a systemic failure to invest in and maintain the rail infrastructure.62

4.3.1 Track Infrastructure Failures

183. The issue of track buckling and breaking was commonly reported as a reason for network failures during the summer of 2008-09.

184. Siemens confirmed to the Committee that the metropolitan track infrastructure was in a poor condition and needed to be upgraded and replaced. In particular, level crossings, points, tracks, sleepers and substations require replacement.63 The Victorian metropolitan network has the highest number of level crossings in comparison to other Australian states. Melbourne has 180 level crossings across the electrified suburban network while in comparison there are two level crossings in the entire

62 Mr Kary Peterson, Manager, Transport, Tourism and Transport Forum, Transcript of Evidence, 22 September 2009, 76.
63 Mr Paul Bennet, Director, Siemens Rail Services, Transcript of Evidence, 6 October 2009 219.
Greater Sydney area. The Department of Transport advised that the Government has a strategy to identify areas which require upgrading. This approach seeks to obtain maximum benefit from the investment, rather than undertaking a single project such as upgrading every level crossing, which would tie up the entire transport budget for the foreseeable future.

185. Evidence illustrates that as a result of the poor condition of the rail infrastructure, train speeds have been restricted. Reducing the speeds at which trains travel reduces a line’s capacity because it takes trains longer to complete their trip, consequently resulting in fewer trains on the line per hour. As such, while reduced speeds are enforced, the introduction of additional services could be limited.

The poor condition of many sections of track far too often results in a rickety and bumpy ride; … poor track maintenance means that tracks will not be able to sustain an increase in train speeds (which allows more trains per hour to operate) ...

186. Victoria’s rail network generally consists of continuously welded rails. Rails of this type are stronger and offer a smoother ride than jointed track (two tracks bolted together with a plate.) Less maintenance is required with continuously welded rails because there are fewer joints. The rails are secured to sleepers which are surrounded by a ballast of crushed rock. The ballast permits some movement of the track and sleeper in hot and cold weather.

187. Continuously welded rails commonly buckle and/or break as a result of insufficient ballast causing excessive movement, such as when the rail expands in hot weather, or where there is a flaw in the rail or the weld. Evidence suggests that rail breaks and buckles are seasonal, and as such can be anticipated and prevented through extensive inspections and maintenance.

… the rails are deliberately put in tension to avoid buckling as the rail expands with heat. Why they break is normally that there is initially a flaw. It could be there from manufacturing; it could be there from welding; it could be there from manufacturing.
damage to the railhead from train operation. If that is not detected it can grow into a crack and eventually result in a fail of the rail, which is typically termed ‘broken rail’.

The sort of regimes they have to detect that are visual inspections. They would have people walking the track on a scheduled basis. They also run what are called ultrasonic test cars. These are high-rail vehicles, which are road vehicles that run on rail, that actually test the rail with an ultrasonic signal much as a medical ultrasound scan, looking for the flaws prior to them growing into cracks. These are then classified and track maintenance gangs are then scheduled on to do a repair at that site, when they are detected. 69

188. Further evidence suggests that track buckling could be avoided by deep pinning rails and replacing wooden sleepers with concrete sleepers. 70 The Department of Transport reported in its 2008-09 Annual Report that it had commenced a program of sleeper replacement on both the metropolitan and regional networks, with 40,000 sleepers to be replaced in the 2008-09 year and a further 80,000 in the 2009-10 year. 71 The program operated on the basis that on straight sections of track one in five sleepers was replaced with a concrete sleeper, while there was full sleeper replacement on curves. The replacement program was constrained by the cost of a full replacement across the entire network and finite supply of concrete sleepers – the manufacturer can only produce approximately 100,000 concrete sleepers. The program was designed to maximise the benefits across the entire network, which over time would be fully upgraded to concrete sleepers. 72

189. On 22 March 2010, Metro outlined the maintenance it proposed to undertake by the end of June 2010. These works included the replacement of 28,500 wooden sleepers with concrete sleepers. 73

190. While the replacement of wooden sleepers with concrete sleepers will reduce the incidence of track buckles and breaks, the Committee heard evidence from Public Transport Safety Victoria (PTSV) that it will not eliminate this problem entirely.

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69 Mr Chris McKeown, General Manager Safety Systems, Public Transport Safety Victoria, Transcript of Evidence, 6 October 2009, 203.
70 Prof Graham Currie, Chair in Public Transport, Monash University, Transcript of Evidence, 5 October 2009, 143.
72 Mr Norm Grady, Chief Executive Officer, Mainco Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009, 51.
I think the committee has already heard that there is a program of putting low-profile concrete sleepers in place across the system initially based on a one in five replacement strategy. We believe that will assist in keeping these numbers down. I stress and state for the record that that will not eliminate buckled track incidents, but it should significantly reduce the impact of them.\textsuperscript{74}

191. Despite rail buckling being extensively covered in the media over the 2008-09 summer as a cause of train cancellations and delays, data provided by Connex to the Committee suggested only a small percentage of the delays and cancellations during this period were caused by rail buckling.\textsuperscript{75}

\begin{center}
\begin{tabular}{|c|}
\hline
FINDING 4.8
\hline
The deteriorating condition of Melbourne’s rail track infrastructure, particularly the wooden sleepers which contribute to track buckling in hot weather, have resulted in reduced train speeds leading to further delays and cancellations. The Committee notes the Government's program of sleeper replacements is expected to alleviate this problem and should be completed as a high priority.
\hline
\end{tabular}
\end{center}

4.3.2 Signal and Power Infrastructure Failures

192. Train delays and cancellations are also commonly caused by signal and power failures, particularly in warmer weather. Evidence suggests that signalling faults tend to double on hot days.\textsuperscript{76} This is due to overheating of equipment in trackside cabinets and the expansion of metal rails around points which restrict their operation.\textsuperscript{77} This can result in the failure to operate train services and the signalling system.

193. Signal failures can cause train delays and cancellations by requiring trains to slow down or stop for safety considerations in order to avoid collisions. Signals can also be damaged through vandalism and the theft of copper wire, which will be discussed further below, when dealing with vandalism and damage issues.

\textsuperscript{74} Mr Alan Osborne, Director, Public Transport Safety Victoria, \textit{Transcript of Evidence}, 6 October 2009, 196.
\textsuperscript{75} Mr Rowan Barker, Manager, Media and Communications, Tourism and Transport Forum, \textit{Transcript of Evidence}, 22 September 2009, 85.
\textsuperscript{76} Connex Melbourne, \textit{Written Submission} (No. 55) 30.
\textsuperscript{77} \textit{Ibid}. 

194. Overhead powerlines also expand in the heat, and consequently may sag excessively.\textsuperscript{78} Again, this can result in the failure to operate train services.

195. The Committee also heard that sagging of overhead lines can be avoided through installing tensioning weights to regulate the tension in the power lines.\textsuperscript{79} Connex advised the Committee that regular checks and maintenance occurs in relation to the line tensioning equipment.\textsuperscript{80}

196. For example, over December 2009-January 2010 the Glen Waverley line experienced of the following overhead power line failures:

- a pantograph became damaged and short-circuited the overhead powerlines on 2 December 2009;
- one kilometre of overhead line was brought down after becoming entangled in a moving train on 11 January 2010, when temperatures exceeded 40 degrees; and
- overhead lines again became entangled in a train on 14 January 2010, resulting in services being suspended for more than five hours between Glen Waverley and Burnley.

197. While replacement buses were provided by Metro on 14 January 2010, the failures occurred while there was a major sporting event near Kooyong station, and as such it was fortunate that the timing of this particular incident did not result in greater chaos.

198. On 15 January 2010, Metro announced an inquiry into the cause of the repeated failures on the Glen Waverley line.\textsuperscript{81}

199. The metropolitan train network does not have its own High Voltage (HV) power supply. Rather it draws power from the electricity grid via 69 power conversion substations and 51 High Voltage supply points.\textsuperscript{82}

\textsuperscript{78} Ibid, 22.
\textsuperscript{79} Ibid, 30.
\textsuperscript{80} Ibid.
\textsuperscript{81} \url{www.metrotrains.com.au/About-Us/News/Glen-Waverly-line-cleared.html} accessed 07.04.2010 at 9.50 a.m.
\textsuperscript{82} Connex Melbourne, \textit{Written Submission} (No. 55), 30.
200. Evidence indicates that power may be lost due to excessive demand and power distributors undertaking load shedding. This was identified by Connex as one of the greatest threats to the network.  

201. In evidence to the Committee, Connex advised that they were identifying the source of the network’s power and working with the regulators to receive notification or priority in relation to load shedding.

   After the experience of last summer we have started an exercise with DOT to confirm the identity of our feeders and to talk to the regulators about getting some warning about load shedding or at least some priority in load restoration after shedding. ... What response we get from it will depend on the electricity industry. We will argue the case very strongly that we should get priority in load-shedding situations. At the same time, sometimes they cannot control it.

202. Metro advised the Committee that standby generators had been deployed around the network to restore power to the signalling system should the voltage drop below acceptable levels or go out completely. The Committee questions why such seemingly simple solutions have not been implemented previously.

FINDING 4.9
Signal and power infrastructure failures on Melbourne’s train network have been a factor in the cause of service failures. This is particularly the case in hot weather conditions.

FINDING 4.10
The metropolitan rail network’s reliability requires all components to be maintained to the same standards along with an ability to continue operations in extreme conditions. Contingency planning is also required for extreme weather days, such as deploying technicians to key locations, to minimise any disruptions. This was recognised by Metro in planning for the 2009-10 summer. When there are areas of the network which have a high probability of failure, longer term solutions should also be explored to improve train service reliability and punctuality.

83 Ibid, 22.
84 Mr Norm Grady, Chief Executive Officer, Mainco Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009, 45.
85 Metro Transcript p 7 - Lezala
4.3.3 Oaks Day, November 2008

203. A series of critical infrastructure failures caused part of Melbourne’s rail network to shut down on Oaks Day 6 November 2008. The service disruptions lasted for three hours and in addition to affecting the line to Flemington Racecourse, it also affected two metropolitan lines (Craigieburn and Upfield), some V/Line operations and some City Loop services. Some trains became stranded between stations, and due to the loss of power, carriage doors unlocked. A lack of information to passengers resulted in them detraining unsupervised and walking along active rail tracks back to the city. As a result of this incident, several safety investigations were conducted including by the Transport and Marine Safety Investigator and Public Transport Safety Victoria (PTSV). Road users were also affected when malfunctioning boom gates further restricted movements away from the racecourse. This section will not examine in detail the causes and timeline of this event, but rather seek to ascertain whether the age and condition of the rail infrastructure along this corridor contributed to the service failures.

204. The system failure occurred around 4.15 p.m., when commuters were leaving work from the city and many racegoers were attempting to head back into the city from Flemington. Victorian Racing Club attendance figures for Oaks Day 2008 recorded in excess of 89,000 people at the races, of which approximately 40,000 were estimated to have travelled by train.

205. PTSV’s report into the incident found that the disruption was not a result of lack of maintenance and that all maintenance processes had been complied with.86

Mainco demonstrated that they had conducted preventative maintenance activities on the network prior to the spring carnival, … They also deployed field staff on and about the network during the carnival, thus minimising response times to reported network occurrences.87

206. In his report on the incident, the Chief Investigator, Transport and Marine Safety Investigations, found that the wide spread service disruptions resulted from several failures which compounded each other, as outlined below:

- There were two instances of points malfunctioning at Kensington.

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87  Ibid, 11.
CHAPTER FOUR

- A track circuit fault caused a signal at Newmarket to revert to Stop immediately in front of approaching trains, resulting in delays.

- The original points malfunction at Kensington resulted in an empty Flemington bound passenger service being detained. Its pantograph had stopped in a critical position in close proximity to a contact wire ‘air gap’, resulting in it arcing and burning through the overhead wire, causing a widespread system power failure.

- A further points failure at a separate location prevented the resumption of train services.

- A further system short-circuit compounded the overhead power outage.88

207. The Chief Investigator noted that some elements of the fixed infrastructure on the rail corridor were very old or in a degraded condition, preventing their efficient operation under current demands. Several of the infrastructure faults that occurred on Oaks Day had occurred previously:

MainCo data indicates the infrastructure at this key location is susceptible to faults, the causes of which apparently have not been determined and addressed, and therefore to being able to produce significant service disruption with the potential for a negative safety outcome as occurred on Oaks Day.89

208. Under the franchise agreement in operation at the time, Connex proposed asset improvement projects to the Government, with the Department of Transport determining which projects to fund. The Department is under no obligation to fund proposals received and may identify its own projects to fund. The Chief Investigator noted that in successive plans between 2005-06 and 2008-09 Connex listed mechanical interlocking as an area requiring attention, while at various times it also proposed upgrading vital signalling equipment.90


89 Ibid, 40.

90 Ibid, 32.
209. The Kensington signal box dates to 1887 and has not been upgraded to electrical switching, rather it continues to operate using the mechanical interlocking system installed in 1918.\textsuperscript{91} The Chief Investigator noted that nationally, mechanical lever frames have generally been phased out of use.\textsuperscript{92} Given the age of some of the infrastructure, it requires a higher level of maintenance.

The Kensington interlocking is old. The age of critical parts means that a sustained effort is required to maintain the physical plant. ... It should be acknowledged that there are subtle aspects of 'wear and tear' and 'lost motion' that are often characteristic of the ageing of mechanical equipment that cannot always be rectified by the continual replacement of individual parts.\textsuperscript{93}

210. In his report on the incident, the Chief Investigator noted that the Kensington signal box operates using two control panels, one for Kensington and one for Newmarket. The Kensington panel is the older of the two and operates using a different signalling protocol to the newer Newmarket panel. On the Kensington display track circuits are illuminated when the track is not occupied, while on the Newmarket panel the track is illuminated when it is occupied.\textsuperscript{94} As such the Chief Investigator suggested the inconsistent technology could contribute to confusion during peak work periods.

During periods of intense activity there is potential for this inconsistency to impact adversely on the intuitive perception by signallers of the diagram and panel indications and thus on the precision, ease and efficiency of operations within the signalbox.\textsuperscript{95}

211. The signalling system is not only prone to mechanical faults; it may also experience electrical failures. Remedying electrical signal failures is complicated by the fact that signal and points equipment is not standard across the network. There are three corridors within the metropolitan network, of which Kensington is one, where signal power is supplied at a frequency of 110 volt AC supply at 25 Hz. These areas are 'isolated' within longer complete corridors that are supplied at the standard 50 Hz. The Chief
Investigator noted that 25 Hz systems are no longer of general use, making it difficult to replace broken or faulty equipment.\textsuperscript{96}

212. The Chief Investigator also noted that some of the impedance bonds on this rail corridor date back to the introduction of electric signalling in 1923. Impedance bonds both ensure the integrity of the energy circuit for powering trains and play a role in signalling circuitry. Impedance bonds are located at insulated track joints and allow the return of traction current to the substation. The Chief Investigator found that many impedance bonds in use across the network were designed to carry approximately 500A of current, while new devices being installed on the network have a 2000A capacity. Older units are more prone to trigger by other events/phenomena, meaning the signal reverts to ‘Stop’ even though no train has passed, which affects the reliability of train operations.\textsuperscript{97}

213. While the Chief Investigator could not find any indication that the Electric Traction Power Control room (Electrol) contributed to the service disruptions, he suggested it should be included in any assessment of the reliability of the network. Electrol uses a mixture of technologies, some of which may be obsolete.

In this facility a variety of technologies are in existence – some being subject to obsolescence and system support issues. Modern system life … is estimated at 10–15 years, however some parts of the electrical control system in this facility are now over 25 years old.\textsuperscript{98}

**FINDING 4.11**

On evidence presented to it, the Committee formed the view that the November 2008 Oaks Day service disruptions to northern metropolitan lines were largely due to the age and poor condition of rail infrastructure. However, the impact on patrons arose due to the lack of the effective implementation of contingency planning. The service disruptions and public safety issues could have been avoided if the rail infrastructure had been upgraded earlier.

\textsuperscript{96} Ibid, 26.
\textsuperscript{97} Ibid, 29.
\textsuperscript{98} Ibid, 45.
4.4 Train Maintenance Issues

214. The delayed and cancelled services data provided by Connex to the Committee indicated that a major cause of train delays and/or cancellations was train faults and damage. The Committee received evidence from a number of witnesses that faults, not including damage caused by vandalism, could be minimised through a rolling maintenance program.99

215. The Department of Transport suggested that while some of the reported faults may appear trivial, passenger safety is the paramount consideration when determining whether to operate or withdraw a train service.100 Connex advised that when minor faults were reported on trains in service, maintenance occurred on these trains at the end of the day. The purpose of this maintenance was to rectify the fault and have the train in operation for the next day. Each morning, drivers are also rostered to start an hour before their service to undertake a check to ensure there are no faults with safety implications.101

216. Metro advised the Committee that they had introduced a reliability centred maintenance and asset approach, which had proven useful in Hong Kong and which should reduce the number of in-service failures.102 This approach resulted in better recovery of trains following the excessive heat in 2010 in comparison with 2009. After the first day of hot weather in 2009 Connex had 129 trains operating the following day. By comparison after the first day of hot weather in 2010, Metro had 139 trains operating.103

217. In addition to the above maintenance issues, evidence suggests vandalism can lead to train delays or cancellations. Vandalism can range from theft of copper wire from signalling components to smashing train windows. This type of damage usually occurs overnight, resulting in delays the following morning when the failed infrastructure is noticed. The Committee received

99 Mr Geoff Gardner, Written Submission (No 24) 2.
100 Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009, 15
101 Mr Bruce Hughes, Deputy Chairman, Connex Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009 55.
102 Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, Transcript of Evidence, 2 March 2010, 254.
103 Minister for Public Transport, Transcript of Evidence, 21 July 2010, 276.
evidence that the theft of copper wire in particular has been a significant problem.

**FINDING 4.12**
Ongoing maintenance of the metropolitan train fleet is required to reduce potential faults, and improve service reliability. While the Committee did not establish the life of the current train fleet, considerations for future fleet numbers need to take into account both the need for new trains to expand capacity and the replacement of existing rolling stock.

### 4.4.1 Siemens Train Braking Issues

218. Following reports of brakes failing on the Siemens trains causing the trains to slide beyond the designated platform stop, the Committee received evidence with respect to the brake specifications for the Siemens trains.

219. In its evidence, Siemens denied there was a problem with the brakes on the trains.

> Over the last couple of years we have had many people — our own experts, Connex’s experts, the Department of Transport, PTSV, the office of the chief investigator — all looking at the train. We have no systemic problems in the train. In fact we have not got brake failure. There is no overheating of the brake discs, they do not crack, they do not fall off, they are not underrated, the computer system does not go into a spin; this is not a question of a particular train having a fault. This is a question of heightened attention on the Siemens trains. When there is an issue, there is an immediate very strong focus.104

220. The braking problem has been attributed to the wheels slipping when train had poor contact with rail. As such, two possible causes have been identified: the weight of the Siemens trains and the profile of the rail.

221. Given the Siemens trains are the lightest trains in operation on the metropolitan network, it has been suggested that this may contribute to their adhesion/braking problems. PTSV advised the Committee that a number of the slides did not occur when the Siemens trains ran as six-car sets rather than three-car sets.105

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104 Mr Paul Bennett, Director, Siemens Rail Services, Siemens, *Transcript of Evidence*, 6 October 2009, 220.

105 Mr Alan Osborne, Director, Public Transport Safety Victoria, *Transcript of Evidence*, 6 October 2009, 204.
222. The Department of Transport advised the Committee that the weight of the respective trains operated on the Melbourne network are as follows:

<table>
<thead>
<tr>
<th>Train Type</th>
<th>Weight (6 car set)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comeng</td>
<td>Between 250.6 to 277.6 tonnes depending on configuration</td>
</tr>
<tr>
<td>Hitachi</td>
<td>279.6 tonnes</td>
</tr>
<tr>
<td>X'Trapolis</td>
<td>244.2 tonnes</td>
</tr>
<tr>
<td>Siemens</td>
<td>241.0 tonnes</td>
</tr>
</tbody>
</table>

Based on the above figures there does not appear to be a significant weight differential between the X'Trapolis trains and the Siemens trains, yet only the Siemens trains are experiencing low track adhesion leading to rail slides.

223. In its evidence, Siemens suggested that the braking fault was not with the trains but with the network not offering sufficient track adhesion to stop the trains.

Mr BARBER — But you are arguing there is nothing wrong with the functionality of your brakes.
Mr BENNETT — That is right.
Mr BARBER — You are effectively arguing it is on the rail side of the problem.
Mr BENNETT — No, what I am saying is it is the wheel to rail adhesion that is less than needed in order to pull up the trains.
Mr BARBER — Can we just fix the wheel or do we need to fix the rail, and what do we need to fix?
Mr BENNETT — A good start would be to recognise that there are points of low adhesion. All trains are affected by low adhesion. Then we need to look at what can be done on the rail itself in order to improve this adhesion.
Mr BARBER — What sorts of things would you do on the rail.
Mr BENNETT — Grinding and shaping is one thing. Some systems apply sand. This is common in high-adhesion locomotives, for example. Some rail systems around the world have trains that throw sand.\(^{106}\)

224. The other solution to the braking problem experienced by the Siemens trains relates to the train’s adhesion to the rails. Areas of low adhesion can be improved in a number of ways, including the application of ‘Sandite’ a special gel consisting of sand, aluminium and an adhesive to improve the track’s grip,\(^{107}\) or rail grinding. Rail grinding is a process which improves the rail

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\(^{106}\) Mr Paul Bennett, Director, Siemens Rail Services, Siemens, *Transcript of Evidence*, 6 October 2009, 221.

\(^{107}\) Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, *Transcript of Evidence*, 2 March 2010, 277.
profile by removing the wear. Since 2008, 270 kilometres of track have been given a new profile through rail grinding.108

225. Every time a Siemens train is withdrawn from service following a braking failure it potentially affects the operator’s ability to deliver a reliable service. As discussed previously, the current fleet is 165 six-car sets and 1 three-car set. To operate the morning and afternoon peak requires between 144 and 149 trains.109 Given a certain number of trains are taken out of service for scheduled maintenance, the number of replacement trains is limited, ultimately leading to service cancellations.

226. While the introduction of speed restrictions reduced the likelihood of the brakes failing to stop the Siemens train, allowing them to resume operations, the slower speeds meant punctuality declined on services operated by these trains.110

227. The Committee inquired about the specifications of the Siemens trains at the time of purchase.111 Evidence from the Department of Transport advised that at the time the contract for the Siemens trains was signed there were comprehensive specifications attached.112 This was supported by Siemens whose website reported the trains were designed to the specifications agreed to with both the then Department of Infrastructure (now Transport) and National Express, the then operator.113

228. During its public hearing appearance in March 2010, the Department of Transport agreed to provide the Committee with a copy of the brake specifications for the Siemens trains. A letter from the Department and these specifications are provided in Appendix D.

229. While the Committee did not compare the specifications for the Siemens trains to those used on other trains, the Committee notes that the rates are specified on the basis of clean, dry, well maintained and level track. As

109 Ibid, 287.
110 Connex Melbourne, Written Submission (No. 55) 32
111 Minister for Public Transport, Transcript of Evidence, 21 July 2010, 279.
112 Ibid.
113 www.aunz.siemens.com/NewsCentre/2009/Pages/20090317_SiemensTrainsHandlingIssues.aspx accessed 11.01.2010 at 2.00 p.m.
discussed previously, metropolitan services in Melbourne generally operate on aged rail infrastructure and in all weather conditions. Further, the Committee notes the evidence from Siemens Rail Services that there were a few clusters where trains failed to stop, which occurred in poor weather conditions.

I do know there have been a couple of clusters. In particular in poor weather conditions or light rain after dry spells there have been a number of sliding events.  

230. The Committee notes that the Siemens trains are the only type of train experiencing braking problems on the metropolitan network. While part of the problem may relate to lack of maintenance of the network, the Committee has been unable to ascertain why this problem has been confined to these trains only. In order to improve reliability and punctuality, the identification of the cause of the problem and a solution should be a priority for both the Government and Metro.

231. The Committee notes that despite the introduction of permanent speed restrictions on the Siemens fleet, there were further reports in May 2010, of incidents where the brakes failed on these trains.

FINDING 4.13
The braking system used on the Siemens trains is not appropriate for Melbourne's metropolitan network. Failure to resolve this issue has caused significant inconvenience and delays to passengers through service cancellations and speed restrictions imposed on these trains.

4.4.2 Train Air-Conditioning Issues

232. In January 2009, Victoria experienced several days of extreme heat with the maximum temperature in Melbourne reaching over 43°C on three consecutive days from 28-30 January 2009. A week later, on 7 February 2009, the temperature reached 46.4°C.

233. The impact of the heat on the metropolitan system caused the closure of the City Loop along with eight lines and the subsequent cancellation of over 500 services. These service disruptions and cancellations were attributed to a

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114 Mr Paul Bennett, Director, Siemens Rail Services, Siemens, Transcript of Evidence, 6 October 2009, 223.
number of factors, including a failure of train air-conditioning units to cope with the heat and track buckling.

234. The Committee examined the data provided by Connex, which detailed the causes of train service delays and/or cancellations, for the period 26 January 2009 to 31 January 2009. As is demonstrated in Graph 4.6 below, this data suggests that as the temperature rose, the number faults with air conditioning units also rose, while generally there was also a decline in other faults being recorded. The data also illustrates the cumulative effects of the successive days of extreme heat can have on the rail network with 243 cancellations on 28 January, 474 cancellations on 29 January and over 730 on 30 January.

Graph 4.6: Metropolitan Railway Faults and Temperature

![Graph 4.6](image)

Source: Data provided to the Committee by Connex.

235. It appears that three consecutive days over 40°C had a significant flow-on effect on the availability of rolling stock. The consecutive days of extreme heat caused further problems for the air-conditioning units, because it meant that it did not cool down sufficiently in the evening to enable them to reset themselves.

We also need to take into account that this was the first time in essentially 150 years of recorded data that we had three days of very high temperatures one after the other. It did not allow the equipment the cooling-down process — we
had high ambient temperatures overnight — which affected the ability of some of the air conditioners to reset as well.\textsuperscript{115}

236. Connex’s submission to the Inquiry also attributed the cancellation to the air conditioner failures:

The 2008/09 summer period saw a plethora of incidents and for many of them there were a number of contributing factors. These prime cancellation causes are described in the report. The biggest factor was the unavailability of trains which, in turn, was mostly related to a combination of air conditioner failures, other train faults, stopped units and the rigid application of FMP.\textsuperscript{116}

237. It was suggested that a further cause of service disruption and cancellation during this period was the dispute between Connex and the Rail, Tram and Bus Union over the application of the Fault Management Protocol. Connex suggested that approximately 80 per cent of the cancellations could have been avoided. This issue will be explored further later in this chapter.

238. Professor Graham Currie noted that while railways can be designed to operate in temperatures in excess of 40\textdegree{}C, Melbourne’s rail system has repeatedly failed in extreme weather conditions. A train system will not be able to operate efficiently once temperatures exceed its design specifications. When this occurs the infrastructure rather than the operator is responsible for the failure.

Early 2009 … abnormally high temperatures in January and February caused track buckling and a failure of air-conditioning systems in the railway system. … At the time there was much discussion in the media about the failure of the railway operator, but in my opinion it really was a failure of infrastructure and our long-term historical decisions that have gone into funding what is there. …

Another observation from my experience in Melbourne — I have been here 21 years — is that Victorian railways have always failed in January and February. There have always been failures as the temperatures have grown, but because it is a holiday period we have not noticed them quite as much.\textsuperscript{117}

239. Given the majority of the fleet is only specified to operate up to 34.5\textdegree{}C, it appears failure was inevitable.

In January and February this year we had five such days. Why is that relevant? In extreme heat the railway does experience difficulties, and by way of example of the sorts of difficulties we experienced, probably the most well-recognised or public one is the impact on the air conditioning units, particularly on the

\begin{footnotes}
\item[115] Ms Catherine Baxter, General Manager, United Group Melbourne Transport Ltd, \textit{Transcript of Evidence}, 21 July 2009, 45.
\item[116] Ibid, 5.
\item[117] Prof Graham Currie, Chair in Public Transport, Monash University, \textit{Transcript of Evidence}, 5 October 2009, 139.
\end{footnotes}
Comeng trains, which represent 56 per cent of our fleet and on which the air conditioning is specified to operate up to 34.5 degrees, so that was probably one of the most significant impacts of the weather on the capability of the system in January ...

240. The Secretary of the Department of Transport, Mr Jim Betts, advised the Committee that when the Comeng fleet was commissioned in the 1970s discussions centred on whether or not the trains should have air-conditioning rather than on the details of the air-conditioning specifications.\(^{119}\)

241. The Committee notes the Comeng fleet was refurbished between 2000 and 2003. The refurbishment did not include upgrading the air-conditioning units. When questioned as to whether the franchisee was responsible for upgrading the air-conditioning system, Mr Betts advised that there was no specific obligation on the franchisee to upgrade the air-conditioning units, however they are obliged to run services reliably and minimise cancellations.

There is no specific obligation in Connex’s franchise agreement that it must upgrade its Comeng air conditioners; there is, however, an obligation in Connex’s franchise agreement that it should run its services on time and reliably and to minimise cancellations. When you say we knew about the problem, the problem as you characterise it, which is the performance specification for the air conditioning, has been known in the 1970s; what has changed is the weather.\(^{120}\)

242. Upgrading the air-conditioners is not as simple as changing the refrigerant. The Committee received evidence that any upgrade would involve substantial work removing and replacing various components. Given the age of the fleet and nature of events which lead to the failure, Connex questioned the appropriateness of such investment.

In particular with the Comeng fleet the air conditioner is specified to operate up to 34.5 degrees. It does not automatically mean that it will not work over 34.5 degrees, but it is quite prone to trip outs and deterioration in operation. … to fundamentally change that would involve stripping out all of the air conditioning equipment and indeed probably a lot of other electrical equipment as well. That is a program that would cost tens of millions of dollars. It would involve taking trains out of service and disrupting the operation. Recognising that these trains are for the best part heading towards 30 years old, they have a lifespan ahead of them, so there is a question about whether that is a sensible use of limited investment …\(^{121}\)

\(^{118}\) Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd, *Transcript of Evidence*, 21 July 2009 41.

\(^{119}\) Mr Jim Betts, Secretary, Department of Transport, *Transcript of Evidence*, 21 July 2009 4.

\(^{120}\) Ibid, 6.

\(^{121}\) Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd, *Transcript of Evidence*, 21 July 2009, 44.
243. The Department of Transport confirmed the Government was responsible for the decision not to upgrade the air-conditioning units on the Comeng fleet when they were being refurbished in the early 2000’s.\textsuperscript{122}

244. The Committee notes that in addition to the withdrawal of Comeng trains due to failed air-conditioners, some Siemens and X'Trapolis trains were also withdrawn. The Director of Siemens Rail Services gave evidence that the withdrawal of the Siemens trains when only one air-conditioning unit failed was unnecessary as these trains were designed to continue to operate even if one unit failed.

Siemens Nexus trains were unnecessarily withdrawn from the revenue service during hot weather. … the Siemens trains have wide, open gangways between the cars, by design. Each car is fitted with two air-conditioning units, one at each end. Each air-conditioning unit has two compressors, and if there is a failure of one of these compressors — one of the air-conditioning units — because of the wide, open nature of the train, we still meet the specified air-conditioning performance. There is no need to take a train out of service if one air conditioner fails.\textsuperscript{123}

245. While a number of train cancellations were due to faulty air-conditioning units, Connex suggested that there were other factors which lead to the larger number of cancellations.

There were a number of trains that were cancelled that, from a purely technical perspective, could have continued on. There are no safety issues with the failure of one air conditioner in a carriage, and in fact that train could continue on. With the changes to FMP, I believe we would see less cancellations if those circumstances were to occur again.\textsuperscript{124}

246. In order to ascertain whether there would be a reoccurrence of the network failure in 2010 if similar weather was experienced, the Committee questioned both Connex and the Department of Transport with respect to their revised contingency plans for the summer period. Connex advised that even if similar weather was experienced a repeat of the network failure was unlikely given the new FMP which had been put in place. This procedure meant that if one air-conditioning unit failed the service would not automatically be cancelled.

\textsuperscript{122} Mr Jim Betts, Secretary, Department of Transport, \textit{Transcript of Evidence}, 21 July 2009 7.

\textsuperscript{123} Mr Paul Bennett, Director, Siemens Rail Services, Siemens, \textit{Transcript of Evidence}, 6 October 2009, 220.

\textsuperscript{124} Ms Catherine Baxter, General Manager, United Group Melbourne Transport Ltd, \textit{Transcript of Evidence}, 21 July 2009, 45.45.
The previous FMP arrangements meant that if you had an air conditioning failure on a train, the train was pretty much cancelled straightaway, which was clearly a major disadvantage for passengers. Given the choice between finding themselves not having a service and having to get off a train onto a platform or continuing to the end of their journey, and the failure maybe affecting only one carriage until the end of that peak period that morning, quite often a lot of people would make the latter choice.  

247. The Committee notes that the metropolitan train system continued to perform poorly following the extreme weather on 11 and 12 January 2010 when 350 trains were cancelled. However, evidence suggests that the cancellations in 2010 were not as bad as those recorded in 2009. When the evening peak cancellations for 11 January 2010 were compared to those for 28 January 2009, there was an 11 per cent reduction. As previously noted, in 2009 the cancellations were attributed to both the extreme weather and a dispute between the operator and the RTBU over the application of the FMP. The summer 2010 failures suggest the problem with the train system relates to the infrastructure rather than the operator, which given the size of the network, will take substantial time to resolve.

248. Following the January 2010 network disruptions, Metro announced a crisis management system has been established should such an event occur again. This system involves suspending the Williamstown and Alamein lines and replacing these services with buses so trains can be redeployed to where they are needed on the system.

249. The Department of Transport initially advised the Committee that they were planning to undertake a trial over the 2009-10 summer to increase the capacity of the air-conditioning units on the Comeng trains, and if successful, this would be progressively implemented throughout the remainder of the fleet. However following the announcement that Metro Trains Melbourne would be the new operator of the metropolitan network, it was also announced that they would undertake an upgrade of air-conditioning units on all Comeng trains so they could operate up to temperatures of 45°C.

125 Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009, 44.
126 Minister for Public Transport, Transcript of Evidence, 21 July 2010, 276.
127 Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, Transcript of Evidence, 2 March 2010, 257.
128 Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009, 5.
Minister for Public Transport advised the Committee that the upgrade was expected to be completed by 2012.129

250. While it is accepted that it was unusual to get the number of excessive heat days consecutively, the Committee notes that both Perth and South Australia experienced similar weather without their train systems experiencing the same degree of disruption. Dr Mees drew the Committee’s attention to the fact that the train fleet in Adelaide consists of Comeng trains similar to Melbourne’s.

... it was hotter over the summer in Adelaide than it was in Melbourne, particularly on those key three days when it was very hot here. It was hotter in Adelaide on each of those days.

The reason why that is relevant is that the majority of the trains in the Adelaide fleet are Comeng trains. They are of the same make as the Comeng trains that have caused problems here, they were made in the same factory in Dandenong and they are powered by diesel rather than electricity, so in some respects they should be even more prone to heat breakdowns. ... as I understand it, there was not a single train cancelled in Adelaide as a result of air-conditioning breakdowns. They did have a section of tracks buckle and they had to close one entire line for an entire day. So you can see that in other respects their system reacted in similar ways to ours. But they did not cancel any trains because of air-conditioning problems, even though you would have expected those problems to be at least as serious.130

FINDING 4.14

A failure by successive Victorian governments to ensure that air-conditioners on the Comeng train fleet were upgraded to a required standard resulted in significant train cancellations during the extreme weather conditions in January and February 2009.

FINDING 4.15

The Victorian Government and Metro Trains Melbourne should continue the current program of upgrades so as to ensure that all metropolitan trains are equipped with effective air-conditioner systems. These upgrades are required as a matter of priority to ensure Melbourne’s train commuters receive a reliable service delivery in future summers, including days of extreme high temperatures.

129 Minister for Public Transport, Transcript of Evidence, 21 July 2010, 284.
130 Dr Paul Mees, Transcript of Evidence, 22 September 2009, 119.
4.5 Timetable Issues

251. With the eventual introduction of new and additional trains on the metropolitan network, it is inevitable that train timetables will need to be upgraded to accommodate new services and to alleviate any previous/existing problems with the timetables.

252. Metro acknowledged the current timetables are difficult to operate and that structural problems exist on various lines, such as the Frankston, Dandenong and Werribee lines.

Two of the future planned operation improvements: there will be new timetables in 2010. We are aiming to simplify operations to increase reliability. The timetables are very complicated at the moment and hard to run at the best of times and when things are starting to run late even more difficult to recover. Simplification of the timetables is something that we will be doing at every opportunity going forward, and using extra trains, the new trains, to provide extra services in the peaks. There will be further timetables coming up in future years. We should have 18 of the new trains available to us by the end of 2011. Our aim is to achieve them by April. That is what we are aiming to do in 2011. That will enable us to have additional hot standby trains in the peak. A key issue is building productive relationships with all of our employees. Part of the balanced scorecard process is to ensure that every employee is engaged throughout the business in a meaningful and productive way.

253. During the public hearing with Metro in March 2010, the Committee sought advice as to how many extra peak services are proposed for each line in the new timetable to be developed later in 2010. Metro subsequently advised as follows:

There are two timetable changes under development for later in 2010. The first is planned to be in late May and the second will be sometime post July. The timetable development process is a complex one and involves ongoing discussions between Metro Trains Melbourne and the Department of Transport. There can be many changes to proposed services during this development phase. As the numbers are not yet finalised, I am unable to provide a specific figures at this stage.  

254. The issue of timetable schedules was raised in earlier evidence to the Inquiry by Dr Paul Mees and the PTUA.

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131 Correspondence from Metro Trains Melbourne to the Committee, responding to matters taken on notice at the hearing, 19.03.2010
255. Dr Mees suggested that the current timetable contributes to overcrowding because trains are scheduled unevenly, with new services added into gaps in the timetable rather than updating the entire timetable.\textsuperscript{132} Evidence from the PTUA supported this view:

In the most recent changes to [the Frankston] line they added an extra morning peak hour train. The problem is that it runs 3 minutes after the previous train and I think 12 minutes before the following one. The result is that the new train is not quite empty but is certainly is not taking the loads that it could and should be taking in the middle of the peak hour …\textsuperscript{133}

256. Evidence suggested that overcrowding could only be eased through the introduction of a new timetable with services spaced evenly, spreading the load more equally between services.\textsuperscript{134} This view was supported by Metro:

… eventually the timetable will need to be revamped fundamentally because this timetable stems back to 96 and has had services added to it and added to it. As we get more towards the metro inner service it will have to start being timetabled more like a metro railway which means evenly spaced trains …\textsuperscript{135}

257. Further, the current timetable incorporates a number of different stopping patterns which may adversely affect service reliability. Dr Mees advised the Committee that there were about fourteen different stopping patterns on the Dandenong-Cranbourne-Pakenham lines in the morning peak alone.\textsuperscript{136} Given train controllers need to accommodate different stopping patterns, it can be difficult for the system to recover if services are delayed and/or interrupted.\textsuperscript{137} In their evidence to the Committee Metro advised they were working to simplify the timetable to allow faster recovery when disruptions occur.

\textsuperscript{132} Dr Paul Mees ‘Infrastructure constraints or poor service planning? Increasing service to Melbourne’s City Loop and Dandenong rail corridor’ Written Submission (No 18) Attachment 2, 4.
\textsuperscript{133} Mr Daniel Bowen, President, Public Transport Users Association. Transcript of Evidence, 5 October 2009, 173
\textsuperscript{134} Mr Daniel Bowen, President, Public Transport Users Association. Transcript of Evidence, 5 October 2009, 173; Dr Paul Mees, Transcript of Evidence, 5 October 2009, 173.
\textsuperscript{135} Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, Transcript of Evidence, 2 March 2010, 16.
\textsuperscript{136} Dr Paul Mees, Transcript of Evidence, 22 September 2009, 132.
\textsuperscript{137} Mr Andrew Lezala, Chief Executive Officer, Metro Trains Melbourne, Transcript of Evidence, 2 March 2010, 255.
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... we want to use the timetable changes to simplify the timetables to allow us to make the railway system more reliable and more recoverable when it is experiencing difficulty.\textsuperscript{138}

258. Evidence suggested that best practice for timetabling rail services assumes a regular service pattern that is easy to understand and remember for passengers.\textsuperscript{139} The current metropolitan timetable fails to fulfil these objectives.

259. The Committee received evidence that simplifying the timetable by operating a predictable stopping pattern may improve reliability and assist recovery in the event of service disruption, it may cause inconvenience to individual commuters. An example is the reversal of the Clifton Hill loop, which eliminated the conflict between trains having to cross in front of each other to enter the loop. Dr Mees and the PTUA advised that this decision meant it now takes some commuters longer to get to work because trains stop at Flinders Street, due to the practice of allowing some minutes for the drivers to change before proceeding through the loop.\textsuperscript{140}

260. The issue of connectivity of trains with buses was also raised with the Committee. It was suggested that for a railway to operate efficiently it needs to be fully integrated with bus services.\textsuperscript{141} However, further evidence suggested that given the size of Melbourne’s public transport network, it is difficult to coordinate every train and bus service.\textsuperscript{142}

261. The Committee notes the PTUA published a study in May 2010, finding that on average only 37.5 per cent of train arrivals had a bus connection, and there was an average wait of 11.2 minutes for the connecting service.\textsuperscript{143} The Committee notes the Department of Transport is currently reviewing bus services to identify how better to improve bus services throughout

\textsuperscript{138} Ibid, 263.
\textsuperscript{139} Dr Paul Mees ‘Infrastructure constraints or poor service planning? Increasing service to Melbourne’s City Loop and Dandenong rail corridor’ Written Submission (No 18) Attachment 2, 9.
\textsuperscript{140} Mr Daniel Bowen, President, Public Transport Users Association. Transcript of Evidence, 5 October 2009, 173; Dr Paul Mees, Transcript of Evidence, 5 October 2009, 170.
\textsuperscript{141} Dr Paul Mees, Transcript of Evidence, 22 September 2009, 128.
\textsuperscript{142} Prof Graham Currie, Chair in Public Transport, Monash University, Transcript of Evidence, 5 October 2009, 145; Mr Bernie Carolan, Chief Executive Officer, Metlink, Transcript of Evidence, 6 October 2009, 211.
\textsuperscript{143} www.ptua.org.au/2010/05/09/train-bus-connections/ accessed 12.05.2010 at 2.20pm
Melbourne’s suburbs. One of the areas being examined is ways to improve bus linkages with connecting trains and trams.

**FINDING 4.16**

New metropolitan train timetable changes to be introduced in June 2010 with further changes to be introduced in late 2010 may lead to improved service delivery and less overcrowding on Melbourne’s trains, particularly during peak periods.

**FINDING 4.17**

It is unclear from the evidence provided by Metro and the Department of Transport as to how new timetables are being planned in conjunction with V/Line services. This further illustrates disadvantages arising from the fragmentation of the management of train services, and in this case, services which share the same rail infrastructure.

**FINDING 4.18**

There needs to be greater coordination of the metropolitan train timetable with bus timetables to ensure timely and efficient connectivity.

**FINDING 4.19**

Metropolitan rail timetable changes should enable trains to run at a regular stopping pattern and frequency. Plans to separate metropolitan and V/Line rail services on some lines, as proposed in the Victorian Transport Plan, would support this objective.

### 4.6 Industrial Dispute – Summer 2008-09

262. Historically, industrial disputes have been a factor in train cancellations and delays. While the Committee notes the Government’s claim that over the past ten years ‘the industrial record of Victoria’s rail industry has been generally one of co-operation’ 144, Connex’s evidence that its ‘industrial relations records has been exemplary in the 10 years’ 145 was particularly tested over the 2008-09 summer during a protracted dispute with the Rail, Tram and Bus Union.

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263. The dispute related to disagreement between Connex and the RTBU over improved FMPs and other operational improvements and culminated in a Sandringham train blocking the line at Richmond station for nine hours during the day on 18 February 2009. Prior to this major service disruption, a spate of cancellations were made over December 2008 – January 2009 up to 80 per cent of which, according to Connex, were attributed to the union’s strict adherence to the FMPs and could have been avoided.

264. Connex’s submission to the Inquiry summarised the factors behind this dispute:

As indicated, an improved FMP is a key initiative to support the introduction of the November 2008 timetable and provide more reliable services in years to come. The FMP requires the ongoing support of operational staff and it has been, for many years, subject to agreement from the Rail Tram & Bus Union (RTBU).

On 12 June 2008, a Memorandum of Understanding (MOU) was signed by Connex and the RTBU incorporating a process to achieve an improved FMP and other operational improvements. The MOU also incorporates a 15% wage increase over 3 years under a 2009/12 Collective Agreement.

In practice, the Locomotive Division of the RTBU (the RTBULD) did not honour the MOU. Exhaustive negotiations continued behind the scenes without success. Whereas such negotiations have been previously successful in diffusing industrial issues over the course of this franchise, on this occasion the differences became intractable. The issue flared up in December, when there was a more rigid application of the existing FMP. This spike in reported train faults caused cancellations to increase to 784 for the month of December.

Connex very reluctantly agreed to a much lesser range of improvements with the RTBULD, which formed the basis of the so called “staff bonus” paid to all staff prior to Christmas 2008. Regrettably these improvements were not implemented either. The RTBULD also frustrated the process to release at least 11 fully operable trains from maintenance yards in early 2009.146

265. Connex’s evidence explained how this dispute culminated in settlement by the Australian Industrial Relations Commission.

On 18 February, intra-Union disagreements over whether the FMP reforms had been implemented led to a Sandringham train blocking the line at Richmond station for nine hours during the day. This became the catalyst for Connex to seek assistance from the Australian Industrial Relations Commission (AIRC) to conduct a Dispute Resolution Process to deal with this wider industrial issue.147

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146 Connex Melbourne, Written Submission (No. 55) 20.
147 Ibid, 38.
266. The Government’s submission added that ‘the need for the involvement of the AIRC was emphasised the following week when, on 23 February, a Belgrave line train was stranded for four hours at Flinders Street Station.’

267. As indicated above, prior to the major disruptions on 18 and 23 February, Connex’s Executive Chairman, Mr Jonathan Metcalfe, was questioned on Melbourne radio on 29 January in response to significant train cancellations during heatwave conditions. In this interview he claimed that up to 80 per cent of those cancellations were avoidable but were triggered by what he considered to be the union’s unnecessarily strict interpretation of the FMPs, including cancellations due to ripped cab seats and scratches on the side of drivers’ cab windows.

268. The Committee questioned Mr Metcalfe on the accuracy of his statement, in particular the 80 per cent figure quoted above. Mr Metcalfe responded:

   It is pretty much accurate. What I believe I said was that up to 80 per cent could have been avoided. The interview, I believe, was on 29 January and it was following a week of very hot temperatures, so I was talking in the context of that very difficult point in time when we were going through the very hot weather. To really try to underscore my comments, if I take the preceding week, we have actually gone through and tracked each day of the week in terms of the numbers of cancellations and basically gone through cancellation by cancellation and worked out how many could have been avoided. Hopefully it will provide some sort of clarification if I take a couple of random days of that week.

   On 19 January we had 74 cancellations, of which, having gone through and analysed all of them, we believe 62 or so were avoidable; that was 84 per cent. On Thursday 22 January we incurred 54 cancellations, and having analysed them, found that 93 per cent could have been avoided. On other days the figures were 73 per cent. So if I take that week as a whole, the figure would be close to 77 per cent. I would argue that that pretty much does reinforce the comments that we made that week.

269. By way of further explanation, Connex’s written submission to the Inquiry supported the notion that up to 80 per cent of cancellations could have been avoided in the context of the operational benefits of the new FMP arrangements:

   As a guide to the potential impact of these FMP changes, the cancellations in December 2008 were analysed. In that month, there were 784 cancellations, of

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148 Victorian Government, Written Submission (56), 33.
149 Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009 11.
150 Ibid, 47.
which 471 were caused by “Faulty Trains”. Those 471 cancellations would have been reduced by 376 to 95 with all of the new FMP arrangements in place.151

270. In his evidence to the Committee, Mr Metcalfe noted that the industrial dispute should be seen as an exception to what had been a period of cooperation between the rail operator, the unions and employees. Mr Metcalfe placed on record his organisation’s support for train staff:

The point I would make is that we are very proud of our employees and staff. They do a very difficult job in very difficult circumstances and quite often those circumstances are not recognised. The difficulties we were dealing with were probably confined to a very small group, quite often relating to the discussions we were having with the trade unions. So we are very clear that we are proud of our employees who do a great job, and through a lot of good discussion and cooperation over the last two or three months we have now got an excellent agreement. We have got an agreement that provides for, I think, a very fair pay award for our staff but also means that the public, the passengers, now get a much better operational performance because of the improved FMP.

271. Connex’s evidence outlined the progress made since the matter was referred to the AIRC:

- The management and reporting of train faults has stabilised.
- Agreement has been reached with the RTBU on the longstanding issue of rolling stock compliance with an adopted theoretical “brake curve”, which has led to impounded trains being quickly released for service. By April, the total number of ‘Stopped Units’ reduced from 22 to 10, compared to the expected average of 11 units.
- Connex management, staff and RTBU representatives have worked together to develop a plan to ensure the availability of sufficient trains to meet timetable requirements.
- To assist with this goal, the FMP categories have been revised focused around weekday peak services in particular. These changes were implemented on Sunday 31 May 2009. The major changes are:
  - An agreed list of non-safety critical “finish run” faults that can be managed as “one peak” faults.
  - Trains with faults on the leading or trailing motor carriages, where practicable, may be re-marshalled to become a centre motor at any stabling siding, then enter and remain in service for an extended period.
  - Trains with “finish fun” faults can enter service from maintenance sidings where previously they could not as they were deemed to be within “Maintenance Facilities”.
- In addition to the above, the Fault Management System is currently undergoing a whole of system review which is designed to deliver additional capability and capacity benefits.
- The Connex Demonstration Train has been deployed on the network, enabling valuable research to be conducted on customer behaviour and opinions.

151 Connex Melbourne, Written Submission (No. 55) 40.
• Negotiations on a new three-year Collective Agreement have proceeded satisfactorily and this agreement has now been formalised.

• The new Collective Agreement incorporates a range of productivity initiatives, including:
  – The above FMP improvements;
  – The trialling and, ultimately, implementation of a regime of crowd management techniques to better manage congestion in the City Loop, targeting a reduction in dwell times;
  – Improved arrangements for ill passengers which will see peak hour trains with ill passengers that are within the Central City area bounded by South Yarra, Jolimont, Richmond, and North Melbourne Stations running direct and express to Flinders Street Station, where an ambulance or other first aid assistance can be made readily available;
  – Formalising the agreement that a “holiday timetable” will no longer operate between Christmas and early January, in recognition of the major patronage growth which has occurred in recent years;
  – Formalising the introduction of the Intelligence Based Deployment for Customer Service Officers (Authorised Officers), originally implemented on a trial basis in February 2008. Intelligence Based Deployment has proven successful in reducing fare evasion and anti-social behaviour across the train network;
  – Ongoing support for the timely implementation of numerous Victorian Transport Plan projects, including new trains, Metrol Replacement, Digital Train Radio and Springvale Road Grade separation.

272. In light of the above new Collective Agreement and review of the Fault Management Protocols, in July 2009 Connex’s Executive Chairman responded to the question of whether a similar dispute may occur in the 2009-10 summer:

Mr DRUM — Could I just finish up on that, Chair? We are confident now that the improved FMP will in fact preclude that situation happening again this summer?

Mr METCALFE — I am confident that in a similar situation to the summer conditions it will have a substantially positive impact on our ability, or the industry’s ability, to deliver and operate. Does it mean that we would not still incur cancellations or difficulties under extreme conditions? No, it does not. We would still incur difficulties and problems but they would not be as exacerbated as I believe they were in January and February this year — of that I am confident. The new agreement on FMP is already working, it is in place, and it is that agreement that is already helping us to deliver, for example, the 99.6 per cent reliability that we are now seeing — pretty much a record high and not far off world-class numbers.\textsuperscript{152}

\textsuperscript{152} Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009 47
273. Connex’s written submission to the Inquiry further noted the operational benefits of the new FMP arrangements in the context of extreme heatwave weather conditions:

The situation in January and February is harder to analyse because of the nature of the extreme weather events and the factors such as the impounded trains. The beneficial impact of the new FMP arrangements, the quicker return to service of impounded trains and a more stable industrial climate could reduce cancellations by as much as 80% in such extreme circumstances.\(^\text{153}\)

274. Connex, and the RTBU jointly signed a Memorandum of Understanding (MOU) in June 2008 which was specifically prepared to ‘provide certainty for the parties throughout the remainder of the franchise period by implementing a range of asset and operational improvement projects and setting the basis for the establishment of the new Collective Agreement commencing July 2009.’\(^\text{154}\) While not a signatory to the MOU, the Department of Transport advised the Committee they had viewed the MOU and were supportive of its intent.

275. As outlined earlier, other evidence put to the Committee with respect to service disruptions during the 2008-09 summer suggests that cancellations and delays were largely attributed to extreme weather and failed air conditioning systems. The air conditioner failures were also referred to widely in public and media commentary as the reasons for the significant cancellations.

276. The Committee is therefore unable to reconcile one body of evidence highlighting failed air conditioners as a major factor, with evidence from Connex suggesting 80 per cent of cancellations should have been avoided and were attributable to union’s interpretation of FMPs and non-compliance with a signed MOU.

277. Earlier in this report, the Committee highlighted evidence from the Department of Transport where the Department accepted ultimate responsibility for the performance of train services. However, the Committee notes the Government did not become involved in settling the dispute or in ensuring continued co-operation between the operator and the union,

\(^{153}\) Ibid.

\(^{154}\) Connex, Memorandum of Understanding between Connex Melbourne P/L and the Australian Rail, Tram and Bus union, 12 June 2008.
consistent with the MOU, to ensure acceptable levels of service delivery were maintained. Indeed, the Committee notes that at the time the industrial dispute was settled by the Australian Industrial Relations Commission (AIRC), the Federal Workplace Ombudsman became involved in investigating the case to determine whether or not there had been unlawful industrial action.

278. Further, evidence from the Department of Transport indicates it was unaware of the extent of the cancellations which were due to the union’s non-compliance with the agreed FMPs.

Mr BARBER — Sorry, if I can interrupt, I am asking you whether you can account for the figure of 80 per cent. Your minister was sitting 2 feet away from him when he made the claim. She had an opportunity to say that was right, wrong or indifferent. I am now asking you if it is correct.

Mr BETTS — The honest answer to that is I do not know. I do not know what assumptions were being made when the 80 per cent figure was quoted. I guess what Mr Metcalfe might have been saying is that, had the union complied with the commitment which it gave in the memorandum of understanding it executed with Connex last year and instituted and stuck by a reformed fault management protocol, and had trains not been out of action for what Mr Metcalfe might perceive to be industrial issues, it would have been possible to eliminate 80 per cent of the cancellations. Whether those trains were out of action because of an industrial dispute or simply because there was a degree of tension between the union and Connex, which in the normal course of events would not have been there, so trains would have gone into service more readily because of goodwill and good working relationships on either side, it is very hard, and I do not think particularly useful, to try and ascribe a precise percentage to what were the cancellations which related to industrial tension as against other factors which might have been at play, so I cannot really confirm or deny whether that figure is accurate to be honest.\footnote{Mr Jim Betts, Secretary, Department of Transport, \textit{Transcript of Evidence}, 21 July 2009 11.}

\begin{center}
\textbf{FINDING 4.20}
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Metropolitan train commuters endured a poor standard of service delivery in the 2008-09 summer, when it was claimed that up to 80 per cent of disruptions could have been avoided with greater co-operation between the Rail, Tram and Bus Union and Connex with respect to adherence to the Fault Management Protocols. The dispute and resultant service disruptions occurred contrary to a Memorandum of Understanding signed by Connex and the union.
4.7 Passenger Related Issues

279. Train delays and cancellations can also arise as a result of trespassers and ill passengers.

280. When a person, animal, or thing enters a rail reservation, train services may be delayed. The Committee received evidence that the number of near misses may be four times the number of serious incidents. A serious incident resulting in the death of a person will lead to cancellation and significant further disruption to train services.

281. While the immediate impact of trespassers may be the suspension of services, there is also an impact on the train driver. Following an incident the driver is removed from service for rehabilitation and counselling. However in the short term there may be a driver shortage resulting in further service cancellations and delays.

282. Issues with trespassers are not confined to the metropolitan network. V/Line advised the Committee that when a V/Line service hits an animal, the train will come to a stop to allow the driver to inspect the damage to the train. If it is safe to proceed the train will continue its run at which point it will be taken out of service for cleaning and repair, a process which may take 24 to 48 hours.

283. On some occasions a train cannot proceed and the location is treated as a crime scene. This results in further delays as Victoria Police and other agencies attend to undertake investigations. During this time services cannot operate.

284. The data provided to the Committee by both Metro and Connex suggested that a significant number of trains were delayed and/or cancelled due to ill passengers. An ill passenger on a train does not only affect that service, but multiplies delays across the entire network. Connex data suggested that

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156 Mr Bruce Hughes, Deputy Chairman, Connex Melbourne Pty Ltd, Transcript of Evidence, 21 July 2009 51.
157 Ibid, 50.
158 Mr Rob Barnett, Chief Executive Office, V/Line, Transcript of Evidence, 6 October 2009. 235.
159 Mr Jim Betts, Secretary, Department of Transport, Transcript of Evidence, 21 July 2009 7.
although there were only 29 reports of ill or sick passengers in October 2009, 573 services were affected.\(^{160}\)

285. Once a driver becomes aware of an ill passenger, the passenger cannot be moved out of a train until an ambulance arrives. This is due to a number of factors including legal reasons and because the majority of stations are unmanned. One submission noted that it may be possible to minimise delays caused by passengers becoming ill if there were station staff with medical training at stations, especially during the peak.\(^{161}\)

How can we minimise those delays to ensure that when an incident does occur the delay is minimised, rather than the snowball effects that you see now where there are frequent trains running down the track and one little thing happens … Putting staff with basic medical training in stations may well mean that if someone does keel over on the train, they can be helped off the train and have someone to provide assistance and wait with them till the ambulance comes. … It is not a matter of being heartless and booting an ill person off a train, but it is a matter of working out how, at least in some instances, you can deal those sort of circumstances better and minimise disruption.\(^{162}\)

286. In its written submission to the Inquiry, Connex commented on improvements to the procedure with respect to ill passengers:

Improved arrangements for ill passengers which will see peak hour trains with ill passengers that are within the Central City area bounded by South Yarra, Jolimont, Richmond, and North Melbourne Stations running direct and express to Flinders Street Station, where an ambulance or other first aid assistance can be made readily available;\(^{163}\)

FINDING 4.21
Better contingency planning is required to minimise service disruptions when they occur. Such plans need to be mindful of the needs of commuters, in particular ill or distressed passengers.


\(^{161}\) Mr Frank Reinthaler, Written Submission (No. 31) 2.


\(^{163}\) Connex Melbourne, Written Submission (No. 55) 39.
Chapter Five:
V/Line Rail Network Failures

The main problems that V/Line faces in terms of its on-time running relate to problems of congestion in the metropolitan area. By and large, V/Line does a pretty good job of running punctually on the regional network, but it tends to hit problems at the metropolitan boundary and from there on into the centre of the city. That simply reflects the levels of congestion that we have on our busiest lines, and those very busy lines tend to be the ones that V/Line uses.

Mr Jim Betts, Secretary, Department of Transport

287. Earlier in this Report, the Committee provided a brief overview of Victoria’s regional passenger train network (Section 2.2) and an overview of V/Line’s responsibilities in providing public transport services in Victoria (Chapter Three).

288. While much of the Committee’s evidence focussed on metropolitan train service failures, an important element of the Committee’s investigations related to the factors leading to and causes of failures in the provision of V/Line train services.

289. The Committee’s evidence, including data on V/Line’s performance, illustrates that the reasons for V/Line service failure were broadly consistent with the causes of failures in the metropolitan network. Most significantly, the interface between the metropolitan and regional networks and conflicts within the metropolitan network, continues to have a flow-on negative impact on the reliability of V/Line service delivery.

290. The Committee also received various submissions highlighting issues dealing with V/Line service delivery including infrastructure and network issues. A summary of these matters is provided later in this chapter.

5.1 V/Line Performance Results

291. Under its franchise agreement, V/Line is required to meet certain operational performance thresholds with respect to punctuality and reliability. V/Line is required to deliver 92 per cent of trains on time and to operate 96 per cent of services. V/Line uses two definitions of ‘on-time’ distinguishing between commuter (interurban) services and long distance services (intercity).

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1 Mr Jim Betts, Transcript of Evidence, 21 July 2009, 5.
Interurban services need to arrive within 5 minutes and 59 seconds to be 'on time', while intercity services need to arrive within 10 minutes and 59 seconds.

292. As part of its investigations, the Committee accessed two separate forms of V/Line performance reporting. The first were copies of detailed internal reports provided to the Department of Transport highlighting operational performance results and other matters including safety, infrastructure, and regional network issues. The Committee received copies of these reports for the six months between October 2008 to March 2009.

293. Separate to these internal reports, V/Line also publishes performance reports on a monthly basis on its website. These public reports outline overall performance results, as well as on a line by line basis, based on services run (reliability) and services on-time (punctuality). The reports also highlight any compensation payments as a result of performance targets not being met.

294. The monthly V/Line reports make specific note of the fact that V/Line is one of only two regional train operators in Australia to publicly report its performance, that it is the only operator to report on both punctuality and reliability, and that it has the highest targets of any regional operator in Australia (CountryLink in NSW is 78 per cent, compared with V/Line’s 92 per cent).

295. With respect to the internal monthly operational reports to the Department of Transport for the period October 2008 to March 2009, V/Line reliability and punctuality performances during this period is summarised in the tables below.

<table>
<thead>
<tr>
<th>Month</th>
<th>Reliability</th>
<th>Cancellations</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2008</td>
<td>99%</td>
<td>62</td>
</tr>
<tr>
<td>November 2008</td>
<td>99%</td>
<td>62</td>
</tr>
<tr>
<td>December 2008</td>
<td>99%</td>
<td>55</td>
</tr>
<tr>
<td>January 2009</td>
<td>95%</td>
<td>292</td>
</tr>
<tr>
<td>February 2009</td>
<td>96%</td>
<td>223</td>
</tr>
<tr>
<td>March 2009</td>
<td>98%</td>
<td>112</td>
</tr>
</tbody>
</table>
Table 5.2: V/Line Train Punctuality: October 2008 to March 2009

<table>
<thead>
<tr>
<th>Month</th>
<th>Interurban</th>
<th>Intercity</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2008</td>
<td>88%</td>
<td>91%</td>
</tr>
<tr>
<td>November 2008</td>
<td>87%</td>
<td>88%</td>
</tr>
<tr>
<td>December 2008</td>
<td>89%</td>
<td>89%</td>
</tr>
<tr>
<td>January 2009</td>
<td>82%</td>
<td>79%</td>
</tr>
<tr>
<td>February 2009</td>
<td>83%</td>
<td>84%</td>
</tr>
<tr>
<td>March 2009</td>
<td>81%</td>
<td>86%</td>
</tr>
</tbody>
</table>

296. With respect to punctuality, it is clear that services struggle to be on time the closer the trains are to the metropolitan network. This issue is explored further in section 5.2.

297. Looking at cancellations only, the graph below highlights the impact of hot weather, rolling stock problems and crew shortages. It is noted that metropolitan network interface issues will not lead to V/Line cancellations as such and is not a factor in cancellation data. Reasons for cancelled and delayed V/Line services will be discussed throughout this chapter.

Graph 5.1: V/Line Service Cancellations

Source: Data provided to the Committee by V/Line.

298. The data illustrates the direct relationship between cancellations and warmer weather in the summer months, which is consistent with service failures on the metropolitan network. The data also indicates that the morning peak punctuality was consistently better than evening peak punctuality.
299. An examination of the V/Line performance reports published on its website since March 2009 illustrates similar results. Using a sample of four months over summer and winter during the past year, V/Line’s performance results can be summarised below.

- **In February 2010,**
  - there were seven cancellations out of 800 long distance train services (99.1 per cent reliability) and 132 cancellations out of 4872 short distance train services (97.3 per cent reliability);
  - on-time performance was affected by major storms, metropolitan network conflicts and infrastructure faults;
  - on-time performance across the network was an average 82.1 per cent for short distance trains and 82.4 per cent for long distance services; and
  - compensation was payable on all lines except Ararat.

- **In January 2010,**
  - there were four cancellations out of 896 long distance train services (99.6 per cent reliability) and 95 cancellations out of 5271 short distance train services (98.2 per cent reliability);
  - on-time performance was affected by hot weather speed restrictions, metropolitan network conflicts, train faults and infrastructure faults;
  - on-time performance across the network in January was an average 83.5 per cent for short distance trains and 80.6 per cent for long distance services; and
  - compensation was payable on all lines except Ararat.

- **In July 2009,**
  - there were no cancellations out of 898 long distance train services (100 per cent reliability) and 54 cancellations out of 5606 short distance train services (99 per cent reliability);
  - on-time performance affected by metropolitan network conflicts, infrastructure and train faults;
  - on-time performance across the network in July was an average 89.1 per cent for short distance trains and 90.5 per cent for long distance services; and
  - compensation was payable on all lines except Ballarat, Ararat and Warrnambool.
In June 2009,

- there were two cancellations out of 862 long distance train services (99.8 per cent reliability) and 27 cancellations out of 5186 short distance train services (99.5 per cent reliability);
- on-time performance affected by metropolitan network conflicts, infrastructure and train faults;
- on-time performance across the network in June was an average 89.9 per cent for short distance trains and 93.1 per cent for long distance services; and
- compensation was payable on all lines except Ballarat, Ararat, Echuca/Swan Hill and Shepparton.

300. This sample over four months further highlights the negative impact that warmer weather can have on service delivery over summer. The data also highlights the significance of metropolitan network conflicts on the ability of V/Line to deliver a reliable service.

301. Between October 2008 and March 2010, V/Line paid compensation on 18 occasions for failing to meet punctuality targets and on four occasions for failing to meet reliability targets. Generally, compensation for punctuality has been paid on all lines between October 2008 and March 2010, except for Ararat.²

302. A further illustration of V/Line’s total punctuality and reliability over a 12 month period is provided in the following two graphs.

303. V/Line is required to operate 96 per cent of services based on kilometres travelled. Graph 5.3 below, shows the percentage of services not delivered. A result greater than four per cent would mean V/Line had failed to meet its reliability target for that month. The graph shows that V/Line’s reliability is best in the cooler months, while the worst result occurred in February 2009. If an overall reliability measure were used, compensation would not have been paid; however using the line-by-line measure compensation was paid a total of six lines in January and February 2010.³

Graph 5.2: V/Line Punctuality


Graph 5.3: V/Line Reliability

FINDING 5.1
V/Line performance data illustrates that:

- V/Line punctuality and reliability is adversely affected during summer months when heat speed restrictions and other severe weather conditions can impact upon service delivery;
- interurban (short-distance) services are less reliable than intercity (long-distance) services;
- V/Line is consistently required to pay compensation to its customers as a result of not meeting performance targets; and
- the most reliable regional services appear to be on the Ararat line which consistently meets its targets even in the summer months.

5.2 Metropolitan – Regional Network Interface

304. It is evident from the V/Line performance data that the regional rail network’s interface with the metropolitan network, and in particular conflicts in the metropolitan network, is a significant contributing factor in the reliability and punctuality of V/Line passenger services. The Department of Transport and V/Line have both acknowledged that this continues to be a challenge for V/Line service delivery.

305. The quote at the commencement of this chapter from Mr Jim Betts, Secretary, Department of Transport, notes that the punctuality of V/Line trains is impaired once they hit the metropolitan boundary due to conflicts on these lines.

306. Figures 5.1 and 5.2 below show V/Line’s performance in March 2010 on the Interurban and Intercity routes. These figures distinguish the punctuality of V/Line trains on the regional and metropolitan networks, generally showing poorer performance of these trains in the metropolitan area.

307. Figure 5.1 illustrates that excluding the metropolitan area, the punctuality of 92 per cent of trains ‘on time’ target was achieved on all Interurban lines except Bendigo in March 2010, while this target was not achieved for any of the lines within the metropolitan boundary.
Figure 5.1: V/Line Interurban Punctuality

March 2010


308. Figure 5.2 illustrates that only the Ararat line achieved ‘on time’ performance outside of the metropolitan area for Intercity routes in March 2010, and once the V/Line trains hit the metropolitan boundary ‘on time’ performance further declined.

Figure 5.2: V/Line Intercity Punctuality

March 2010


309. An analysis of V/Line performance results over the past 18 months reveals that conflicts arising on the metropolitan network are responsible for one-quarter of all V/Line train delays. As the number of V/Line delays increases in summer months, the proportion of delays due to conflicts with metropolitan trains appears to decrease. Conversely, when V/Line delays are minimised in the cooler months, the proportion of delays attributed to the metropolitan
network would appear to increase. On average, conflicts arising on the metropolitan network account for anything between 150 to 300 V/Line train delays each month.

310. The Committee received evidence that the stopping patterns of metropolitan trains also impact on the punctuality of V/Line services. Metropolitan trains operate a complicated set of stopping patterns. The Committee received evidence from Dr John Stone, Project Officer, Australian Centre for the Governance and Management of Urban Transport (GAMUT), that there are up to 27 different stopping patterns on the Pakenham line alone. Given V/Line services generally operate as express once they enter the metropolitan area, this increases the difficulty in scheduling paths for V/Line services from the Latrobe Valley, which also uses this line.4

311. Simplifying metropolitan timetables based on regular stopping patterns was identified as providing clear and predictable paths for V/Line services while also allowing for recovery strategies to be planned in the event of service disruption.

Again if you have timetabling philosophy based around a regular pattern of services and regular timetable intervals, you can start planning those recovery strategies into your system. Whereas what we do … results in uneven loadings and makes the system immensely more difficult to operate than it needs to be.5

312. Simplified operating patterns may also make travelling easier and more predictable, and increase the capacity of a line. However, the Committee received evidence that it may take some commuters longer to reach their final destination because they may be required to change trains or because the train no longer runs express.

Currently, if you look at lines, there are various operating patterns that are adopted. Why are there two or three operating patterns at peak on a line? This is historic, but maybe we should say that if we only had one operating pattern, it may take people who live at the end of the line a little longer, but maybe we could increase the capacity by 20 per cent. Maybe if we did not change crews at Flinders Street, we could increase the capacity. Maybe we could run some of the tracks in a slightly different way.6

4 Dr John Stone, Project Officer, Australian Centre for the Governance and Management of Urban Transport (GAMUT) Transcript of Evidence, 22 September 2009, 70.
5 Dr Paul Mees, Transcript of Evidence, 22 September 2009, 132.
6 Mr Edward Dotson, Transcript of Evidence, 22 September 2009, 97.
313. The Latrobe Valley service also impacts on the operation of metropolitan services. In his written submission, Mr Bruce Sutherland noted that terminating services from the Latrobe Valley at Flinders Street would free up capacity at Southern Cross and the viaduct, enabling an extra four metropolitan trains an hour. Such a move would reduce the interaction between the two services, and consequently increase the reliability of both.  

Dr Stone noted that while Latrobe Valley services used to terminate at Flinders Street Station, all services now terminate at Southern Cross. He further suggested that Melbourne was not making the best use of its existing rail infrastructure.

There are quite a number of different inefficiencies that we have built into the way we put V/Line and suburban trains together. I do not think we have explored fully the extent to which we can get more capacity out of the existing system, particularly when we have — and we are building more on the Altona line — passing loops and other pieces of infrastructure which I know operators of other systems feel Melbourne is blessed with and would love to have in their operations in London and other places.

314. Timetabling of services was raised as an area that could be enhanced. It was suggested to the Committee that the push to separate V/Line and metropolitan services has arisen in part due to a lack of coordination between the timetabling of V/Line and metropolitan services.

315. Currently, when a V/Line train misses its slot in the timetable it needs to travel behind a metropolitan train at slow speed. If it passes the metropolitan train this delays the metropolitan train by up to 10 minutes to create a sufficient window between the trains.

If the V/Line train turns up late by X number of minutes, it has technically lost its slot and should follow the suburban train. We have buffers set in the timetable to ensure or to try and ensure that they hit the boundary on time and therefore they get their correct slot. Ultimately you do get out-of-course running on the metropolitan network and their services are out of kilter and we end up following a Connex train. To give you an example, to stop a Connex train to let a V/Line train pass at certain parts where you can do that, it stops the Connex train for 10 minutes. It has to stop at a platform for basically 10 minutes to get the V/Line train past it and then getting going again, so it is a significant delay to a Connex train and, given their frequency, they have probably got the next
Connex train right behind, so in practical terms it is probably not feasible to do that.\textsuperscript{11}

316. In evidence to the Committee, V/Line advised that the addition of metropolitan services on the Werribee line impacted on its ability to enter and leave the metropolitan area by reducing the windows available to V/Line services. Consequently some V/Line services had their timetables altered, by extending their running times, to reflect the reduced speed through the metropolitan area.\textsuperscript{12}

317. V/Line’s evidence to the Inquiry also highlights the importance of the Regional Rail Link project in terms of increasing services and alleviating conflicts between metropolitan and V/Line services in the metropolitan corridors, particular on the Ballarat, Bendigo and Geelong lines.

We certainly believe the regional rail link is an extremely important project for us. This is because it enables us to, firstly, run more trains. Right now the number of paths for us into the metropolitan area at the busiest time of day are restricted. Quite frankly, we cannot get any more paths into Melbourne. The regional rail link provides us with our own dedicated railway for three main corridors, so it is extremely important for us. We think it will deliver increased services in our busiest time and improve our punctuality.\textsuperscript{13}

**FINDING 5.2**

Conflicts within the metropolitan network account for one-quarter of all V/Line train delays. These conflicts limit paths available to V/Line services leading to trains running at slower speeds to accommodate metropolitan services.

**FINDING 5.3**

It is the responsibility of the Department of Transport to alleviate conflicts between V/Line and metropolitan services in the metropolitan corridors through improved planning and greater timetable co-ordination with Metro in order to create additional V/Line paths into Melbourne.

**FINDING 5.4**

Completion of the Regional Rail Link project is designed to alleviate conflicts between metropolitan and V/Line services on the northern and western lines.

\textsuperscript{11} Mr Greg Wilson, Manager, Network Services and Performance, V/Line, Transcript of Evidence, 6 October 2009, 241.

\textsuperscript{12} Ibid, 237.

\textsuperscript{13} Mr Rob Barnett, Chief Executive Officer, V/Line, Transcript of Evidence, 6 October 2009, 236.
5.3 Extreme Weather Conditions

318. Consistent with problems experienced on the metropolitan network, extreme weather is a significant cause of V/Line service cancellations, particularly in the summer months. In January and February 2009, almost 60 per cent of V/Line cancellations were the result of the extreme heat, speed restrictions or bushfires.

319. An analysis of V/Line performance data during the course of the Inquiry reveals there are a range of extreme weather conditions that impact upon service delivery as the sample below illustrates:

- February 2009 – 104 trains were cancelled due to the impact of bushfires (rail infrastructure damage and line suspensions);
- April 2009 – 22 trains were cancelled due to lightning strikes;
- September 2009 – storms or lightning caused 7 trains to be cancelled;
- November 2009 – hot weather speed restrictions resulted in 30 cancellations and 113 delayed trains;
- December 2009 – hot weather speed restrictions resulted in 18 cancellations and 140 delayed trains;
- January 2010 – hot weather speed restrictions resulted in 27 cancellations and 153 delayed trains; and
- February 2010 – floods and lightning resulted in 57 cancelled trains and 49 delayed trains.

320. At its public hearing in October 2009, V/Line outlined in detail the impact and response to extreme hot weather conditions in January and February 2009. Consistent with the evidence received in relation to the metropolitan network in section 4.3.1, with respect to the impact of the heat on rail infrastructure, V/Line advised as follows:

- If rail temperature exceeds the stress-free temperature of the rail, the rails expand and can force sleepers to move sideways creating a buckle.
- The critical components are the ballast quality / quantity and sleeper quality. Typically rail is 60 kg/m.
• Speed restrictions are applied to reduce the forces applied by passing trains and also to allow trains the chance to stop in the event of a buckle.

• Speed restrictions are applied to both timber and concrete sleeper track but typically the restrictions are more severe and introduced at lower temperatures on timber.

• Once air temperatures exceed 40°C the restrictions become quite severe on all track.\(^14\)

321. Given the nature of regional rail passenger travel, it is essential the customers are given advance notice of heat speed restrictions and that alternative travel options are provided. During the 2009 summer heatwave, V/Line provided advance information to customers through a SMS notification system and regular web updates. V/Line advised the Committee that as a safety precaution in extreme heat train speeds are slowed down. In addition, some services are either partially or fully replaced by buses. While these measures may increase the trip time, they also prevent train derailment.

We impose these restrictions for safety reasons. Still tracks expand in extreme heat, and this can force sleepers to move sideways, creating track buckles. Speed restrictions are applied to reduce the forces applied by passing trains and also to allow the trains the chance to stop in the event of a buckle on the track.\(^15\)

322. The benefit of replacing wooden sleepers with concrete ones as a means of reducing track buckling was discussed in Chapter Four. However, V/Line advised that in extreme weather speed restrictions were applied to both wooden and concrete sleepers.

There is much discussion about whether concrete sleepers make the difference with heat speed restrictions. I can tell you that speed restrictions are applied to both concrete and timber sleepers, but typically the restrictions are more severe and introduced at lower temperatures with timber sleepers.\(^16\)

323. The issue of air conditioner failures during extreme heat, which was a major factor in the delays and cancellations of metropolitan trains, did not appear to be as significant on V/Line trains. With respect to the heatwave from 13

\(^14\) V/Line presentation to Committee, 6 October 2009.
\(^15\) Mr Rob Barnett, Transcript of Evidence, 6 October 2009, 232.
\(^16\) Ibid.
January to 7 February 2009, V/Line Chief Executive Officer, Mr Rob Barnett, advised the Committee:

There were 53 cancellations due to air conditioning failures on our trains. Of these 53 cancellations, 93 per cent were on our loco-hauled trains. This was a good outcome considering the number of services that we operated. Air conditioning on our newer trains, the V/Locities and the Sprinters, which form the vast majority of our fleet, performed well with very few breakdowns. It is interesting to note that we had fewer customer complaints about air conditioning in 2009 than we did in 2008.\footnote{Ibid.}

FINDING 5.5

Extreme weather conditions are a contributing factor in cancelled and delayed V/Line train services, particularly during the summer months. Heat speed restrictions and other weather conditions such as storms and bushfires can impact on service delivery. While weather conditions are outside the control of V/Line, it should continue to attempt to minimise service disruptions through early customer notifications, replacement coach services and continued infrastructure and fleet maintenance.

5.4 Infrastructure/Train Faults

324. Various infrastructure and rolling stock problems continue to be a factor in the reasons for cancelled and delayed V/Line services. In its performance reports to the Department of Transport, V/Line reported:

- in October and November 2008, over one-third of cancelled services were due to problems with rolling stock;
- in December 2008, over half of cancelled services were due to problems with rolling stock; and
- in March 2009, over one-third cancelled services were due to rolling stock and infrastructure problems.

325. V/Line performance reports published on its website reveal that from April 2009 to March 2010, train faults and infrastructure faults each accounted for an average of 15 per cent, or a combined 30 per cent, of all delayed services.

326. The issue of infrastructure and train faults was not specifically highlighted during the Committee’s public hearings other than some comment on air

\footnote{Ibid.}
conditioner failures during heatwaves, and specific infrastructure failures on the Bendigo line.

327. The question of signalling failures on the Bendigo line was raised by the Committee reflecting a view that the axle counter system may be a contributing factor. Mr Chris McKeown from Public Transport Safety Victoria suggested that the failure may not have been with the axle counter but with the power supply.

I am not sure exactly what those faults are, but one of the characteristics of axle counters … is that they operate by counting trains in and out of sections. If you lose power and the system shuts down, then there is definitely going to be a delay until that particular track section is validated to be clear for trains.  

328. The Committee received evidence from Siemens, the manufacturer of the axle counter system, that the problems on the Bendigo line related to a failure of the communication system. When the axle counters were installed only one communication system, rather than two, was installed. This meant that there was no backup in the event that the communication system failed. Siemens advised that works had been undertaken so the system has now been installed as recommended which should alleviate some of the problems.

329. The age of V/Line’s infrastructure was identified as a problem affecting the reliability of its services, given the majority of rolling stock dates from the 1940s-50s. It was suggested to the Committee that the age of infrastructure combined with a lack of maintenance contributed to delays as trains were unable to travel at maximum speeds. The Victorian Rail Freight Network Review, chaired by the Hon Tim Fischer AC, noted that maintenance on the regional network was reduced in the 1990s which resulted in the network becoming degraded.

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19 Mr Brian Luber, Executive Manager, Sales, Siemens Rail Services, Transcript of Evidence, 6 October 2009, 227.
20 Mr Bob Bassett, Divisional President, Rail Tram and Bus Union, Written Submission (11) 2.
330. In 2001, the Victorian Government proposed that the two gauge regional network would be standardised to standard-gauge tracks. The project was estimated to cost $96 million. These plans were deferred in 2003 due to a lack of Federal funds. At the time it presented its report, the Victorian Rail Freight Network Review suggested that standardisation of the whole Victorian rail freight network could not be justified, but noted that measures should be taken to eliminate break of gauge issues as traffic increased.22

331. The Victorian Rail Freight Network Review proposed dividing the regional intra-state non-metropolitan network into four classes of lines. Platinum lines are used by both the passenger and freight services, Gold lines are the core of the grain freight network, Silver lines are high priority lines and Bronze lines are those not designated a priority for upgrading at the time the report was published.

332. The Victorian Rail Freight Network Review anticipated that the Platinum lines referred to above would receive a high level of maintenance because they were part of either the V/Line passenger network or the Australian Rail Track Corporation Ltd (ARTC) interstate network. The Regional Fast Rail project is an example of investment in upgrading the infrastructure on some of these lines. The Regional Fast Rail project upgraded track and signalling infrastructure on the Geelong, Ballarat, Bendigo and Latrobe Valley lines. The project involved upgrading 500 kilometres of track, 400 new and/or upgraded signals, installation of 460,000 concrete sleepers and the upgrading on 170 level crossings.23

333. In its evidence to the Committee, V/Line highlighted the improvements to regional rail infrastructure and fleet arising out of the Regional Fast Rail project. The project resulted in:

- 38 new V/Line trains;
- 500 kilometres of upgraded track;
- 400 new and upgraded railway signals;
- over 460,000 concrete sleepers; 170 upgraded level crossing; and

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22 Ibid, 9.
23 Mr Rob Barnett, Chief Executive Office, V/Line, Transcript of Evidence, 6 October 2009, 231.
• new rail safety systems and fibre optic signalling.

334. In its written submission the Geelong Branch of the Public Transport Users Association (PTUA) suggested that although the extra carriages would take some of the pressure off the existing fleet, they would only be able to increase capacity on existing services rather than increase service frequency as no additional motor cars had been ordered.24

FINDING 5.6
Problems with infrastructure and rolling stock can account for up to 30 per cent of V/Line train delays and cancellations.

FINDING 5.7
Improvements to regional rail infrastructure and fleet are expected to reduce service failures arising from infrastructure and rolling stock.

5.5 Driver/Crew Shortages

335. The Committee notes with concern V/Line performance data which suggests driver and crew shortages are, or have been, a contributing factor in cancelled V/Line services.

336. The internal V/Line performance reports provided to the Department of Transport for the six month period between October 2008 and March 2009 reveals the following:

• in October 2008, 16 out of 62 cancellations were due to crew shortages;
• in November 2008, 17 out of 62 cancellations were due to crew shortages; and
• in March 2009, 23 out of 112 cancellations were due to lack of drivers.

337. In the months of January and February 2009 when there were a high number of cancellations, mainly due to heat issues, the proportion of cancellations due to driver shortages was much less, but still remained an issue. V/Line specifically highlighted to the Department the on-going problem with

24 Public Transport Users Association (Geelong West Branch), Written Submission (48) 5.
recruiting additional drivers which was hampered as a result of a dispute with the Rail, Tram and Bus Union Loco Division.\textsuperscript{25}

338. V/Line’s evidence suggested that although driver cancellations may be around 20 per month, when viewed against the total number of services operated this would be a small percentage.\textsuperscript{26}

339. In evidence to the Committee, V/Line largely attributed the cancellations to drivers’ rosters failing to take external factors such as driver training into account.

Our data indicates that if we look at our absenteeism in V/Line, the numbers are actually reasonably low. It is quite good. If you look at the essential question, it is how do we establish the number of people we need to run our operation? What we have is clearly that the timetable drives our rosters, and through the population of rosters plus a number of backup employees, if you like, that determines the headcount.

Essentially the rosters, when they are built at budget times, may not have figured into them things that we do not know about. A good example is recently a number of drivers have been involved in training on the Australian Rail Track Corporation network to do with operating the train from Sydney. We take over the driving of many of those trains from Junee and there have been some changes to infrastructure. That has created a large number of driver shifts that have been taken out of our roster to fulfil that training requirement. That is one example, but there will be many examples of that.\textsuperscript{27}

340. However, as referred to earlier, the issue of driver shortages was clearly identified by V/Line as an ongoing problem. Further, V/Line suggested to the Committee that service cancellations due to drivers being ill only constitute a small percentage, given rosters normally incorporate a number of spare drivers for each shift.

We only get handfuls of drivers who go off sick at any one time. It depends on how much notice you get of those drivers going off sick, as to how quickly you can replace them, or juggle the rosters around on that given day. Generally if you have a day’s notice you can cover the rosters, but it is the short-term ones who ring up at lunchtime for the evening peak when you do struggle to actually cover that service and run a train.

\ldots

\textsuperscript{25} V/Line monthly performance reports to the Department of Transport, October 2008 to March 2009.

\textsuperscript{26} Mr Rob Barnett, Transcript of Evidence, 6 October 2009, 236.

\textsuperscript{27} Ibid, 235.
By and large in our rostering we do have a number of spares, and people available step up, so that they are always there for the roster. But if you get a significant event happen, it is hard to cover that.  

341. Mr Bob Bassett, the Divisional President of the RTBU suggested to the Committee that staff growth has not kept pace with patronage growth. Consequently this means that some services are cancelled due to a lack of staff.  

342. The Committee notes Victorian Parliament’s Education and Training Committee has recently conducted an Inquiry into skills shortages in the rail industry. The Committee was required to examine matters including factors influencing recruitment and retention of staff; the demographic profile of the workforce and the outlook for future retirements and loss of skills.  

343. The Education and Training Committee tabled its final report in Parliament on 5 May 2010 and broadly found that an adequate supply of appropriately skilled and qualified staff is essential for the efficient operation of rail services. Many of the roles in the rail industry require highly specialised skills, which involve long training periods. For example, the Committee notes it takes 73 weeks to train a metropolitan train driver. Given patronage growth experienced by rail services is expected to necessitate an expansion of the workforce, and that it predicted that around 40 per cent of the rail workforce would leave the industry between 2008 to 2012, it will be important to balance the future staffing needs against training requirements to prevent potential staff shortages in certain roles.  

**FINDING 5.8**  
Driver/crew shortages are a factor in the reasons for V/Line train cancellations.  

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29 Mr Bob Bassett, Divisional President, Rail Tram and Bus Union, *Written Submission* (11) 1.
5.6 Patronage Growth and Overcrowding

Patronage growth on V/Line services almost doubled between 2004-05 and 2008-09. V/Line attributed this growth to a number of factors including the fare decreases in 2007, rising petrol prices and faster services. In its evidence, V/Line suggested that one of the main causes for the patronage growth was the enhancement in regional train services.

I think history says to us — and we saw it when the original fast rail networks were closed and being upgraded — that patronage drops dramatically when it goes to a coach, because if people have a choice, they have their own car and they will say, ‘I might as well drive so I have got some element of control’. Our experience is that people by and large want to travel on the train and we need to try and provide that experience where it is absolutely possible.

The Committee received several submissions which suggested that service frequencies and timetables were lagging behind patronage growth, resulting in excessive overcrowding on V/Line services. Evidence also indicated that on weekdays outside of peak times, trains between Melbourne and Geelong are approximately hourly, with passengers forced to sit on the floor due to lack of seats.

The data provided to the Committee by V/Line confirmed overcrowding was a problem on several lines. Graph 5.4 illustrates the average load breaches per corridor per month between October 2008 and March 2009. It should be noted that during this period there is a general trend down, which was attributed by V/Line to the deployment of some three car sets. The graph below also indicates that overcrowding is worst on the Geelong corridor.

The Gippsland line featured prominently in evidence received by the Committee. The stopping pattern of the line was identified as failing to deliver passengers to their destinations. Additional stops were proposed at Casey and Clayton due to the stations' proximity to the Hospital and University/TAFE campuses. The stop at Richmond was proposed to be eliminated given its proximity to Flinders Street and the ease of travelling between the two stops.

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30 Mr Rob Barnett, Chief Executive Office, V/Line, Transcript of Evidence, 6 October 2009, 231.
31 Mr Rob Barnett, Transcript of Evidence, 6 October 2009, 241.
32 Mr Ray Manley, Written Submission (21) 1.
33 Ms Margaret Curtis, Written Submission (15) 1.
Graph 5.4: Average load breaches per corridor per month

Source: Data provided to the Committee by V/Line.

348. Both the Wellington Shire Council and the East Gippsland Shire Council suggested that one of the causes of overcrowding on the Gippsland line is that metropolitan passengers using Metcards are permitted to board at Pakenham. This is the only V/Line service that permits metropolitan passengers to board. A further problem is that there is no dedicated express track for V/Line services between Pakenham and Flinders Street. Consequently any time savings realised by the Regional Fast Rail project are lost when trains enter the metropolitan area.34

349. To deal with patronage growth, V/Line expanded its capacity by adding a third carriage to the VLocity two-car train sets in 2008-09, which increased the number of physical seats available on V/Line trains by 1064 to a total of 17,886.35 The Committee notes however that although V/Line recorded significant patronage growth on regional train and coach services, increasing from 11.96 million in 2007-08 to 13.17 million in 2008-09,36 the expected outcome for 2009-10 is 13.4 million, while the target for 2010-11 is 14 million. (The original target for 2009-10 was 14.4 million.)37 The lower projected

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34 Mr Steven Dickson, Director, Community & Development, Wellington Shire Council, Written Submission (44) 2; – Ms Rhonda James, East Gippsland Shire Council, Written Submission (45) 4.
37 budget.eyemedia.com.au/CA2576BD0016DD83/WebObj/BP3Ch3DOT/$File/BP3Ch3DOT.pdf accessed 12.05.2010 at 2.45 p.m.
growth and capacity expansions mean V/Line is potentially well positioned to continue to deliver reliable services.

**FINDING 5.9**

Victoria’s regional passenger train network has experienced significant patronage growth in recent years. It is expected that further proposed investment in rail infrastructure and fleet, combined with timetable improvements, may alleviate overcrowding issues.

### 5.7 Southern Cross Station Issues

350. A number of submitters identified problems with or relating to Southern Cross Station. The provision of information regarding service changes and delays at Southern Cross, for example, was hampered due to the station’s acoustics and displays being poorly located and not updated. Further V/Line displays use a 24 hour clock and list services in order, while metropolitan displays use a 12 hour clock and list services by corridor. The confusion may result in passengers missing connecting services.38

351. The passenger waiting areas at Southern Cross were identified as being inadequate. The Committee received evidence that passengers travelling late at night may be forced to wait outside the station.39

352. While the actual station has been upgraded, the infrastructure serving the station has not been significantly altered since 1958. Delays arise from a lack of sidings, which means trains are stored in the arrival yard. Further, the Committee received evidence that upgrading the Franklin Street cross-over would eliminate a bottleneck between metropolitan and V/Line services.40

353. V/Line advised the Committee of communication problems at Southern Cross Station during the January/February 2009 heatwave and bushfire periods:

> At times we struggled with the on-ground communication at Southern Cross station and the metropolitan stations when it was unclear what was happening. This is an area we certainly need to improve. At the time we tried to overcome this by increasing the number of people on the ground and using our new SMS

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38 Ms Leah-anne Howie, Secretary, Western Improved Passenger Service, Written Submission (26) 9.

39 Mr Ray Manley, Written Submission (21) 1.

40 Mr Bob Bassett, Divisional President, Rail Tram and Bus Union, Written Submission (11) 4.
notification system to tell customers what was happening in advance.

354. In response to these problems, V/Line has embarked on various continuous improvement programs with respect to communication at Southern Cross Station:

We have focused on strengthening communication processes between the Southern Cross yard and the station control room. This means that staff on the ground will have more accurate and timely information so they can better guide customers.

5.8 V/Line Institutional Arrangements

355. In Chapter Three, the Committee highlighted evidence from a number of witnesses regarding the need for a central authority to coordinate public transport. While the Committee is not calling for a return to publicly operated metropolitan train services, it is worth highlighting findings from an August 2009 Senate Rural and Regional Affairs and Transport References Committee report into Investment of Commonwealth and State funds in public passenger transport infrastructure and services. This report found that:

... good governance was usually said to be a single regional public transport authority with the power and responsibility to plan and deliver the city's regional public transport service in an integrated way under a single brand ...

356. As previously noted, V/Line currently plans and operates rail and bus services. While V/Line is directly responsible for the delivery of rail services, it usually subcontracts the rural and regional coach services to private bus operators. These coaches however are usually in V/Line livery.

Certainly in the past I think the way in which V/Line has operated its train and coach services as a multimodal entity has been somewhat successful. For example, I used to travel to Daylesford on a regular basis; I would get the V/Line train to Woodend and then at Woodend there would be a V/Line-branded coach. It was actually operated by a private coach operator in the area, but it was in V/Line livery, so you could quite clearly see it was part of the same system. That then took you to Daylesford, and that was coordinated with the train, so that system was integrated in much the way we would like to see metropolitan transport integrated in fact. Some of that multimodal integration has come about on the V/Line side of things. It is certainly far from ideal, but it is a little bit ahead of the game as far as Melbourne's transport is concerned, I suppose. I do not know that we necessarily go out and say that V/Line is the epitome of how public transport ought to be run.42

41 Senate Standing Committee on Rural and Regional Affairs and Transport. Commonwealth of Australia, Inquiry into the investment of Commonwealth and State funds in public passenger transport infrastructure and services (2009) 40
42 Dr Anthony Morton, Secretary, Public Transport Users Association, Transcript of Evidence, 5 October 2009, 179.
357. While it could be suggested that the institutional arrangements for V/Line are operating on the basis of the good governance model proposed by the Senate Committee, the Geelong Branch of the PTUA suggested that this model could be improved by giving it greater independence from the Government.

A country public transport authority should be established to plan the rural and regional rail and bus network. It should also operate at arm's length from the government, under a clear charter.

It would have responsibility for services now run by V/Line (which is effectively a wholly state-owned “private” company, having been left in limbo since the withdrawal of its former private franchise-holder National Express in 2002). V/Line currently plans and operates its rail services, and plans and subcontracts many rural and regional coach services to private bus operators.

The new country authority would also assume, from the Department of Transport, responsibility for planning and supervising the operation of the considerable number of non-V/Line country buses which presently operate between and within smaller rural centres.

These arrangements would allow for better co-ordination of all public transport services, creating a real network across Victoria, maximising the linkages between all public transport modes and routes.

Through a separate division, the country public transport authority would also have responsibility for controlling access to the network for rail freight services.*

FINDING 5.10
The current institutional arrangements for V/Line result in a co-ordinated multimodal service to regional Victoria.

Committee Room
26 May 2010

* Mr Paul Westcott, Public Transport Users Association, Geelong Branch, Written Submission (48) 6.
Appendix A: Select Committee Establishing Resolution

1. A select committee of seven members be appointed to inquire into the factors leading to and causes of failures in the provision of metropolitan and V/Line train services.

2. The committee will consist of three members from the government party nominated by the Leader of the Government, three members from the Liberal National coalition nominated by the Leader of the Opposition and one member from the Australian Greens nominated by the Australian Greens Whip.

3. The members will be appointed by lodgement of the names with the President by the persons referred to in paragraph 2 no later than 4.00 p.m. on Friday, 20 March 2009.

4. The first meeting of the committee must be held no later than 4.00 p.m. on Monday, 6 April 2009.

5. The committee may proceed to the dispatch of business notwithstanding that all members have not been appointed and notwithstanding any vacancy.

6. Four members of the committee will constitute a quorum of the committee.

7. The chair of the committee will be a non government member and the deputy chair will be a government member.

8. The committee will advertise its terms of reference and call for submissions and all such submissions received by the committee will be treated as public documents unless the committee otherwise orders.

9. The committee may commission persons to investigate and report to the committee on any aspects of its inquiry.

10. The committee will present its final report to the Council no later than March 2010.
11. The presentation of a report or interim report of the committee will not be deemed to terminate the committee’s appointment, powers or functions.

12. The foregoing provisions of this resolution, so far as they are inconsistent with the standing orders and sessional orders or practices of the Council will have effect notwithstanding anything contained in the standing or sessional orders or practices of the Council.
Appendix B: List of Written Submissions Received

1. Mr Peter Dwyer, Patterson Lakes
2. Mr Robert McLean, Shepparton
3. Mr Andrew Ashworth, Tyers
4. Mr David Archer JP, Seymour
5. Mr Bruce Sutherland, Malvern
6. Ms Susan Moldrich, Mirboo
7. Mr Arvo Talvik, Cranbourne
8. Mr Derek Cox, Diamond Creek
9. Mr Roderick Smith, Editor, Rail News Victoria
10. Mr Paul Hamilton, Manager Transport, City of Casey
11. Mr Bob Bassett, Divisional President, Rail, Tram and Bus Union
12. Ms Barbara Crisp, Belgrave
13. Mr Benjamin Sangster, Service Development Manager, McHarry’s Buslines
14. Mr Brian Sherry, Rosanna
15. Ms Margaret Curtis, Newborough
16. Mr Graeme Madigan, Brighton
17. Ms Lois Williams, Central Gippsland Older Adults Recreation Network Inc
18. Dr Paul Mees, Senior Lecturer in Transport Planning, RMIT
19. Cr Samantha Dunn, Chairperson, Eastern Transport Coalition
20. Prof Graham Currie, Chair in Public Transport, Monash University
21. Mr Ray Manley, Lara
22. Ms Jennifer Williams, Altona
23. Ms Jean Whitworth, Belgrave
24. Mr Geoff Gardner, Newport
25. Mr Simon Cohen, Public Transport Ombudsman
26. Ms Leah-anne Howie, Secretary, Western Improved Passenger Service
27. Mr John Prideaux, Thomastown
28. Ms Elaine Twomey, Shepparton
29. Mr Paul Stark, Richmond
30. Mr Alan Osborne, Director, Public Transport Safety Victoria
31. Mr Frank Reinthaler, Albion
32. Mr Daniel Bowen, President, Public Transport Users Association
33. Mr Evan Boloutis, Manager Engineering and Traffic, City of Boroondara
34. Dr John Stone, Project Officer, Australasian Centre for the Governance and Management of Urban Transport
35. Mr Nicholas White, Cobram
36. Mr Glen Mills, Glen Waverley
37. Mr Graeme Skinner, Eltham
38. Mr Glenn King, Ballarat
39. Mr David Eltringham, Secretary, Wimmera Regional Transport Group, Horsham Rural City Council
40. Mr Graeme Emonson, Chief Executive Officer, Knox City Council
41. Mr Kary Petersen, Manager, Transport, Tourism and Transport Forum
42. Mr John McPherson, Collingwood
43. Mr Ray Allen and Mr Peter Downie, South Melbourne
44. Mr Steven Dickson, Director, Community and Development, Wellington Shire Council
45. Mr Steve Kozlowski, Chief Executive Officer, East Gippsland Shire Council
46. Mr Ossie Martinz, General Manager Assets, Frankston City Council
47. Ms Alicia Keogh, Manager Economic Development, Greater Shepparton City Council
48. Mr Paul Westcott, Public Transport Users Association, Geelong Branch
49. Mr Griff Davis, General Manager, Advocacy, City of Whittlesea
50. Cr Jackie Fristacky, Chair, Metropolitan Transport Forum
51. Mr Ashwin Sharma, Keysborough
52. Mr Stephen Griffin, Acting Chief Executive Officer, City of Greater Geelong
53. Ms Diana Rice, Seaholme
54. Mr Peter Marshall, Chief Executive Officer, Wyndham City Council
55. Connex Melbourne
56. Victorian Government
57. Mr Ken Blackman, Hampton
58. Mr Christopher Blake, Ripponlea
59. Mr Rolf Preston, Highett
60. Mr Ferhat Salman, Montmorency
61. Mr Bob Maguire, Northcote
62. Mr John Lees, The Patch
63. Mr Michael Plis, North Dandenong
64. Ms Ann Sathasivam, Elsternwick
65. Mr Chris Beall, Eltham
66. Mr Daniel Voronoff, Maidstone
67. Mr Hugh Howard, Rowville
68. Mr Derek Russell, Eltham
69. Mr Adam Watson, Mitcham
70. Mr Binesh Perera, Keysborough
71. Ms Tahmina Saeed, Craigieburn
72. Mr Emmy Silvius, Vermont
73. Mr John Nevins, Chief Executive Officer, City of Kingston
Appendix C: Schedule of Public Hearings

Tuesday 21 July 2009

Department of Transport
- Mr Jim Betts, Secretary
- Mr Hector McKenzie, Director of Public Transport
- Mr Tom Sargant, Deputy Director of Public Transport, Safety and Asset Management

Connex Melbourne / Veolia
- Mr Jonathan Metcalfe, Executive Chairman, Connex Melbourne Pty Ltd
- Mr Bruce Hughes, Deputy Chairman, Connex Melbourne Pty Ltd
- Mr Norm Grady, Chief Executive Officer, Mainco Melbourne Pty Ltd
- Ms Catherine Baxter, General Manager, United Group Melbourne Transport Ltd

Tuesday 22 September 2009

Australasian Centre for the Governance and Management of Urban Transport
- Dr John Stone

Tourism and Transport Forum
- Mr Kary Petersen, Manager, Transport
- Mr Rowan Barker, Manager, Media and Communications

Mr Edward Dotson

Eastern Transport Coalition
- Cr Samantha Dunn

Dr Paul Mees, Senior Lecturer in Transport Planning, RMIT

Monday 5 October 2009

Institute of Transport Studies, Monash University
- Prof Graham Currie, Chair in Public Transport

UITP (International Association of Public Transport)
- Mr Peter Moore, Executive Director

Upgrade Upfield Corridor Committee
- Mr Denis Watson

Public Transport Users Association
- Mr Daniel Bowen, President
- Dr Tony Morton, Secretary

Metropolitan Transport Forum
- Ms Suzie Strain, Executive Officer
- Cr. Martin Zakharov, Secretary, MTF and Councillor, City of Maribyrnong
- Mr Paul Hamilton, Manager Transport, City of Casey
Tuesday 6 October 2009

Public Transport Safety Victoria
- Mr Alan Osborne, Director
- Mr Chris McKeown, General Manager Safety Systems

Metlink
- Mr Bernie Carolan, Chief Executive Officer

Siemens
- Mr Paul Bennet, Director – Siemens Rail Services
- Mr Brian Luber, Executive Manager Sales

V/Line
- Mr Rob Barnett, Chief Executive Officer
- Ms Ursula McGinnes, General Manager Stakeholder Relations
- Mr Greg Wilson, Manager, Network Services and Performance

Wednesday 9 December 2009

Mr Ian McCallum, Chief Investigator, Transport and Marine Safety Investigations

Tuesday 2 March 2010

Metro Trains Melbourne
- Mr Andrew Lezala, Chief Executive Officer
- Mr Bob Lindsell, Chief Operating Officer
- Mr Ys Au, General Manager, Asset Management and Engineering
- Mr Robert Tatton-Jones, Operations

Department of Transport
- Hon. Martin Pakula, Minister for Public Transport
- Mr Jim Betts, Secretary
- Mr Hector McKenzie, Director of Public Transport
- Mr Tom Sargant, Deputy Director of Public Transport, Safety and Asset Management
Appendix D: Siemens Train Brake Specifications

Mr Richard Willis  
Secretary, Council Committees  
Legislative Council  
Parliament House  
EAST MELBOURNE VIC 3002

Dear Mr Willis

SELECT COMMITTEE ON TRAIN SERVICES

I refer to your letters dated 10 March 2010 to the Minister for Public Transport, the Director of Public Transport, the Deputy Director of Public Transport (Safety and Asset Management) and myself in relation to the above matter. I am responding on behalf of the Minister and officers of the Department of Transport.

Matters taken on notice

The braking performance specifications of the Siemens Nexus trains

The performance requirements for the Siemens Nexus trains were originally specified in a document entitled 'New Train Pro Forma Performance Parameters' dated 17 October 1999. These specifications were later amended by a further version of the 'New Train Pro Forma Performance Parameters' dated 1 August 2001.

Please find enclosed copies of relevant redacted extracts of the original and amended specifications.

I draw your attention to the following in respect of the specifications:

1  the full specifications comprise Schedules to the Manufacture and Supply Agreements under which Siemens Ltd manufactured and delivered the Nexus trains. Relevant extracts, rather than the full specifications, are being provided as the full specifications run to several hundred pages;

2  the page numbering within the original specification extract reflects the fact that the original specification was made up of a number of sub-documents; and
the specifications include calculations regarding the impact that defective traction equipment has on travel times. The specifications foreshadow that similar calculations will be provided in relation to defective brake equipment (refer section 2.5.7). Whilst our enquiries have revealed that these calculations were not provided, in practice, if a train is identified as having defective brake equipment it is generally removed from service in accordance with the rail operator’s fault management protocol. Accordingly, calculations regarding any increase in travel times are not considered to be of material practical relevance.

The publication of monthly data in relation to cancelled metropolitan trains on a line by line basis

The Public Transport Division of the Department publishes reliability data (ie cancellation data) for metropolitan and V/Line trains on a line-by-line basis in its monthly Track Record bulletin. Track Record is available on the Department’s website. Track Record is ordinarily published approximately two to four weeks after the end of each month.

If you have any questions in relation to the above, please contact Robert Pearce on 9095 4253.

Yours faithfully

JIM BETTS
Secretary

10 / 5 /2010
New Trains for
National Express

New Train Pro Forma Performance Parameters
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2.5.3 Electric Braking Performance

All rates specified herein are net rates on clean, dry, well maintained level track. Braking performance is achieved under all conditions of line receptivity from 0% up to 100%. Depending on the line receptivity the regenerative brake is blended with rheostatic brake.

- Maximum deceleration: \(1.0 \text{ m/s}^2\)
- Jerk limit (adjustable): 0.60 to 1.0 m/s\(^3\)
- Fade point: 8 km/hr
- Stopping Distance: according to the applicable standard

The command brake rate will be achieved using electric braking at any loading up to and including AW2 and for any train speed between fade point to a minimum of 50 km/hr. Outside these speeds or above AW2 loading, friction brake supplementation may be necessary to achieve the command brake rate.

The regenerative braking scheme will optimise the utilisation of the available line receptivity for braking.
2.5.4 Pneumatic Braking Performance

All rates specified herein are net rates on clean, dry, well-maintained level track and without the assistance of electric braking. All rates are time averaged measured over the stop after 90% of the commanded brake cylinder pressure has been achieved. The full command brake rate, both service and emergency will be achieved without assistance from electric brake, for any load from AW0 to AW3_inclusive. The brake values given are load compensated. The service brake is durable and designed for continuous service usage. However, there will be a "look-out time" of 60 sec before a new start is possible after an emergency brake was applied. The emergency brake can withstand up to 3 repeated start/stop sequences. After 3 sequences an extended "look-out time" may be necessary. Details have to be clarified during the detailed design phase.

- Service brake rate (maximum): \( 1.0 \text{ m/s}^2 \)
- Jerk limit (adjustable): 0.60 to 1.0 m/s³
- Emergency brake rate (maximum): \( 1.3 \text{ m/s}^2 (\pm 0.15 \%, -0.15 \%) \)
- Stopping Distance: According to the applicable standard

The emergency brake will be instantaneously applied with no jerk limitation.
2.5.5 Parking Brake Performance

The parking brake force will be sufficient to hold an AW3 loaded train on the network. It will also be sufficient to stop an AW0 train moving down a 3% gradient with an initial speed of 20 km/hr.

The parking brake force on individual axles will, however, not be so large as to inhibit emergency train recovery and wheel-flat will not arise due to the parking brake force.

Automatic parking brake application will follow an initial pneumatic brake application with the parking brake applying as the air brake cylinder pressure is released. The system is designed so that the parking brake takes effect prior to fade off of the service brake.
2.5.7 Defective Brake Equipment.

Similar calculations as performed for defective Traction Equipment Capability will be performed and provided as soon as possible.
New Trains for National Express

New Train Pro Forma Performance Parameters
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1) Melbourne Bayside Amendment to Schedule 1
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2.5 Performance

2.5.3. Electric Braking Performance

All rates specified herein are net rates on clean, dry, well maintained level track. Braking performance is achieved under all conditions of line receptivity from 0% up to 100%. Depending on the line receptivity the regenerative brake is blended with rheostatic brake.

- Maximum deceleration: 1.0 m/s²
- Jerk limit (adjustable): 0.60 to 1.0 m/s²
- Fade point: 10 km/hr ± 2% (Ref # 16)
- Stopping Distance: according to the applicable standard

The command brake rate will be achieved using electric braking at any loading up to and including AW2 and for any train speed between fade point to a minimum of 50 km/hr. Outside these speeds or above AW2 loading, friction brake supplementation may be necessary to achieve the command brake rate.

The regenerative braking scheme will optimise the utilisation of the available line receptivity for braking.
2.5.4 Pneumatic Braking Performance

All rates specified herein are net rates on clean, dry, well maintained level track and without the assistance of electric braking. All rates are time averaged measured over the stop after 90% of the commanded brake cylinder pressure has been achieved. The full command brake rate; both service and emergency will be achieved without assistance from electric brake, for any load from AWS to AW3 inclusive. The brake values given are load compensated. The service brake is durable and designed for continuous service usage. The emergency brake can withstand up to 3 sequential start/stop sequences (0-130km/h-0). (Ref #18)

- Service brake rate (maximum): 1.0 m/s²
- Jerk limit (adjustable): 0.60 to 1.0 m/s³
- Emergency brake rate (maximum): 1.3 m/s² (+15 %, -15 %) (Ref #103)
- Stopping Distance: According to the applicable standard

The emergency brake will be instantaneously applied with no jerk limitation.
SIEMENS

2.5.5 Parking Brake Performance

Original remains.

2.5.7 Defective Brake Equipment

Original remains. (Ref # 18)
Extracts of Proceedings

Legislative Council Standing Order 24.08 requires the Committee to include in its report all the divisions which occurred during meetings and the names of Members voting for each side on a question. The Chairman of the Select Committee can only vote when there is an equality of votes.

Proceedings on Consideration of Draft Report

The Committee divided on the following questions during consideration of this Report, with the result of the divisions detailed below. Questions agreed to without division are not recorded in these extracts.

Paragraph and finding numbers refer to the Committee’s draft report, and consequently may differ from the final adopted report as printed.

DELIBERATIVE MEETING FRIDAY, 21 MAY 2010

FINDING 3.1

Responsibility for delivery of Victoria’s train services is fragmented across a range of Government authorities, private operators and independent statutory bodies. The Committee believes this fragmentation of responsibility may result in uncertainty in terms of the factors leading to and causes of failures in the provision of train services in Victoria.

Question – That Finding 3.1 stand part of the report – put.

The Committee divided.

<table>
<thead>
<tr>
<th>Ayes 3</th>
<th>Noes 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Barber</td>
<td>Ms Huppert</td>
</tr>
<tr>
<td>Mr Drum</td>
<td>Mr Leane</td>
</tr>
<tr>
<td>Mr O'Donohue</td>
<td>Mr Viney</td>
</tr>
</tbody>
</table>

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

FINDING 3.2

Evidence illustrates improvements could be made to the delivery of train services in Victoria by further streamlining of public transport governance responsibility.

Question – That Finding 3.2 stand part of the report – put.
The Committee divided.

**Ayes 3**
- Mr Barber
- Mr Drum
- Mr O'Donohue

**Noes 3**
- Ms Huppert
- Mr Leane
- Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

**FINDING 4.1**

The Committee finds that Melbourne’s train operators, previously Connex and now Metro Trains Melbourne, have failed to consistently deliver metropolitan trains on-time in line with their respective performance thresholds under the franchise contracts. In particular, train punctuality and reliability has been in significant decline over the summer months in 2008-09 and 2009-10.

**Amendment moved by Mr Viney** – That the words ‘In particular, train punctuality and reliability has been in significant decline over the summer months in 2008-09 and 2009-10’ be deleted.

Question – That the amendment be agreed to – put.

The Committee divided.

**Ayes 3**
- Ms Huppert
- Mr Leane
- Mr Viney

**Noes 3**
- Mr Barber
- Mr Drum
- Mr O'Donohue

There being an equality of votes, the Chairman gave his casting vote with the Noes.

Amendment negatived.

Question – That Finding 4.1 stand part of the report – put.

The Committee divided.

**Ayes 3**
- Mr Barber
- Mr Drum
- Mr O'Donohue

**Noes 3**
- Ms Huppert
- Mr Leane
- Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.
FINDING 4.2

The largest single categories for cancellations and delays in Melbourne’s train services are train and infrastructure faults, together with passenger interchange.

Amendment moved by Ms Huppert – After the word ‘interchange’ insert the following words ‘, resulting from a doubling in patronage.’

Question – That the amendment be agreed to – put.

The Committee divided.

Ayes 3
Ms Huppert
Mr Leane
Mr Viney

Noes 3
Mr Barber
Mr Drum
Mr O’Donohue

There being an equality of votes, the Chairman gave his casting vote with the Noes.

Amendment negatived.

FINDING 4.3

Melbourne’s train network has experienced significant, sustained patronage growth over the past ten years which was not matched with an appropriate increase in services and infrastructure investment during this period. This has caused constraints on network capacity and adversely affected service reliability. The Committee believes the root cause of this failure is poor strategic planning and investment, despite growth being part of the original franchise agreements and the Victorian Government’s policy commitment of 20 per cent of mechanised trips on public transport by 2020.

Question – That Finding 4.3 stand part of the report – put.

The Committee divided.

Ayes 3
Mr Barber
Mr Drum
Mr O’Donohue

Noes 3
Ms Huppert
Mr Leane
Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.
FINDING 4.4

The Committee believes that planning for medium term growth can be catered for through better use of existing infrastructure, which is potentially the cheapest and fastest way to increase capacity.

**Amendment moved by Mr Viney** – After the word ‘capacity’ insert the following 'The Committee notes that the major constraint for increased use of existing infrastructure is that it will lead to traffic gridlock at level crossings and rail congestion.'

Question – That the amendment be agreed to – put.

The Committee divided.

<table>
<thead>
<tr>
<th>Ayes 3</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ms Huppert</td>
<td>Mr Barber</td>
</tr>
<tr>
<td>Mr Leane</td>
<td>Mr Drum</td>
</tr>
<tr>
<td>Mr Viney</td>
<td>Mr O'Donohue</td>
</tr>
</tbody>
</table>

There being an equality of votes, the Chairman gave his casting vote with the Noes.

Amendment negatived.

Question – That Finding 4.4 stand part of the report – put.

The Committee divided.

<table>
<thead>
<tr>
<th>Ayes 3</th>
<th>Noes 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr Barber</td>
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<td>Mr Leane</td>
</tr>
<tr>
<td>Mr O'Donohue</td>
<td>Mr Viney</td>
</tr>
</tbody>
</table>

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

FINDING 4.5

The number of trains currently in operation across the metropolitan network is insufficient to meet the existing and projected patronage levels. Despite plans to have 20 per cent of mechanised trips on public transport by 2020, the Government has been slow to invest in expanding the fleet of trains on the metropolitan network.

**Amendment moved by Mr Huppert** – That the words ‘Despite plans to have 20 per cent of mechanised trips on public transport by 2020, the Government has been slow to invest in expanding the fleet of trains on the metropolitan network.’ be deleted.
Question – That the amendment be agreed to – put.

The Committee divided.

Ayes 3  Noes 3
Ms Huppert  Mr Barber
Mr Leane  Mr Drum
Mr Viney  Mr O'Donohue

There being an equality of votes, the Chairman gave his casting vote with the Noes.

Amendment negatived.

Question – That Finding 4.5 stand part of the report – put.

The Committee divided.

Ayes 3  Noes 3
Mr Barber  Ms Huppert
Mr Drum  Mr Leane
Mr O'Donohue  Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

FINDING 4.6

The introduction of new X'Trapolis trains on the metropolitan network has been slower than projected in the Victorian Government’s transport plans and public announcements. Delays in the roll-out of the new train fleet has therefore not alleviated train delays and cancellations in the first quarter of 2010 as promised by the Victorian Government.

Question – That Finding 4.6 stand part of the report – put.

The Committee divided.

Ayes 3  Noes 3
Mr Barber  Ms Huppert
Mr Drum  Mr Leane
Mr O'Donohue  Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.
FINDING 4.14

A failure by the Victorian Government to ensure that air-conditioners on the Comeng train fleet were upgraded to a required standard resulted in significant train cancellations during the extreme weather conditions in January and February 2009.

Amendment moved by Mr Viney – Delete the words ‘the Victorian Government’ and insert in their place ‘successive Victorian governments’.

Question – That the amendment be agreed to – put.

The Committee divided.

Ayes 4
- Mr Barber
- Ms Huppert
- Mr Leane
- Mr Viney

Noes 2
- Mr Drum
- Mr O'Donohue

Amendment agreed to.

FINDING 4.15

The Victorian Government and Metro Trains Melbourne should ensure that all metropolitan trains are equipped with upgraded air-conditioner systems as a matter of priority to ensure Melbourne’s train commuters receive a reliable service delivery in future summers, including days of extreme high temperatures.

Amendment moved by Ms Huppert – After the word ‘should’ insert the following ‘continue the current program of upgrades, so as to’.

Question – That the amendment be agreed to – put.

The Committee divided.

Ayes 4
- Mr Barber
- Ms Huppert
- Mr Leane
- Mr Viney

Noes 2
- Mr Drum
- Mr O'Donohue

Amendment agreed to.

FINDING 4.17

It is unclear from the evidence provided by Metro and the Department of Transport as to how new timetables are being planned in conjunction with V/Line services. This further illustrates disadvantages arising from the fragmentation of the management of train services, and in this case, services which share the same rail infrastructure.

The Committee divided.

Ayes 3  
Mr Barber  
Mr Drum  
Mr O'Donohue  

Noes 3  
Ms Huppert  
Mr Leane  
Mr Viney  

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

FINDING 4.18

There needs to be greater coordination of the metropolitan train timetable with bus timetables to ensure timely and efficient connectivity.

Amendment moved by Mr Huppert – That finding 4.18 be deleted and replaced with the following words ‘That coordination of the metropolitan train timetable with bus timetables continue to ensure timely and efficient connectivity.’

Question – That the amendment be agreed to – put.

The Committee divided.

Ayes 3  
Ms Huppert  
Mr Leane  
Mr Viney  

Noes 3  
Mr Barber  
Mr Drum  
Mr O'Donohue  

There being an equality of votes, the Chairman gave his casting vote with the Noes.

Amendment negatived.

FINDING 5.2

Conflicts within the metropolitan network account for one-quarter of all V/Line train delays. These conflicts limit paths available to V/Line services leading to trains running at slower speeds to accommodate metropolitan services.

Amendment moved by Mr Viney – That the first sentence in finding 5.2 be deleted and replaced with the following words ‘Substantial patronage growth in both metropolitan and regional services has resulted in conflicts within the metropolitan network and accounts for one-quarter of all V/Line train delays.’

Question – That the amendment be agreed to – put.

The Committee divided.
Ayes 3  Noes 3
Ms Huppert  Mr Barber
Mr Leane  Mr Drum
Mr Viney  Mr O'Donohue

There being an equality of votes, the Chairman gave his casting vote with the Noes.

Amendment negatived.

Question – That Finding 5.2 stand part of the report – put.

The Committee divided.

Ayes 3  Noes 3
Mr Barber  Ms Huppert
Mr Drum  Mr Leane
Mr O'Donohue  Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

DELIBERATIVE MEETING WEDNESDAY, 26 MAY 2010

Preliminary Pages

Question – That the preliminary pages (table of contents, list of findings, list of acronyms) stand part of the report.

The Committee divided.

Ayes 3  Noes 3
Mr Barber  Ms Huppert
Mr Drum  Mr Leane
Mr O'Donohue  Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

Chapter 3

Question – That Chapter 3 (paragraphs 46-107, Findings 3.1 and 3.2) stand part of the report

The Committee divided.
Ayes 3  
Mr Barber  
Mr Drum  
Mr O’Donohue  

Noes 3  
Ms Huppert  
Mr Leane  
Mr Viney  

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

Chapter 4

Question – That Chapter 4 (paragraphs 108-286, Findings 4.1 to 4.21) stand part of the report

The Committee divided.

Ayes 3  
Mr Barber  
Mr Drum  
Mr O’Donohue  

Noes 3  
Ms Huppert  
Mr Leane  
Mr Viney  

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

Chapter 5

Question – That Chapter 5 (paragraphs 287-357, Findings 5.1 to 5.10) stand part of the report

The Committee divided.

Ayes 3  
Mr Barber  
Mr Drum  
Mr O’Donohue  

Noes 3  
Ms Huppert  
Mr Leane  
Mr Viney  

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.

Adoption of Report


The Committee divided.
Ayes 3
Mr Barber
Mr Drum
Mr O'Donohue

Noes 3
Ms Huppert
Mr Leane
Mr Viney

There being an equality of votes, the Chairman gave his casting vote with the Ayes.

Question agreed to.
Minority Report:  Mr Leane, Mr Viney and Ms Huppert

Select Committee of the Legislative Council on Train Services

Introduction

The establishment of a select committee into Public Transport is a political process which cannot undertake a serious and genuine investigation as it lacks both the expertise and resources required for such a major undertaking.

Despite six days of hearings and over 70 written submissions, the committee has not produced any findings that will provide a basis for a good, solidly supported, public transport system.

Nor have the opposition controlled majority of the committee made any recommendations that will lead to improvements in the performance of the system.

Notwithstanding these concerns, the Government Members took an open approach to the hearings and sought to assist the Committee in its activities where appropriate.

The Government members on the committee would like to thank the Chair of the committee Mr Bruce Atkinson for his Chairmanship during this inquiry.

Key Findings of Government Members

While the Government members accept that there have been areas of underperformance in the Train System, the cause of these has been the direct result of a massive patronage boom on both the Metropolitan and Regional Rail systems. This boom has occurred on a seriously ageing infrastructure that has suffered from inadequate investment into the system by successive Governments for the 55 years between World War 2 and 1999.

The patronage boom is evidenced by the fact that the number of people using trains has nearly doubled from 124 million boardings in 1999 to 214 million boardings last financial year.

Such a significant and concentrated increase has, unsurprisingly, had an impact on the reliability and punctuality of train services.

The Government Members note the clear evidence to the Committee that the first Government to seriously invest in the Train System in Victoria was the Bracks and subsequent Brumby Government.
Evidence to the committee demonstrates that the Bracks and Brumby Governments have responded to this historic growth with the introduction of 1,734 new weekly services since 1999. 1,099 of these have been added since 2004.

Further, the committee heard that new service improvements have been made possible by the progressive delivery of new trains as part of the State Government’s procurement of 38 new X'Trapolis trains. In total, since 1999 the Bracks and Brumby Governments have delivered:

- the Regional Fast Rail project which required the rebuilding of the entire regional network due to 100 years of neglect,
- some 102 V/Locity carriages,
- 69 new six carriage metropolitan trains,
- the Clifton Hill duplication,
- separated road and rail with a new train station at Springvale Road Nunawading,
- built the new Southern Cross and North Melbourne Stations, and
- opened new stabling facilities at Cranbourne.

We also note the Government is well underway in the delivery of capacity boosting projects including stabling and maintenance facilities at Craigieburn and rail upgrade projects at Westall and Laverton.

Building on the early investments of the Government, the committee also heard evidence regarding the $38 billion Victorian Transport Plan, which is:

- extending rail to growth areas,
- constructing new tracks to separate regional and metro trains (through Regional Rail Link),
- building a new rail tunnel to expand the capacity of the rail system,
- delivering new trains to increase capacity,
- upgrading stations, and
- providing more staff.

The failure of the Opposition controlled majority members of the committee to properly acknowledge these achievements, or to find that the failure of successive Governments for 50 years to adequately invest in the system is the key cause of underperformance, demonstrates the political intent and process of the select committee.

It is the finding of the Government members that the largest investment into the Public Transport System in Victoria’s history [underway since the 2000/01 State Budget] is the correct response to the dramatic increase in demand for train services.
We note that no evidence was given to the committee for alternatives to this investment and that the Opposition controlled majority members on the committee made no recommendations in this regard. Indeed many of their findings merely make criticism of these investments with no alternative policies.

**Disputed Findings**

Many of the Opposition controlled majority findings are erroneous or have failed to consider relevant evidence.

Some of the most glaring examples include:

- *Findings 3.1 and 3.2* which ignore evidence clearly stating that the Secretary of the Department of Transport is responsible for the delivery of Victoria’s Train Services. Optimising service provision through a mix of public and private sector organisations is best practice in many other government funded services (eg health and education).

- *Finding 4.1* omits the issue of historic patronage growth and additional services on train punctuality and reliability.

- *Findings 4.3 and 4.5* ignore evidence provided to the committee regarding new rolling stock procured and other infrastructure improvements made in the early 2000s as well as the recent procurement of 70 new trains under the *Victorian Transport Plan*.

- *Finding 4.4* ignores evidence provided that medium term patronage growth requires investments in the system which is being delivered through *Victorian Transport Plan* initiatives such as Regional Rail Link and the Metro Rail Tunnel.

- *Finding 4.13* correctly recognises ongoing issues with the Siemens trains, however it fails to properly recognise that:
  1. The independent safety regulator PTSV has assessed the trains to be safe to run on the network subject to speed restrictions at certain locations; and
  2. Metro is currently trialling the use of Sandite on tracks and rail sanding to improve track adhesion.

**Underinvestment and mismanagement in the 1990s**

The Government’s strong record of public transport investment is in stark contrast to the Opposition record. When last in power they closed 6 train lines and 26 stations, ran 1563 fewer metropolitan train services each week and staffed fewer train stations for commuters.

The Opposition also mismanaged the franchising of our public transport services resulting in the walk out of one rail operator at a significant cost to the state.

Since 2000 the Bracks and Brumby Governments have turned around this lack of investment in our public transport network.
Average annual investment in public transport is now four times higher than it was before the Government was elected.

Planning for the Future
The Government has a strong record in strategic and coordinated transport and land use planning. The $38 billion Victorian Transport Plan, including projects such as the Metro rail tunnel, rail extensions and new rolling stock, was developed simultaneously with Melbourne @ 5 Million which updates the Victorian Government’s long-term planning framework for managing Melbourne’s growth.

Practical Early Steps
Big public transport projects take time. While the major projects provided for in the Victorian Transport Plan are delivered, the Government is continuing to take practical steps by upgrading the existing network with $1.8 billion in upgrades and maintenance over eight years.

The committee heard that this work is underway, and that in the period to June this year Metro will install more than 28,000 new concrete sleepers, 10 kilometres of new rail line, grind some 225 kilometres of track and pack 117 kilometres of ballast to improve our existing rail lines.

Conclusion
The Government plan for improving the reliability and effectiveness of our rail system is supported by the Government members on the committee and we again note that there was no evidence put to the committee that these plans were either wrong or inadequate.

The Opposition seem intent on ripping up that plan and this select committee process demonstrated that it has nothing to replace it.

On 11 June 2008 the Opposition Leader announced he would deliver his own transport strategy. The release of this select committee report is almost two years to the day, after that statement.

The Leader of the Opposition he has failed to release the Opposition policy either publicly or presented any ideas or alternatives to the $38 billion Victorian Transport Plan to the select committee for its consideration.

The Government members on the Select Committee also find that the Opposition controlled majority members:

- failed to recognise the responsibility of successive Governments to adequately invest in Victoria’s Rail System between 1945 and 2000,
- attempted to make this failure the responsibility of the current Government,
• ignored the evidence provided to the committee of the largest investment into the Rail System in Victoria's history currently being undertaken by the Government,

• made no findings against this massive investment in the rail system, and

• made no practical recommendations for change or investment that would lead to service improvements.

This leaves the Government members to conclude that the select committee was little more than a political exercise.

Shaun Leane MLC (Deputy Chair)
Matthew Viney MLC
Jennifer Huppert MLC
Minority Report: Mr Barber

Exploring the excuses for public transport failures

Summary of findings
This minority report confirms and extends the findings of the majority report and makes recommendations that follow logically from those findings. The majority report contains many important findings of fact. Its failing lies in the unwillingness to draw the obvious conclusions from these facts. The evidence shows constant attempts by the professional and political managers of Melbourne’s rail system to mask poor performance with self-congratulation, complacency and strategic misrepresentation.
I recommend fundamental changes to the current arrangements and basic reform of the systems of management, planning and public accountability for Victorian train services.

Summer heat: maintenance backlog and union tensions
According to evidence, a large number of cancellations during the 2009 heatwave were the result of ‘vexatious’ union activity associated with a dispute with Connex and positioning during the re-tendering for the train franchise. The union did not take the opportunity to appear before the committee to give an alternative view. Union activity was said not to be a factor during the 2010 summer, but there were still a very large number of cancellations. It follows that many more of the 2010 cancellations were for serious technical and management problems than was the case in 2009 and the data confirms this. Amongst other problems, the effective management of the maintenance backlog is very far from being resolved.

Over-crowding
DoT and the operators claim that the rapid growth in patronage has caused crowding that has delayed trains: the system is the victim of its own success. This is too convenient. Targets for rapid patronage growth were set almost a decade ago, but new trains are only just arriving. The proximal cause of over-crowding is poor planning.

Shifting risk and responsibility
The franchising arrangements have been fraught since their inception, under the Kennett government, with problems due to manipulation of the process by “aggressive” under-bidding by the operators and consequent demands for extra funding from the government. There are indications that this pattern has been repeated in the recent reallocation of the public transport franchises.

The capacity of existing infrastructure and the failure of planning
Fragmentation of responsibilities and blocking of public scrutiny and participation have lead to very inefficient use of existing infrastructure and poor design of new infrastructure projects.
Conclusion
Current management structures complicate and confuse the processes of planning adequate responses even for the current growth in rail patronage, let alone the much greater growth in public transport use we must achieve to meet the challenges of climate change, peak oil and social exclusion in our cities.

Recommendations
In response to the findings of this committee, the Government must:
• negotiate an end to the current franchise arrangements by refusing to again ‘bail out’ the operators and by using all available performance management provisions in current contracts;
• create an overarching metropolitan public transport authority to take control of public transport planning with the aim of delivering a transport ‘network’ that the public can easily understand and use;
• engage constructively with the professional transport planning community, local government and with the general public on the future directions for public transport investment and operational reform.
Exploring the excuses for public transport failures

Introduction
This inquiry was set up to investigate the factors leading to and causes of failures in the provision of metropolitan and V/Line train services. The submissions made to the Inquiry, and the evidence provided by the many witnesses, provide a great deal of information and analysis about the state of operations, planning, management and political oversight for Melbourne’s train system.

Importantly, we obtained detailed operational data on each train service that was cancelled or delayed over the summers of 08/09 and 09/10 and in the surrounding months. This comprised over 17,000 records, with information on the cause and responsibility for each failure. The ‘Cause code’ in the table below is as supplied by the operator.

### Analysis of Metro Train data on delays and cancellations 30 Nov 2009 - 5 Feb 2010

<table>
<thead>
<tr>
<th>Cause code</th>
<th>Frequency</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faulty Train</td>
<td>1281</td>
<td>Where the service failure is caused by faulty rolling stock</td>
</tr>
<tr>
<td>Passenger issue</td>
<td>796</td>
<td>Passenger management issue, such as illness, accident or misbehaviour</td>
</tr>
<tr>
<td>V/Line train</td>
<td>651</td>
<td>Problems relating to VLine services that impact on suburban services</td>
</tr>
<tr>
<td>Other</td>
<td>650</td>
<td>Uncategorised causes.</td>
</tr>
<tr>
<td>Metropolitan train</td>
<td>380</td>
<td>Includes a grab bag of issues such as faulty train, speed restrictions and unclear “train situation”.</td>
</tr>
<tr>
<td>Track circuit failure</td>
<td>292</td>
<td>Mostly signalling and points issues</td>
</tr>
<tr>
<td>Vandalism</td>
<td>286</td>
<td>Vandalism</td>
</tr>
<tr>
<td>Driver Issue</td>
<td>217</td>
<td>Where the driver is the cause of the service failure (late to arrive, driver error, roster misreads etc)</td>
</tr>
<tr>
<td>Other categories</td>
<td>208</td>
<td>Eg Craigieburn Rail Project (67)</td>
</tr>
<tr>
<td>Track maintenance</td>
<td>146</td>
<td>Predominantly service failures due to speed restrictions in this cause category</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4907</td>
<td></td>
</tr>
</tbody>
</table>

While infrastructure failures such as buckled rails make for spectacular news-pictorials, the true story is one of mismanagement of operations. Very few of these thousands of failures are unforeseeable, unavoidable or unmanageable. While the wealth of data is valuable, the key challenge in examining this evidence is to identify the underlying issues that represent the true and ultimate cause of the service failure.

The evidence reveals that the fundamental problems with rail system relate to the inefficiencies and lack of clear accountabilities embodied in the byzantine franchising arrangements – now in their third incarnation since the initial privatisation. These problems are exacerbated by the unwillingness of the government to use the provisions of its various contracts with private companies to seek redress for failures; and further, by the failure of the government and the department to open their planning processes to the necessary level of public engagement.

The argument to support these conclusions begins with an analysis of the evidence offered in the relation to the two ‘surface’ explanations given by Connex and the Department of Transport (DoT) for the January 2009 train failures:

- a maintenance backlog exposed by the long heatwave;
- union action.

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These explanations raise more questions than answers. Particularly, they raise the question of how the government and the DoT exercise their authority over the management of the rail system.

The Department and the Minister, in their evidence, asserted that the ‘buck stops with them’ and that, due to their efforts, Melbourne is the Australian benchmark for public transport success. However, the inquiry demonstrated that the buck actually bounces all over the place and the claim of Australian leadership is patently wrong. Even if it were right, it would only be ranking us against other cities that are all, with the possible exception of Perth, struggling to build a public transport system that can deal with the challenges of climate change, peak oil and social isolation in our suburbs.

Current management structures complicate and confuse the processes of planning adequate responses even for the current growth in rail patronage, let alone the much greater growth in public transport use we must achieve to meet these challenges.

Problems with the institutional arrangements associated with franchising, and with the way that these arrangements are used politically by the government are revealed in the evidence provided to the committee on many issues besides those raised by the near-collapse of the system during the 2009 heatwave. These issues include:

- overcrowding on trains and platforms;
- brake problems with the Siemens trains;
- questions concerning ‘carrying capacity’ of current rail infrastructure;
- planning for future infrastructure projects.

**Excuse number 1: Unprecedented summer heat, exposing maintenance backlog and union tensions**

The unprecedented nature of the summer heatwave in January and February was obviously central to the explanations given by DoT and Connex for the large number of delays and cancellations in suburban rail services during this period (for example, Connex, 21 July 2009, p. 5).

Having identified this ‘act of God’ as the trigger for the service problems, both DoT and Connex sought to reassure the committee that a plan was in place to deal with the extensive backlog in maintenance of track, signalling and rolling stock that had been exposed by the extreme weather.

It is unclear if this new urgency about maintenance would have been seen if the weather had been more benign. In any case, it appears that an accelerated maintenance regime could only be negotiated through a new franchise agreement.

There is no doubt that extensive work is needed on track, overhead wiring and signaling, but the issue of air conditioning on trains took up a great deal of the committee’s time, and illustrates the obstacles to getting a new maintenance regime in place under a privatised arrangement.

In its submission to the committee, Connex stated:

> Under the terms of the current franchise, the existing Comeng air conditioners have been maintained, and not upgraded (p. 26).

Mr Betts agreed:

> There is no specific obligation in Connex’s franchise agreement that it must upgrade its Comeng air conditioners; there is, however, an obligation in Connex’s franchise agreement that it should run its services on time and reliably and to minimise cancellations (21 July, p. 6).
Under such an arrangement, there was no reason for Connex to upgrade air-conditioning units if this would cost more than paying the fines for cancelling services, or if it could pass the cost of the upgrade on to the government. The government has decided to pay for new maintenance to air conditioners, track and signalling. However, it appears that in the future, there will be even less pressure on the new operator, MTM, to use the new maintenance funding effectively as annual fines for cancellations and late running have been capped at $12 million.

The process used by DoT and the operators to exchange information and develop joint plans, including analysis and response to the extensive data on faults and cancellations that is collected by Connex, is cumbersome:

There is a franchise relationships manager within the Department of Transport. At that level there would be a daily interface. They certainly receive our train operations performance system reports; they are able to access that data. The reporting on the network is on a completely open and transparent basis, right through from financial to operational. On a daily basis, there are people in the organisation dealing with that sort of stuff. On no less than a monthly basis, … other diarised meetings … take place at an operational level.

At a higher level, twice yearly we do a complete overview of the performance of the franchise for the previous six months, when we present to a whole range of people from the Department of Transport. We do that collectively, with representatives from our organisation. The managing director has a monthly interface meeting with the Director of Public Transport. Jonathan has almost a regular monthly meeting — sometimes more frequently — with the secretary (Connex, 21 July 2009, p. 8).

The ineffectiveness of this management process, which sounds more like a series of meetings, has been demonstrated. It took five years of patronage growth for Connex to develop a new ‘Fault Management Protocol’ (FMP) designed to ensure that trains were not taken out of service for minor matters that could wait until the end of the day to be repaired. For example:

The previous FMP arrangements meant that if you had an air conditioning failure on a train, the train was pretty much cancelled straightaway, which was clearly a major disadvantage for passengers. Given the choice between finding themselves not having a service and having to get off … or continuing to the end of their journey, and the failure maybe affecting only one carriage until the end of that peak period that morning, quite often a lot of people would make the latter choice (Connex, p. 8).

Connex argued that a dispute between Connex and the drivers’ division of the Rail, Tram & Bus Union (RTBU) over the implementation of the FMP was the cause of the majority of cancellations during the 2009 summer heatwave:

Obviously one of the important elements to this inquiry is the question of what was underpinning some of the difficulties in January and February, so I want to turn to the subject of the industrial environment. As I said earlier, the fault management protocol was a key requirement to support the introduction of new services but also to provide more reliable services. An improved FMP requires the support clearly of our employees … On 12 June 2008 a memorandum of understanding was signed by both Connex and the RTBU.

This MOU incorporated a process to achieve an improved FMP as well as a number of other benefits for the operation and the industry, as well as providing for a potential 15 per cent pay increase over a period of three years.
Regrettably … the MOU was not honoured … (the issue) became intractable and … flared up publicly in December 2008 when a more rigid application of the FMP arrangements caused a significant spike in train faults, leading to 784 cancellations in total in December alone, and that overspilt also through into January and February.

Ultimately these industrial tensions led Connex to seek the assistance of the Australian Industrial Relations Commission on 18 February 2009 … we now have full implementation of the new revised FMP arrangements, and these are yielding significant operational benefits and improvements (Connex, p. 4-5).

One cause of the industrial dispute may have been conflict between the division of the union representing drivers and that representing other rail workers. It is notable that this union manoeuvring intensified during the franchise tendering process that was in progress through much of 2009 and ultimately to the detriment of then manager Connex.

In any case, all these explanations can be tested to some extent by looking at the figures for cancellations during the hot days of January 2010. This year the weather was much closer to a ‘typical’ Melbourne summer. There were fewer days of extreme heat, and no successive days over 40 degrees, and so the ‘knock-on’ effect on train operations seen in 2009 was less pronounced. However, according to MTM there was approximately the same number of cancellations as was seen on the first hot day in January 2009 – 248 this year, 243 last year (data supplied to the committee by MTM).

Minister Pakula used the DoT’s ‘passenger weighted minutes’ data to show that fewer passengers were inconvenienced by these cancellations (2 March 2010, p. 25). The Minister also argued that MTM were “more strategic in their use of rolling stock (p. 25)”, which simply raises the question of why the DoT allowed Connex to act so unstrategically in the past. It is interesting to note that MTM’s “strategic” decisions included some blindingly obvious ‘innovations’ such as deploying technicians to locations where signalling failures were likely to occur, and also some desperate tactics like “liberating” 11 trains for service elsewhere by suspending all trains on the Alamein and Williamstown lines (2 March 2010, p. 5).

Clearly, MTM knew that it would be under intense scrutiny during its first summer in the job and planned accordingly – it, for example, cut the maintenance cycle on the air conditioning systems to two weeks from Connex’s three weeks. And, there was no hint of union activity behind any of the cancellations: MTM says that “our drivers acted perfectly well (2 March 2010, p. 9).

Without the union’s ‘vexatious’ removal of trains from service for trivial reasons, it can only be concluded that many more of the cancellations that occurred in January 2010 were for much more serious technical problems than was the case in 2009. The effective management of the maintenance backlog is very far from being resolved.
Excuse number 2: Over-crowding

A common theme in evidence from DoT and the operators has been that the rapid growth in patronage has caused crowding that has delayed trains: the system is the victim of its own success.

The underlying driver of ... (worsening performance in) cancellations and on-time running has been the growth in patronage, which causes increasing congestion and delays (DoT submission, p. 21).

The performance of the metropolitan train network depends significantly on dwell times. Passenger congestion on trains and platforms increases the length and variability of dwell times. The City Loop was designed for dwell times of 20 seconds, but it can now take up to 90 seconds for passengers to alight and board at Loop stations. With trains often scheduled at 3-minute intervals, dwell times of up to 90 seconds severely disrupt on-time running (p. 31).

It is too convenient to blame the users of the system for creating this problem. The government launched its ‘20% by 2020’ target almost a decade ago. In 2003, the Department prepared a plan that clearly required new trains (Train Plan, see Attachment 1), and patronage growth began in 2005. But, the first new trains are only now arriving and being put into service.

A major part of the government response to overcrowding has been to assert that “many metropolitan lines are now operating at or near the limits of their practical capacity (DoT submission, p. 24)”. This issue of capacity will be discussed further below, but as a response to problem of overcrowding, the real question is why more planning “was not done in the five years that the rail patronage has been going up (Dotson, 22 Sept 2009, p. 33)”.

In any case, the DoT’s claim of “up to 90 second” delays exaggerates the problem. The DoT’s own data, and data collected by my own volunteers, suggests that most trains operate well within this margin.

Only in recent months, have measures to ameliorate this problem – such as increased station staffing, improved pedestrian flow arrangements, and better passenger information – begun to be implemented (see DoT submission, p 31). These measures, according to MTM, have brought dwell times below 35 seconds for 90 per cent of trains at city stations (2 March 2010, p. 22).

Even so, increased passenger numbers are only one cause of train over-crowding and longer ‘dwell times’ at stations.

The evidence has shown that increased boarding times are also associated with:

- other late running: the unreliability of the system creates delays that result in over-crowding (this is discussed in more detail below);

- the fact that a significant proportion of driver changeovers occur at Flinders St, adding to the transfer of the impact of delays from one part of the system to another;

- poor design of trains: the Siemens trains, which make up 22% of the current fleet have only 2 doors in each carriage. This is a major obstacle to the rapid movement of passengers. It is just one of a list of problems with the Siemens trains, which were bought by the government for National Express during the first franchise period. This questionable decision points to the failure of government oversight of the operators under the franchise arrangements.
Excuse number 3: Siemens brake failures

Brake problems with the Siemens trains have been a constant issue since 2004. Periodic removals of trains from service and speed restrictions have significantly hampered efficient operation of the system. Train ‘overshoots’ of stations continue to happen: the most recent spate of events in late 2009 and early 2010 forced eight Siemens trains out of service for several months.

Apart from the fact that this problem has not been resolved over a period of nearly six years, a number of management questions arise.

First, why is the government continually prepared to accept the costs of the brake failures without recourse to legal remedies? Like Myki, the government is unwilling to recognise that poor decisions have been made and that it is time to ensure that the private ‘partners’ accept some of the costs of failure rather than expecting that the taxpayer to assume all of the risk.

Second, a short excerpt from the transcripts (DOT, 21 July 2009, pp. 18-19) shows how the DoT moves quickly to avoid taking responsibility for problems in the system:

Mr O’DONOHUE — … I would like to ask you about the overshoot issue that occurred on 18 June in relation to Siemens trains …

Mr BETTS — You said there was overshoot on 16 June?

Mr O’DONOHUE — It was 18 June, according to Connex.

… Mr BETTS — We might need to take that on notice … Siemens trains have generally operated pretty well — the drivers like them — but there have been a couple of spates of overshots …

Mr O’DONOHUE — Can I interrupt? The overshoot occurred on 18 June and what you are telling me is that you do not know the details of it. That is over a month ago. Describe to me the process by which serious safety failures in the network are reported from the operator to you, the government.

… Mr O’DONOHUE — This situation, as I said, occurred over a month ago. How long would it take for you to be in the loop and part of the process? I find it extraordinary.

Mr SARGANT — Normally we know about it within 30 minutes.

… Mr BETTS — We are hearing this for the first time. Ask Connex about it this afternoon.

Mr O’DONOHUE — As you said earlier, the buck stops with you. There is a major safety issue with the Siemens trains that has been going on for six years and you do not know about it. You are saying, ‘Ask Connex’. I am asking you
Excuse number 4: Shifting risk and responsibility

The government’s submission to this inquiry is very upbeat about the state of Melbourne’s public transport system: “Melbourne is now Australia’s public transport capital, with higher per capita patronage than any other city (p. 11)”. However, other evidence provided to the committee clearly shows that this claim is false. An independent assessment of relative performance of public transport in Australian cities by BITRE reveals that in financial year 2007 there were 137.8 public transport journeys per capita in Sydney compared with only 110.0 in Melbourne (Mees, 22 Sept 2009, p. 53).

In his verbal evidence, the DoT secretary, Jim Betts, continued this boosterish theme: “the on-time performance of our system compares reasonably well with performance in the UK” (21 July, p. 5). But, this is questionable. London’s Overground rail network uses the same measure of on-time running as that used for MTM in Melbourne (that is, a train is ‘late’ if it is more than 4 minutes and 59 seconds behind schedule). The new franchise contracts set MTM a target of at least 87% of services running on-time – and in February 2010 achieved only 83.4%. The London Overground has a target of 93.4% on time and in the year to March 2010 achieved 92.9% (Transport for London, MTM and DoT websites).

Of course, any government wants to put the best possible spin on its performance, but what is most revealing is that Betts makes comparisons with the UK – a country not renowned for its public transport successes compared with the rest of Europe. Where is the detailed benchmarking of Melbourne’s public transport system against the cities that can legitimately claim to be world leaders?

In Melbourne, there is more than the usual pressure to come up with ‘proof’ of success. The government is continually seeking to justify its support for the unique and complex ‘franchise’ arrangements for managing the city’s public transport that have been in place since 1999.

The sharing of responsibilities under the franchising contracts is so complex that the Secretary of the DoT, Jim Betts, was forced to begin his evidence by asserting that:

… the government is accountable for the performance of the public transport system. We plan the system, we fund it, we regulate it and we choose the private sector firms with whom we partner. The buck stops here … the ultimate accountability is clear and undisputed (21 July 2009, p. 2).

In most parts of the world, such a statement would be unnecessary. That the Government felt the need to make the statement raises doubts about way responsibility is actually shared. In fact, the evidence described above shows that the DoT and the operators must engage in long and complex discussions before any new issue can be addressed. The existence of ‘franchise partners’, as they are now called, creates many opportunities for the government to disassociate itself from responsibility, or, in the case of Siemens train overshoots, deny knowledge of important matters.

The confusion over responsibilities was a theme of a number of witnesses (including the GAMUT Centre at the University of Melbourne, Dr Paul Mees from RMIT, and the PTUA). They expressed the view that institutional arrangements are crucial to understanding the current problems in Melbourne’s rail system. These witnesses have recommended significant institutional reform as the first step to significant improvement in Melbourne’s public transport.

This is a view endorsed by the 2009 cross-party Senate Committee investigating investment in public passenger transport, which concluded that:

Australian Government funding for transport initiatives should be conditional on reforms to state and territory planning departments to create central
To understand the way that the franchising arrangements have affected the performance of Melbourne’s rail system and have influenced the responses to growing demand since 2005, it is necessary to look briefly at the main features and outcomes of the three versions of the franchising arrangements that have been employed since 1999.

On the spectrum from full privatisation to state control, franchising is, broadly speaking, an arrangement whereby the state retains ‘strategic’ control over planning but where private firms are given responsibility for both operational matters like staffing and a range of ‘tactical’ planning decisions such as timetables and technologies.

The Kennett Liberal Government on the advice of its Treasury Public Transport Reform Unit made the first franchise agreements in 1999. Under these agreements, which split the operation of the rail system between Connex and National Express, patronage growth of up to 82% was expected over 15 years (with 25% growth expected in the first two years alone) and subsidies were expected to fall in line with the new revenue from these new passengers.

In his evidence, the Government has recognised that there were serious problems in the contracts in 1999:

> It became apparent in 2001 that the franchise operators were losing money, or were about to start losing money. They bid very, very aggressively in the 1999 franchising process to the point where their business plans were effectively unsustainable in the absence of additional financial support from the government. National Express, which held three franchises, had bid more aggressively than anybody. … National Express made a whole series of demands for additional money and for the state to take more commercial risk. (21 July 2009, p. 20).

In short, the government had been ‘low-ballled’, and National Express was attempting to hold the state to ransom.

The ALP won the 1999 election, on a platform of opposition to public transport privatisation, but it appears to have had little enthusiasm for acting on this platform once in government, despite the imminent collapse of the original franchises for which, as Betts tells us: “the savings …apparently on offer … had proved to be illusory” (p. 20).

The government then sought to negotiate a new arrangement. As Betts told the committee:

> The state refused to countenance all (the demands of National Express) and then in December 2002 (they) notified us with a week’s notice that it was going to withdraw financial support from its three Melbourne franchises. We went into negotiations with National Express to secure if we could an orderly handover of the businesses to receivers, whom we appointed …

We had had two train operators and two tram operators. The government decided — and I think rightly so — to simplify those arrangements to move to one train and one tram operator (p. 20).

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237 Senate Rural and Regional Affairs and Transport Reference Committee (2009), *Investment of Commonwealth and State funds in public passenger transport infrastructure and services*, p. 41, para. 4.41.
In the new franchise agreements, concluded in February 2004, the previous ambitious patronage growth targets were abandoned. A great deal more money was being spent, but service levels were improved only marginally. In this period, the boundaries of risk and responsibilities between the government’s contract managers and the private operators became blurred in new language of ‘partnerships’, which have been called “regulatory capture in another guise”. This phenomenon is not peculiar to Victoria – in fact it is a common and well understood pattern described by Peter Kain in a report for the Bureau of Transport and Regional Economics. Unfortunately Mr Kain was not available to give testimony before the committee.

Despite the government’s promises that it was working towards a dramatic increase in public transport market share, to reach 20% of all motorised trips by 2020, the Department was just waiting for something to turn up – no patronage growth targets were imposed on Connex or Yarra Trams.

By 2005, it appeared that patronage growth was finally beginning, albeit due to factors unrelated to the actions of our public transport managers. At the time, DoT believed that the growth was due to rising petrol prices and:

> the assumption was that if petrol prices went up, they would stabilise eventually and we would expect patronage growth to return to normal levels

When patronage growth continued, it is clear that the Department and Connex took a long time to respond. The fact that new trains and increased services in peak periods are only now being provided, is a clear demonstration of this.

After having previously given the operators substantial funding to compensate them for anticipated patronage growth that had not occurred, the Government began to suggest that the system was facing ‘capacity constraints’ – something that does not appear to have been an issue when the 1999 franchisees built their bids around almost doubled patronage.

**Excuse number 5: the capacity of existing infrastructure**

The central response to this new problem, described in the government’s 2006 transport plan *Meeting our Transport Challenges* (p.27 & p. 40), was a proposal for construction of a third track from Caulfield to Dandenong at a cost of more than $1.5 billion.

Since then, we have seen a protracted debate between the Department and critics led by Dr Mees about what would seem to be a simple engineering question relating to the extent to which the existing rail infrastructure can carry significantly higher numbers of train services. That such an apparently straightforward question cannot be resolved in more than four years of debate is a telling rebuke to the effectiveness of the government’s approach to public engagement. It is also very revealing that the ‘third track to Dandenong’ proposal, at the heart of MOTC, has been quietly shelved. The ‘capacity constraint’ argument has now been used as the basis for even larger capital projects in the 2008 *Victorian Transport Plan*: the $4 billion Regional Rail Link and the first stage of the Metro Tunnel from Footscray to St Kilda Road (conservatively costed at $4.9 billion).

‘Capacity constraint’ has also been used as the reason for lack of planning for major suburban rail extensions, including those to Doncaster and Rowville, both of which

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239 Between 1980 and 2005, patronage growth had been at a rate less than or equal to population growth.
have been part of long-term plans, and community aspirations, for future
development of Melbourne's suburban rail system.
While I am a strong supporter of capital investment in Melbourne's rail system, the
adequacy of the processes and content of planning for such investment and for the
most efficient use of our current extensive rail infrastructure has been called into
question by the evidence presented to this committee. This evidence is discussed
further below, but a new twist in the continuing embarrassment that is management
of Melbourne's rail system under the franchise model came in the final hearings of
the committee.
On 2 March, we heard from MTM (the new franchisees) that their:
overall plan is to double the patronage on the railway during the life of the
franchise which requires a major increase in the system's capacity (Andrew
Lezala, MTM, 2 March 2010, p. 6).

Given that the 'life of the franchise' is eight years, it is clear that this capacity
increase does not depend on the construction of the inner-city rail tunnel which is
now only in the planning stages. So, apparently, this new capacity can be created
with only limited changes to existing infrastructure.
It would be unwise to accept the MTM view without some solid corroboration. There
might be good reason to doubt that this promise is any more likely to be realised than
the patronage growth promised by National Express in 1999. Jim Betts himself has
told us that the 1999 promises were made in the context of “very, very aggressive
bidding” (22 July 2009, p. 20). Has the same thing happened again?
A large part of the evidence given to the committee concerned the two related groups
of questions regarding the capacity of existing infrastructure to carry more trains than
it does today.
The first question was the purely engineering issue of how many trains could fit, if
they were available, on the current system. This question was raised by evidence
that challenged the government's assertion that “many metropolitan lines are now
operating at or near the limits of their practical capacity (DoT submission, p. 24)”.
This view was supported by Dr Currie from Monash University, whose Chair of Public
Transport is partly funded by the DoT:

Mr O'DONOHUE — Professor … do you want to make some comments
about timetabling and signalling, because previous evidence we have had
has indicated there are significant efficiencies yet to be achieved through
proper timetabling, improved signalling and the like?

Prof. CURRIE — I have not seen any evidence of this …

We need a 50 per cent growth in our railway capacity at least. … We are not
going to get it from doing small things, in my opinion. (5 October 2009, P. 5)

However, we have been told by MTM and by the DoT that more trains can fit as
incremental operational changes, such as removing the Werribee trains from the City
Loop took effect, and that the number of services will increase with the introduction of
a new timetable during 2010. But, as to the ultimate number, the best we can be told
is that:

We have not finalised the exact numbers … eventually the timetable will need
to be revamped fundamentally because this timetable stems back to 1996
and has had services added to it and added to it. … It will have to start being
timetabled more like a metro railway which means … metronomic headways
and … eventually there will have to be a revamp of the basis of the timetable
to be able to get the extra trains back but also the reliability that we need
(Andrew Lezala, MTM, 2 March 2010, p. 16-17).
MTM also gave evidence that the basis for their plan to “double capacity over the life of the franchise” would be “timetable design, train design (and) signalling system design” (p. 21).

So, it is clear that MTM agrees with other witnesses who told us that there is significant ‘slack’ in current operations.

The second, perhaps more important, questions relate to the extent of the investigations of the capacity of the current system that have been undertaken by the DoT, and how this is being used to inform planning decisions.

The evidence provided by internationally experienced rail planner, Mr Edward Dotson, who was employed by the DoT in 2008 to review the proposals for the capital projects in Eddington’s EWLNA. Dotson painted a picture of the DoT pursuing its large capital program at the expense of work to unlock the central operational “tangle”:

Mr BARBER — With the whole North Melbourne to Footscray area we are shown all these confusing spaghetti diagrams which show all the tracks as if to say it is an impossible mess and how could you ever untangle it? Could you untangle it …?

Mr DOTSON — I take the view that you can untangle it if you say, ‘What do we need to do to untangle it?’ … The conflicts that exist have been there for a while … Do you say, ‘That is too hard. We will take 14 or 20 trains an hour out of that mess and stick them in a tube under the ground, and that will solve the problem. When we have the 20 trains out we then go back and look at the tangle and see, with less trains in it, whether we can untangle it’. My argument is simply that if you are talking about … $7 billion plus … you need to spend a little more money on seeing whether or not you can untangle it (22 Sept, p. 38).

Following the development of the case for the Footscray to Caulfield tunnel (including an assessment of the cost of building and operating it), the sort of process that Dotson thinks should be undertaken, but which he saw no indication of DoT actually doing, would include the following steps:

You look at other ways of achieving (the same outcomes as the tunnel). First of all, you have to ascertain what it is you want to get in terms of increased capacity, not in terms of train paths but in terms of the number of people you want to carry into the CAD in the morning peak or out of it of the evening peak. (Then you) say, ‘Okay, we need to provide this amount of capacity at these dates. How can we do it?’. Then you systematically look at the existing system and say, ‘Can we get that capacity on the existing system? How much can we get in operational needs? How much can we get by changing the configuration, by buying new trains that have higher capacity? How much can we get by assuming higher loads per train, which may mean more people standing? At what point do we then have to start building new tracks? Could we do it by building a small section of tunnel somewhere rather than a whole 17 kilometres of tunnel?’ (p. 32).

Dotson took his critique of current planning of Melbourne’s rail system a step further. A member of the committee sought Dotson’s reaction to the following assertion:

I would just naturally have assumed that the people in charge of the system would be constantly challenging their own assumptions and constantly challenging how their capacity has been reached.

Dotson replied:
I do not think your assumption is correct. Based on discussions I have had I do not think your assumption is correct (p. 33).

Dotson’s evidence also produced an interesting insight into the approach to public consultation that is favoured by the Brumby Government. Consider this exchange between Dotson and ALP committee member, Jennifer Huppert – in which the former World Bank official gives the social democrat a lesson in community relations:

**Mr DOTSON** — I am not assuming no planning has been done. I again say that there has not been much said publicly about what planning has been done on this.

**Ms HUPPERT** — But that is not to say that the Department of Transport has not done the planning and has just not made an announcement or is in the process of locating where those tracks are going to go…

**Mr DOTSON** — You are correct, but I would have thought it was a little strange if the department is doing work on it but is not prepared to announce what it is doing. But then I am working in an environment where I think matters like this should be made public and that — —

**Ms HUPPERT** — I just think in terms of planning for the placement of new tracks one of the issues about putting things out in the public too soon before final decisions are made is that it allows for scaremongering about people losing land. From a good policy perspective it is important to actually make a decision before putting out any options that are uninformed. That allows people living in areas that may be affected by the new tracks to be properly informed in an orderly manner, which avoids the problem of people getting scared and worried about what is going to happen to their property. I think that is not a bad thing to be doing: to be doing the planning without uninformed information getting out to the public.

**Mr DOTSON** — I have a professional difference with you. That is not the current normal worldwide practice. Normal practice is to go in for full public consultation, including involving the public in writing the brief for the studies. That is the way that has been found over time to reduce the amount of concern and reduce the potential political backlash at a later date.

**Ms HUPPERT** — Just in terms of public consultation, what is your view on the process that led to the Eddington report? I understand there was a great deal of public consultation, and people — —

**Mr DOTSON** — Let me be clear. When I talk about public consultation, I mean it is not submission-based.

You actually go out to the public and you talk to them about the issue you are going to address. You ask them for their view, and you ask them what they think about the issue. You ask them to make suggestions about how you may solve the problem, and then you go away and take that on board, together with the stuff from the technical people, and work up some solutions, come back to the public and say, ‘Here we have three solutions. These are the costs, these are the benefits and these are the downsides we see. What do you think?’. You solicit public opinion in a variety of ways, and then you go away and you produce a preferred option to recommend to the minister.
That is a major criticism I have about the process. The submission-based process is not public consultation as it would be practised elsewhere. The reason that public consultation started in transport projects was to stop people laying down in front of bulldozers on projects they did not like. That is how it started (p. 37).

Returning to the problem of planning for growth in public transport patronage, the process of franchising appears to have accelerated an on-going decline in the skills available within the DoT in the disciplines of transport planning and operational management. As Dr Mees said in his evidence:

Privatisation was an important part of (the loss of skills), but it was not the whole of it …in the 1920s we really were as good as anyone in the world, and probably better than just about everyone else in the world. By the late 1950s, early 1960s, I think we had atrophied a little bit …

The steady decline in patronage accelerated (this process) because you did not have to be that clever at fitting trains through any more. In particular, once we had finished building the loop, which was designed to enable us to carry vastly greater numbers of passengers — even than we are carrying now …

The gap between the physical capacity and what we needed to do was so great that … it is understandable, that a kind of slackness gradually creeps into the system. All the operating margins stretch out and the timetables are padded more and more, so that kind of culture of ruthless and rigorous on-time operation that is necessary because you want to timetable trains at very close intervals kind of goes out of the system.

I do think that, in a sense, privatisation was the final blow … the last group of people who … who retained any sense of that culture did leave at that time, so we have got a real problem, particularly within the department. It is partly because in the initial enthusiasm for privatisation the idea was, ‘Now we have got these private firms we do not need any of those skills in the department any more. We can all be contract managers, lawyers, monitors and reporters, and we do not need any of that ourselves’. Unfortunately, the operators did not have it either, because the skill base had departed. I think we have lost it from all aspects of our operation (22 Sept 2009, p. 58).

The fragmentation of responsibility for the operation and planning of different modes, which has been a feature of Melbourne’s public transport for nearly a century, has also been entrenched by the franchise system.

Several examples of the impact of this fragmentation were revealed in evidence to the inquiry. MTM explained their efforts to increase capacity and reliability on the Caulfield group of suburban rail lines (Dandenong and Frankston) by simplifying the timetable, but revealed that they are:

held to maintaining the (existing) paths (of V/Line services) as is … which is one of the reasons we get a structural problem in there. If we cannot vary the V/Line times then we are constrained with what we can do with the others (2 March 2010, p. 13).

And, responding to a question about increased investment in the bus network and the effect of this on demand for train services, Betts said:

We have obviously seen massive growth on the train system, we are seeing massive growth on the bus system. The two may well be related although I would say that generally speaking most trips are on one mode or the other
and that at the moment interchange is not as high as it might be … (21 July 2009, p. 22).

This is not a trivial issue. Evidence from GAMUT researchers at the University of Melbourne argued that fragmentation of planning was the central failure of the Melbourne public transport system. Their submission argues that:

Urban public transport managers in a small but growing number of cities, across a range of sizes and degrees of dispersed suburban development, have achieved long-term growth in patronage or market share. These public transport managers have built their success on an approach to the design and operation of their services described as ‘network planning’. (A) key operational element of the ‘network planning’ approach (is) integration of all modes with easy and comfortable transfers at a number of locations across the city region (submission #34, p. 11).

The institutional reform recommendations of the 2009 Senate Committee (described earlier), which centre on the need to create a regional agency for planning all modes of public transport, are designed to overcome the problems of planning revealed in the evidence to this inquiry and to create the conditions in which effective ‘network planning’ can take place.
Conclusions

It is clear that many of the problems that face Melbourne’s public transport system are exacerbated and entrenched by the institutional arrangements for its management and planning. The argument about appropriate institutional arrangements for planning is not a simple ideological divide between supporters of the market and supported of public ownership. Instead, it is based on the empirical evidence from cities where public transport has had some long-term success in winning people back from their cars. The government has been complacent in its continuing acceptance of the DoT’s explanations for the current state of Melbourne’s public transport, and in putting their trust in the current management and systems to ensure that Melbourne’s public transport is the best it could possibly be in the future. The is a clear tendency for current managers to use claims about the ‘uniqueness’ Melbourne’s public transport system as an excuse to ignore the lessons of international best-practice in public transport management, planning and operations. Current management structures complicate and confuse the processes of planning adequate responses even for the current growth in rail patronage, let alone the much greater growth in public transport use we must achieve to meet the challenges of climate change, peak oil and social exclusion in our cities.

With the evidence presented to this committee before it, the public good will continue to suffer and the government will be negligent if it does not:

- negotiate an end to the current franchise arrangements by refusing to again ‘bail out’ the operators and by using all available performance management provisions in current contracts;

- create an overarching metropolitan public transport authority to take control of public transport planning with the aim of delivering a transport ‘network’ that the public can easily understand and use;

- engage constructively with the professional transport planning community, local government and with the general public on the future directions for public transport investment and operational reform.
7 Key Strategies

Important conclusions from the suburban train fleet plan include:

- If the decision to proceed with next major rollingstock purchase is aligned with new Franchise agreements in 2008 then it is likely that the rollingstock will not be on track until 2010, leaving a substantial amount of unassisted growth demand in the years leading up to that time assuming a straight line growth in patronage towards the 2020 objective.

- Taking up of the options on the existing rollingstock order (10 trains) will help to fill the interim gap and is necessary in order to take advantage of any

- There is expected to be a requirement for a substantial rolling stock purchase at the time when the Combino trains reach the end of their service life towards 2012 – 2015.

- There is expected to be a requirement for a substantial rolling stock purchase at the time when the trains forming part of the existing orders reach the end of their service life towards 2022 – 2025. (Note that this is beyond the forecast period)

The financial impacts of the plan, assuming that a new single deck 6 car train set costs $15M, are as follows:

<table>
<thead>
<tr>
<th>Phase</th>
<th>No. Trains to be Purchased</th>
<th>Approximate Cost ($M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1 (2003 to 2008)</td>
<td>10</td>
<td>150</td>
</tr>
<tr>
<td>Phase 2 (2009 to 2013)</td>
<td>64</td>
<td>960</td>
</tr>
<tr>
<td>Phase 3 (2014 to 2020)</td>
<td>103</td>
<td>1,545</td>
</tr>
<tr>
<td><strong>Total over 20 years</strong></td>
<td><strong>177</strong></td>
<td><strong>2,655</strong></td>
</tr>
</tbody>
</table>