

AUDITOR-GENERAL'S REPORT PERFORMANCE AUDIT

Improving the Performance of Metropolitan Bus Services

NSW Transport and Infrastructure



The Legislative Assembly
Parliament House
SYDNEY NSW 2000

The Legislative Council
Parliament House
SYDNEY NSW 2000

In accordance with section 38E of the *Public Finance and Audit Act 1983*, I present a report titled **Improving the Performance of Metropolitan Bus Services: NSW Transport and Infrastructure**.

A handwritten signature in black ink that reads 'Peter Achterstraat'.

Peter Achterstraat
Auditor-General

Sydney
March 2010

State Library of New South Wales cataloguing-in publication data

New South Wales. Audit Office

Improving the performance of metropolitan bus services : NSW Transport and Infrastructure / [The Audit Office of New South Wales]. (Performance audit).

978 1921252 365

1. NSW Transport and Infrastructure - Auditing. 2. Review of bus services in New South Wales 2004. 3. Bus lines - New South Wales - Auditing. 4. Local transit - New South Wales - Auditing. 5. Transportation and state - New South Wales - Auditing. I. Title: Improving the performance of metropolitan bus services : NSW Transport and Infrastructure. II. Title: NSW Auditor-General's report : improving the performance of metropolitan bus services : NSW Transport and Infrastructure. III. Series: Performance audit (New South Wales. Audit Office).

© Copyright reserved by the Audit Office of New South Wales. All rights reserved. No part of this publication may be reproduced without prior consent of the Audit Office of New South Wales.

The Audit Office does not accept responsibility for loss or damage suffered by any person acting on or refraining from action as a result of any of this material.

Contents

Foreword

Audit conclusion and recommendations	1
The focus of our audit	2
Conclusion	2
Recommendations	3
Response from NSW Transport and Infrastructure	4
Key findings	7
How do the bus contracts work?	8
Have clear performance objectives been set?	8
Is operator performance closely monitored?	10
Is performance information accurate and timely?	18
Is action taken to correct any deficiencies?	21
Appendices	23
Appendix 1 About the audit	24
Appendix 2 Bus operators and their service areas	26
Appendix 3 Population within 400m of a bus stop	28
Appendix 4 Key performance indicators benchmarked internationally by STA	29
Performance Audits by the Audit Office of New South Wales	31

Foreword

Sydney's metropolitan bus services play an essential role in helping people to access work, education, shopping, health services, as well as social, cultural and recreational activities. They also help reduce traffic congestion and pollution. For example, more people come across the Sydney Harbour Bridge in the morning peak in the bus lane than all of the other city bound lanes put together.

In 2004 the Government embarked on a program of reform to develop bus services that aimed to better reflect community needs with new service contracts. These were to include consistent service standards, clear performance requirements and sustainable funding. The contracts were introduced in 2005 and are worth \$5.6 billion over seven years.

This is an area of increasing investment and strategic importance, which could be greatly influenced by the new NSW metropolitan transport plan.

This audit examines how well the performance of metropolitan bus services is being managed, focusing on the critical role of the lead Government agency - NSW Transport and Infrastructure.

The report builds on our audit work over the last few years in the NSW transport sector, particularly our 2007 audit *Connecting with Public Transport* that dealt with the role of interchanges. I believe it will inform the performance management of public transport, and add to transparency in an area of increasing interest to the public.

Peter Achterstraat
Auditor-General

March 2010

Audit conclusion and recommendations

The focus of our audit

All scheduled bus services in the Sydney metropolitan area - including both public and private companies - are provided under Metropolitan Bus Service Contracts managed by NSW Transport and Infrastructure (NSWTI).

The contracts were introduced in 2005 and are worth \$5.6 billion over seven years. The State Transit Authority (STA) was awarded contracts to operate four metropolitan regions; private operators were awarded contracts to operate the other eleven regions. The contracts include extensive requirements for operators to report information to NSWTI.

Importantly, they also allow NSWTI to determine exactly what bus services are provided and to whom. Previously such decisions were made by individual contract operators, subject to minimum service levels which the agency had specified. The *2004 Review of Bus Services in NSW* found that the metropolitan area had two bus systems - government and privately operated, with widely varying levels of service and customer satisfaction that fell short of community expectations.

In this audit we wanted to determine how well NSW Transport and Infrastructure manages the performance of metropolitan bus services.

Conclusion

The *2004 Review of Bus Services in NSW* always envisaged that there would be a transition period as the new bus contracts were introduced. NSWTI has developed and implemented the new arrangements, and pursued a range of new initiatives including the network improvement program, strategic corridors and uniform bus fares and concessions.

The new contracts provided for a performance management regime to hold operators accountable. But this is still being developed four years after the bus contracts came into effect and it remains unproven as a basis for ensuring value for money from the contracts - each of which guarantees monopoly rights to the operators.

This is particularly significant as:

- services are not always reliable. A 2009 survey found 25 per cent of bus users said they were delayed by 10 minutes or more at least once a week and 24 per cent of bus users said they were left standing at the bus stop at least once a week
- there are wide variations in service levels, with services in privately operated areas likely to be less frequent and less accessible. They average 23 km per head of population with 75 per cent in walking distance of a bus stop, compared to 44 km per head in government bus areas and 90 per cent within walking distance of a bus stop
- the new bus contracts were directly negotiated with existing operators, using a cost and profit benchmarking process, in the absence of an open competitive tender.

For the bus user this means that poor performance and poor service may go unnoticed. For the tax payer it means that bus services may be more costly than they need to be.

Have clear performance objectives been set?

The 2004 *Review of Bus Services in NSW* has provided direction with its emphasis on new contracts, strategic corridors and a new bus network. But NSWTI has no overarching business plan and has set few clear performance objectives in relation to bus services. This makes it difficult to establish a performance linkage with operator business plans and difficult to gauge NSWTI's success in driving performance improvements.

Is operator performance closely monitored?

Service delivery, payments and budgets are closely monitored. But a lack of performance information has prevented NSWTI from undertaking any comprehensive analysis of the performance of bus services. The proposed new performance assessment regime will be limited to using data already available and will not cover many areas of performance important to bus users. This will continue to frustrate NSWTI's ability to manage the performance of metropolitan bus services.

Is performance information accurate and timely?

NSWTI relies on the bus operators self-reporting using their own existing systems to collect and report on operational and performance data. It has control measures in place, but this information carries a risk of unreliability and inaccuracy. In our view NSWTI needs to further strengthen its contract management reviews and its audit program. It also needs to ensure that bus customer satisfaction and usage surveys are undertaken more often.

Is action taken to correct any deficiencies?

Action is taken to address known deficiencies. No penalties for operator performance failure have been applied, although the contract does allow for penalties. The absence of adequate performance reporting means that NSWTI cannot provide assurance that it has reliably and consistently identified and addressed all performance issues that need to be addressed.

Recommendations

We recommend that NSWTI further increases pressure to improve performance and drive costs down by:

- specifying a range of performance objectives for each contract region (eg. cost per passenger kilometre, service quality and accessibility) with a clear focus on the needs of bus users
- comprehensively benchmarking performance to hold bus operators accountable, with penalties for poor performance
- strengthening controls on operator self-reporting to ensure that performance information is accurate
- publicly reporting operator performance by route and by region
- conducting more frequent bus customer satisfaction and usage surveys, including the use of *Mystery Shoppers*.

This should be in place well ahead of the next round of bus contracts.

Response from NSW Transport and Infrastructure

I refer to your correspondence of 1 February 2010 enclosing a copy of the final report of the 'Performance Audit: Improving the performance of metropolitan bus services'.

I note the report finds NSW Transport & Infrastructure (NSWTI) closely monitors service delivery, payments and budgets in the management of the Metropolitan Bus System Contracts (MBSC) and that NSWTI has pursued a range of new initiatives including the network improvement program, strategic corridors, uniform bus fares and the expansion of concessions.

NSWTI accepts the recommendations made in the report and provides the following information about steps that are being taken to improve the management of metropolitan bus operator performance.

1. *NSWTI is working to develop a model for the renewal of bus contracts that are due to start expiring from December 2011. These contracts will specify levels of performance required of bus operators.*

To assist in managing current bus operator performance as well as preparing for the contract renewal process, NSWTI is undertaking a Bus Contract Benchmark Exercise. The Benchmarks include a mixture of cost and service quality Key Performance Indicators (KPIs) as follows:

- *Total cost per service kilometre*
- *Boardings per service kilometre*
- *Early and late trips from departure*
- *Early and late trips at mid-point*
- *Complaints per 100,000 boardings*
- *Customer satisfaction*
- *Average number of Heavy vehicle Inspection Scheme (HVIS) failures per bus per annum*
- *No management fraud detected during independent audits of sales and reconciliation processes.*

NSWTI has also convened a National Bus Performance Benchmarking Group. The objectives of the Group are to establish a system of measures for cross jurisdictional comparison and to understand why differences might occur.

2. *NSWTI has engaged an Independent auditor to audit the Metropolitan Bus Service Contracts. This audit will be expanded to include the auditing of bus operator self reported performance data.*
3. *NSWTI is taking steps to implement a transparent reporting system that will in particular, enhance current on time running information. NSWTI acknowledges the recommendation relating to publicly reporting operator performance by route and region and is working on implementing appropriate measures and systems to address this in a timely manner.*

4. *NSWTI approached the Independent Transport Safety and Reliability Regulator (ITSSR) to undertake customer satisfaction surveys in 2009. A first survey has been undertaken and ITSRR have agreed to undertake further surveys for the next three years.*
5. *The NSW Government is on track to sign a contract to deliver an electronic ticketing system with the successful entity in 2010. Together with the GPS bus tracking technology provided by the Public Transport Information and Priority System (PTIPS) these projects will enable real time data without significant operator input. Real time data will allow NSWTI to drive better performance from contracted bus operators as well as providing for improved customer information.*

I thank you and the audit team for the opportunity to contribute to this Audit Report.

(signed)

*Les Wielinga
Director General*

Dated 25 February 2010

Key findings

How do the bus contracts work?

Under the bus contracts NSWTI pays bus operators to provide specified services within their contract area. These payments consist of a fixed payment (such as to cover vehicles and depots), a service payment (a rate per kilometre to cover running costs), and a patronage payment (or 'shadow fare' for each boarding). NSWTI effectively collects all fare revenue for bus services, which partly offsets its costs.

Each contract has a term of seven years. The contracts include extensive requirements for operators to report information to the agency. Sydney Buses, which is part of the State Transit Authority (STA), was awarded contracts to operate four metropolitan regions. All other operators are privately owned.

Have clear performance objectives been set?

Conclusion

The 2004 *Review of Bus Services in NSW* has provided direction with its emphasis on new contracts, strategic corridors and a new bus network. But NSWTI has no overarching business plan and has set few clear performance objectives in relation to bus services. This makes it difficult to establish a performance linkage with operator business plans and difficult to gauge NSWTI's success in driving performance improvements.

Setting performance objectives

The performance objectives in the NSW State Plan are:

- meet public transport reliability targets (95% of Sydney buses run on time across the network)
- increase public transport share of trips made during peak hours to and from the Sydney CBD to 80% by 2016, Parramatta CBD to 50%, Penrith CBD to 20%
- increase the journeys to work in the Sydney metropolitan region by public transport to 28% by 2016.

NSWTI has issued *Service Planning Guidelines to bus operators* that indicate:

- minimum frequencies and hours of operation, depending on the nature of each route
- 90% of households (overall) should be within 400 metres of a regional or district bus (or rail) route during the day and within 800 metres at night.

The bus contracts include requirements for example for buses to be clean and tidy, in safe operating condition, and not over-loaded. But, for example, the loading limitation refers to the design limit set by the bus manufacturer - not any performance objective set by NSWTI to limit over-crowding.

We found there was potential for NSWTI to set more performance objectives for areas likely to be of concern to bus users, such as:

- public transport share of trips made to and from places other than the CBD (for community transport, educational transport, pensioners or other segments)
- passenger and driver safety (aside from licensing and accreditation)
- passenger comfort (such as seating, air-conditioning)

- over-crowding
- cancelled services
- level of accessibility - combining the nearness of a bus stop, service frequency and hours of operation
- bus travel times
- availability of parking at bus stops
- provision of information about bus services (on board announcements, real time information about next arrival)
- provision of bus shelters (generally left to local councils).

Serving as key result areas

We found that NSWTI has reported results against the public transport objectives set in the State Plan, but not specifically for bus services.

NSWTI also reports regularly to Treasury in relation to the funding of the bus contracts and forecast patronage. Although bus operators are not set specific objectives for patronage growth over the life of their contract, patronage levels are forecast each year and the contracts provide for a patronage incentive payment.

There are many areas of management focus, but the lack of specific performance objectives for many activities means that it is more difficult to gauge NSWTI's success.

We found NSWTI had pursued a range of management initiatives including:

- network improvement program in which services were rationalised in each area, straightening out routes, and removing less patronised services
- development of strategic corridors and trunk routes
- establishment of uniform bus fare and concession arrangements throughout the metropolitan area, making privately operated bus services more affordable
- provision of new bus information stands on strategic corridors across the network
- funding the acquisition of new buses, now standardised across the metropolitan area, with more buses that are air-conditioned and wheel chair accessible.

Linking with operator business plan objectives

We found that operator business plans are primarily used as a basis for a three year financial forecast. The plans include only a one year forecast on operational activities. They include a number of statements about what the operator is meant to do, such as in managing customer feedback. The business plans contain few, if any, performance objectives.

The 2004 *Review of Bus Services in NSW* provided direction, with its emphasis on new contracts, strategic corridors and a new bus network. But NSWTI has no overarching business plan to integrate the regions, outline the future for each area and set overall priorities. We were advised that a new metropolitan transport plan is being developed and that it will be supported by more detailed 5 and 10 year plans.

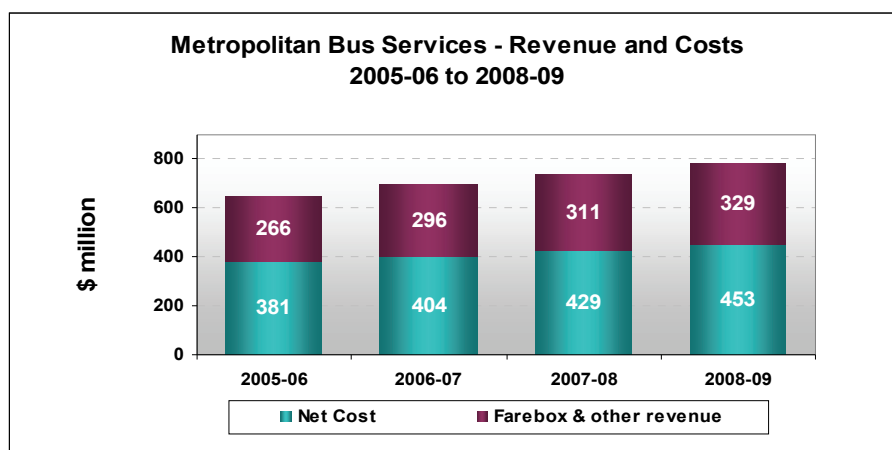
Is operator performance closely monitored?

Conclusion

Service delivery, payments and budgets are closely monitored. But a lack of performance information has prevented NSWTI from undertaking any comprehensive analysis of the performance of bus services. The planned new performance assessment regime is a step forward, but it will be limited to using data already available and will not cover many areas of performance important to bus users. This will continue to frustrate NSWTI's ability to manage the performance of metropolitan bus services.

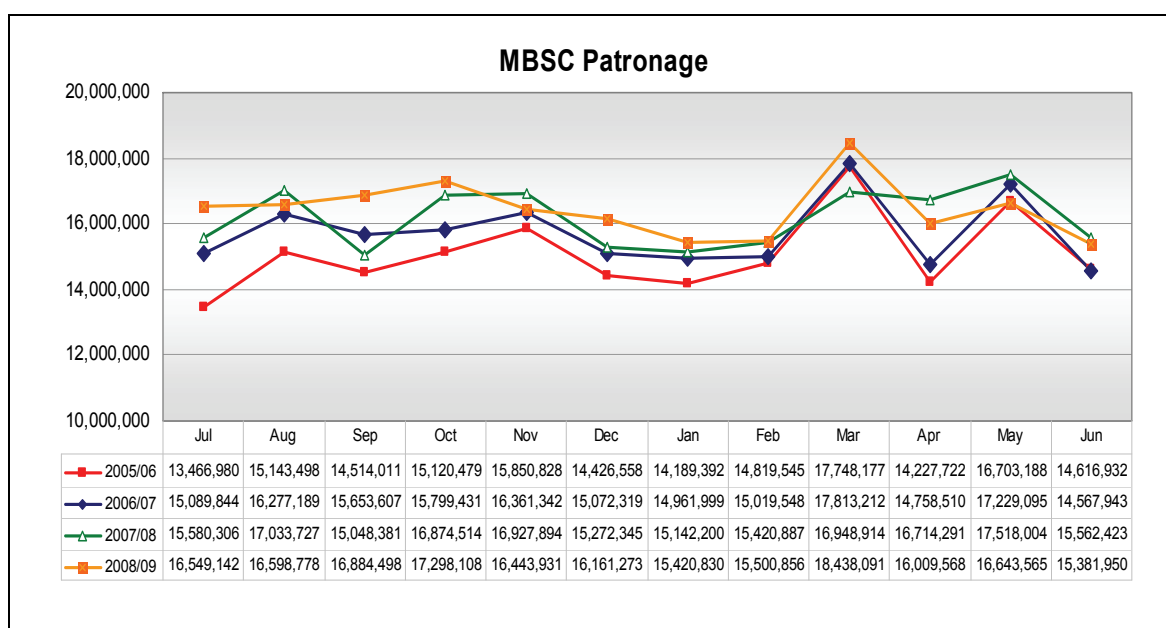
Assessing overall performance

NSWTI's Report on Bus Services for the June Quarter 2008-09 showed that net payments to STA and private operators under the bus contracts in 2008-09 totalled \$453 million. Farebox and other revenue recovery have remained stable at around 42 per cent of total costs, as shown by the following figure.



Source: NSWTI Report on Bus Services for the June Quarter 2008-09

The report also shows steadily increasing patronage, as shown below.



Source: NSWTI Report on Bus Services for the June Quarter 2008-09

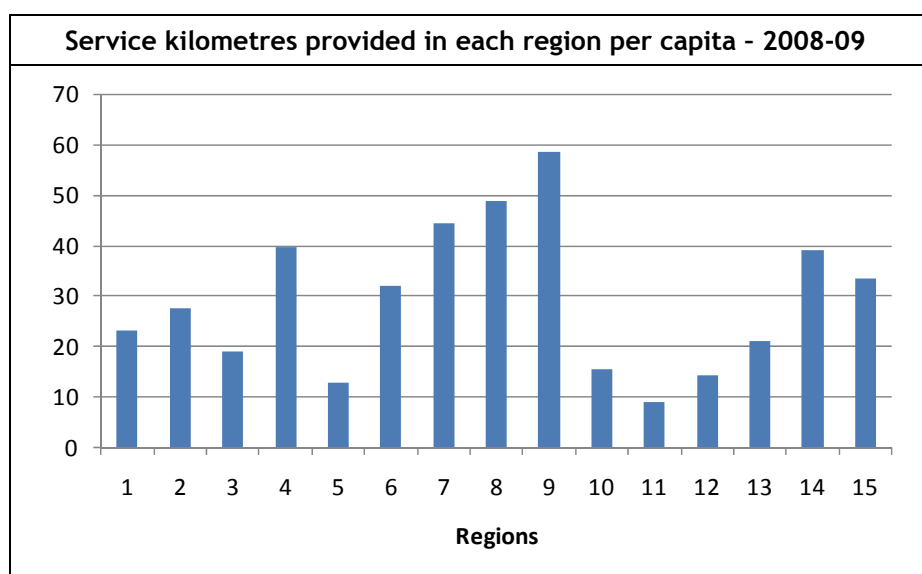
On the other hand, the Independent Transport Safety and Reliability Regulator (ITSRR) undertook a survey of bus users in 2009 that showed that not all bus users are satisfied with the reliability and availability of bus services. In particular:

- 25 per cent of bus users said they were delayed by 10 minutes or more at least once a week
- 24 per cent of bus users said they were left standing at the bus stop at least once a week
- 33 per cent of bus users had wanted to catch a bus at times when the services had stopped operating; the proportion was higher (more than 40 per cent) for the private bus operators than for Sydney Buses.

We referred earlier to the network improvement program, which focused on rationalising and improving services within each contract region. The aim was to ensure that the overall changes within a contract region remained at least cost neutral by not increasing the total number of service kilometres. As the new networks have only recently been implemented, it is too early to establish how successful they have been.

In some cases NSWTI approved and funded additional service kilometres, such as for new housing developments, new school services, “Shopper Hoppers” and additional route services on M2 City based Services.

However, there remains a wide variation in service levels across Sydney - as illustrated by the figure below.

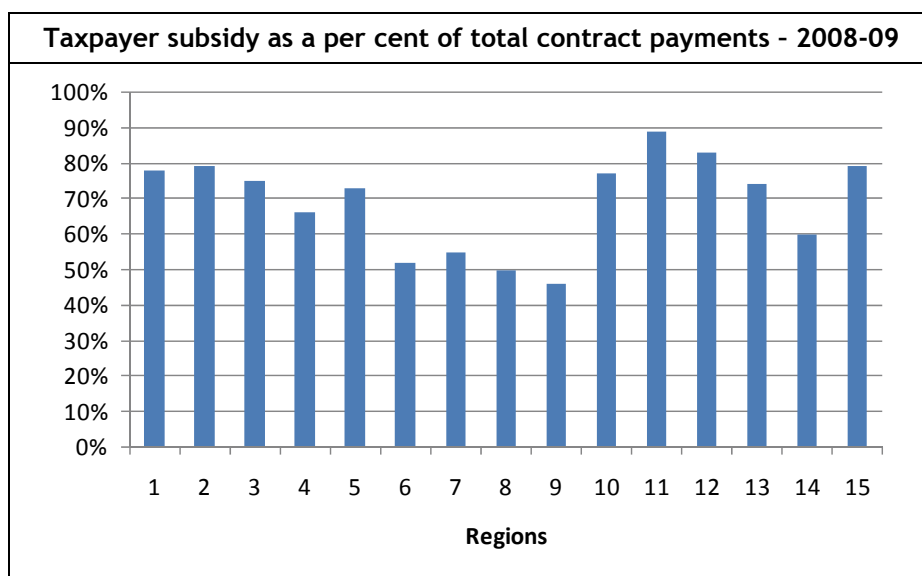


Source: NSWTI 2008-09 reported service kilometres, census data in regional Fact Sheets.

Note: Region numbers are identified in Appendix 2.

Local services in the privately operated contract areas are likely to be less frequent, less accessible and less likely to operate at nights or on weekends. For example, Appendix 3 highlights differences in bus stop accessibility. This variation in service levels was a major concern of the 2004 *Review of Bus Services in NSW*. To an extent there will always be differences between regions, as service levels are affected by demand. But improved services can increase demand.

We observed that the regions serviced by private operators receive much higher taxpayer subsidies, as shown by the figure below:



Source: NSWTI 2008-09 reported contract payments
 Note: Region numbers are identified in Appendix 2.

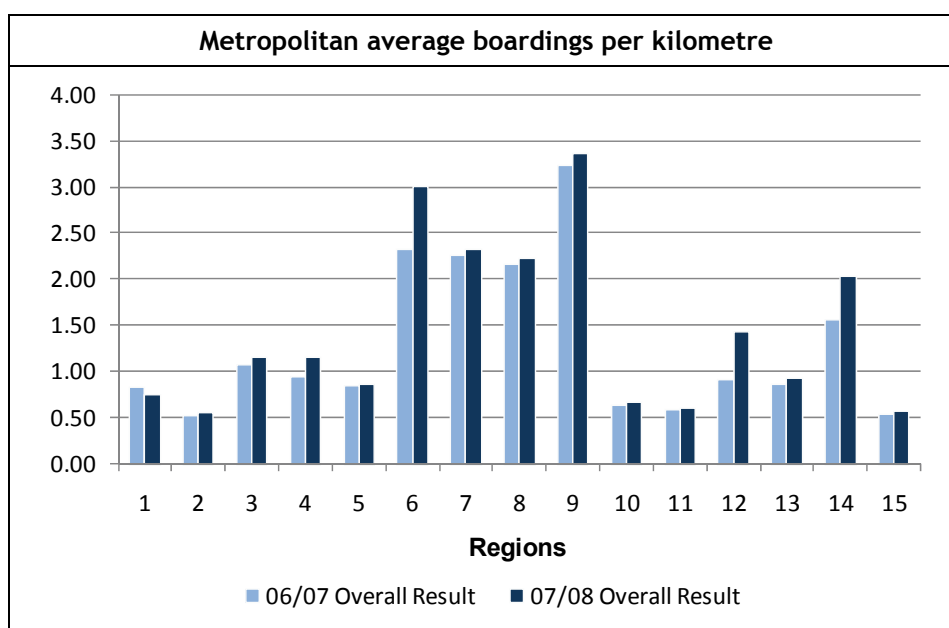
This higher subsidisation reflects social policies to provide free or reduced fares to some passengers, including school students and other concession travellers.

We see scope for improved performance management of the level of service provided by metropolitan bus services, with particular emphasis on the needs of relatively disadvantaged areas where the level of transport services does not provide residents with sufficient access to work, education, health and shopping.

Assessing operator performance

We found that NSWTI assessed operator reports against budget, forecasts, and prior periods for revenue kilometres, service reliability customer feedback, and patronage by route. However, there has until recently been little comparison between operators.

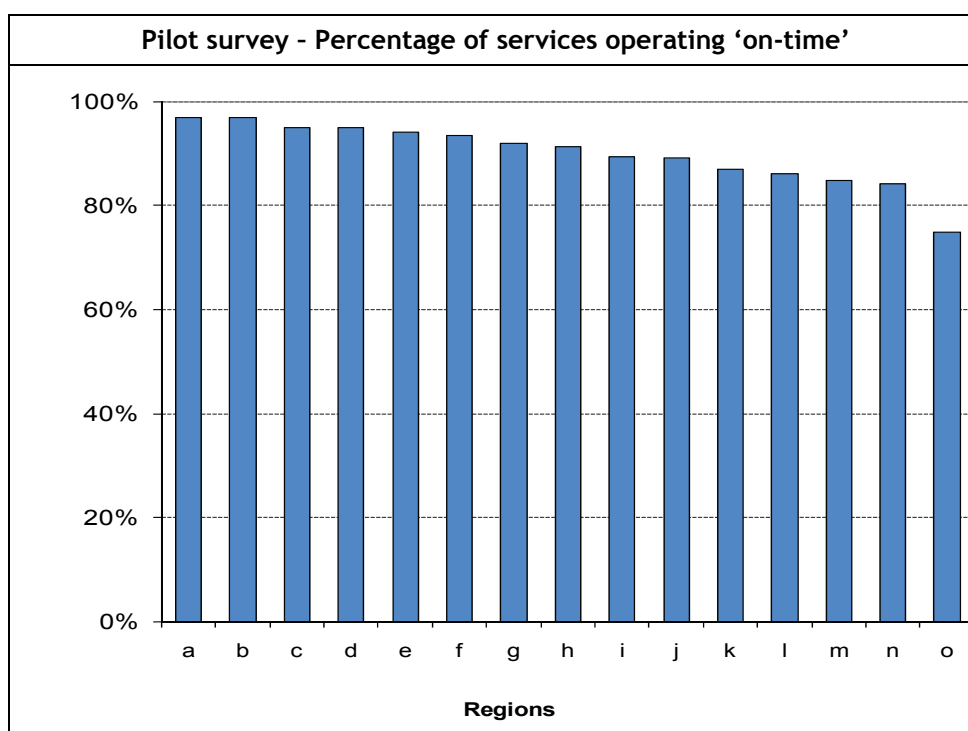
One measure, which helps in understanding why service levels tend to be lower in the regions served by private operators, is boardings per kilometre. This is the number of passengers carried in each region divided by the kilometres that buses travelled. The results are as below:



Source: NSWTI benchmarking report 2007-08

Note: Region numbers are identified in Appendix 2.

NSWTI is also piloting an on-time running survey. The rule is that services should leave no more than one minute early, and no more than five minutes late. The survey takes place when buses leave major interchanges, which can be misleading, as it is not taken when buses are en-route. The results for October 2009 are as shown below:



Source: NSWTI pilot on-time running survey results for October 2009.

Note: Regions have been de-identified.

Major initiatives to improve performance

We found that NSWTI is closely involved in a number of major initiatives that have the potential to significantly improve bus services.

These include:

- an electronic ticketing system to provide seamless travel across regional boundaries and different transport modes
- a range of traffic management measures to give buses priority travel on the 43 strategic bus corridors that link major and town centres in metropolitan Sydney
- a real time bus monitoring and reporting system, that can also provide traffic light priority for late running buses. It could also provide up to date information against a published timetable to bus operators and the travelling public.
- a spatial database that can store data on each individual shift, route, and timetable for each operator.

These new systems could provide NSWTI with direct information on ticket sales, revenue, service running times, and schedule adherence. They should also provide greatly improved information on passengers boarding and alighting by stop location and time of day, and facilitate better targeting of bus passenger services.

The new electronic systems could enable NSWTI to considerably enhance the information provided to bus passengers, such as with:

- automatic stop announcements that are pre-recorded and triggered automatically by a GPS signal in advance of arrival or departure from a bus stop
- next bus arrival displays using electronic displays to provide real time information to the public at bus shelters and interchanges
- real-time information on bus services provided online to the public using wireless handheld devices, providing information on bus locations, schedule adherence, service disruptions and predicted bus stop arrivals.

We found considerable interest and varying progress on many of these initiatives. Some systems are further developed in relation to the STA bus services, than those provided by private operators.

Unfortunately it seems likely to be at least three to four years before the new electronic ticketing system is fully developed and operational. The Public Transport Ticketing Corporation has assumed that existing ticketing systems will then continue to operate for a further three years after that time.

Taken together, these initiatives have the potential to significantly improve the journey of the bus passenger and strengthen NSWTI's management of metropolitan bus services. Yet we could find no strategy or document that looked at how these major initiatives could improve the performance of bus services. We would have expected to find references in NSWTI's business plan for Sydney's buses - had we been able to find one.

Further progress in awarding a tender for Sydney's new electronic ticketing system should enable NSWTI to reassess its overall position and formulate a comprehensive program for the development and implementation of bus information systems.

Using performance indicators to control operator performance

We found that the bus contracts have a provision for a comprehensive Operator Performance Regime. The intention of this is to provide incentives to improve operational performance and therefore service delivery by measurement of items such as on time running, missed/cancelled trips, incomplete trips, and overloaded trips.

NSWTI has started designing performance measures and benchmarks and agreeing on these with the bus industry. Consultation with the bus contractors began in October 2005. However, to date the Operator Performance Regime is still in development. NSWTI has no plans to start negotiations with the bus industry on the incentives and penalties that will apply to the performance outcomes.

The contracts also have provision for a Service Quality Incentive weighted on a number of criteria. For example, the contract says that the agency will conduct periodic reviews of loadings on the Operator's vehicles, especially at peak loading points, to ensure additional capacity is provided as required under the contract. We found that the Service Quality Incentive had not been developed. There is currently no assessment of the service quality of individual bus operators.

We found that NSWTI's efforts to establish an operator performance regime have been under consideration for a number of years. In 2002 the NSW Parliament Public Accounts Committee's *Inquiry into the School Student Transport Scheme* noted that the agency had released two discussion papers in 1998 and again in 2000. These performance measures had yet to be implemented. It recommended that the agency implement an effective Performance Assessment Regime without any substantial delay.

We found that NSWTI's planned new performance assessment regime is being limited to using data already available. The new regime is a step forward, but it will not cover many areas of performance important to bus operations and to bus users, as below:

Area of performance	Measures implemented 2009	Other measures needed
operator efficiency	<ul style="list-style-type: none"> ▪ cost per service kilometre 	<ul style="list-style-type: none"> ▪ cost per service hour (in order to adjust for congestion effects) ▪ cost per passenger kilometre ▪ revenue per passenger kilometre
service quality	<ul style="list-style-type: none"> ▪ number of complaints ▪ overall satisfaction from customer survey ▪ service reliability ▪ vehicle condition 	<ul style="list-style-type: none"> ▪ passenger safety (operators are required to report incidents) ▪ travel times, transfer times ▪ passenger comfort ▪ overcrowding (particularly when passengers are left behind. A 'bus full en-route' measure is self-reported now) ▪ provision of bus shelters ▪ provision of information at bus stops and on the bus
network effectiveness	<ul style="list-style-type: none"> ▪ passenger boardings per service kilometre 	<ul style="list-style-type: none"> ▪ passenger load factors by route and by time of day (to indicate how full a bus is) ▪ service accessibility in terms of proximity, frequency, hours of service.

Without such information, it is not possible to assess the efficiency and effectiveness of metropolitan bus services and it is much more difficult to identify specific performance improvements and performance failures.

This will continue to frustrate NSWTI's ability to manage the performance of metropolitan bus services.

Benchmarking to identify improvement opportunities

We found that NSWTI is investigating the possibility of comparing the operators' performance at a national and international level.

This is particularly important as:

- the new bus contracts were directly negotiated with existing operators, using a cost and profit benchmarking process, in the absence of an open competitive tender
- NSWTI, which now includes STA, needs to be transparent in its dealings with STA and other bus contractors.

NSWTI's investigations have identified that there are a large number of benchmark criteria used around the world, and within Australia, to monitor bus operator performance.

We found that STA participates in a program of international benchmarking with twelve other bus organisations including London Buses, NYCT (New York), STM (Montreal), and RATP (Paris). The benchmarking process uses 32 key performance indicators including asset utilisation, efficiency, service quality, safety and security, environment, and financial performance - see Appendix 4. We understand that this information is shared by the bus companies on condition that it not be released to third parties.

We also found that in 2009 the Independent Pricing and Regulatory Tribunal (IPART), as part of its fare determination process, undertook a review to estimate the efficient costs of providing regular passenger bus services. The review was finally restricted to STA serving regions 6, 7, 8 and 9, as NSWTI was unable to provide IPART with certain performance data (particularly hourly costs) for private operators.

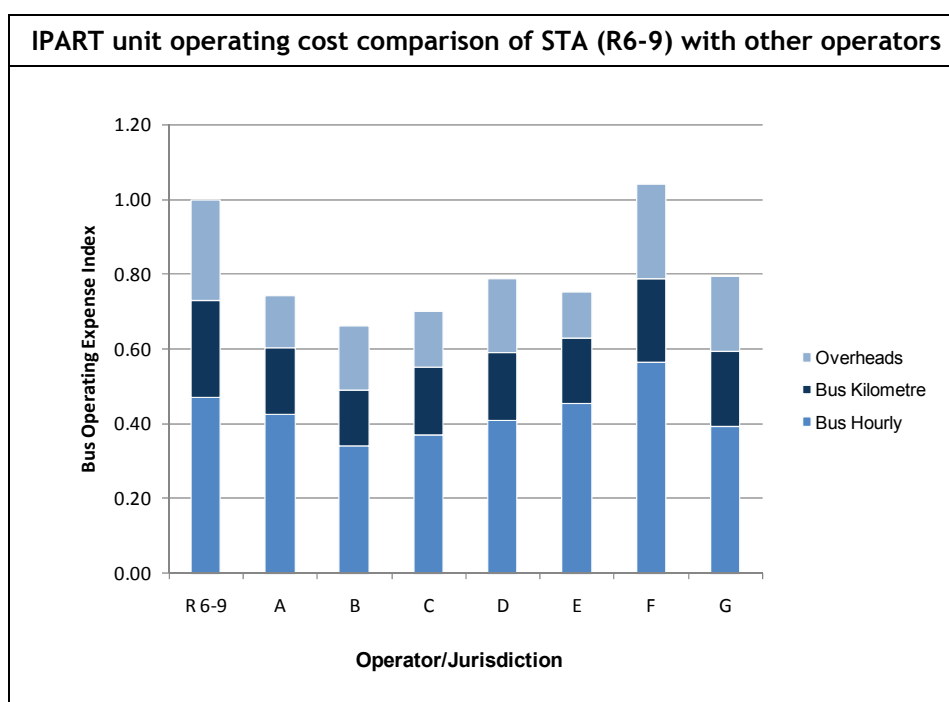
The IPART review found that the costs of STA were likely to be increased as a result of factors including:

- higher levels of traffic congestion
- more starting and stopping
- higher passenger densities
- more services operating at night and on weekends.

It compared STA's average unit costs with seven comparators (for which data was available) including private operators in Sydney, Melbourne, Perth and Adelaide, and public bus operators in Hobart, Brisbane and Canberra. See the figure below.

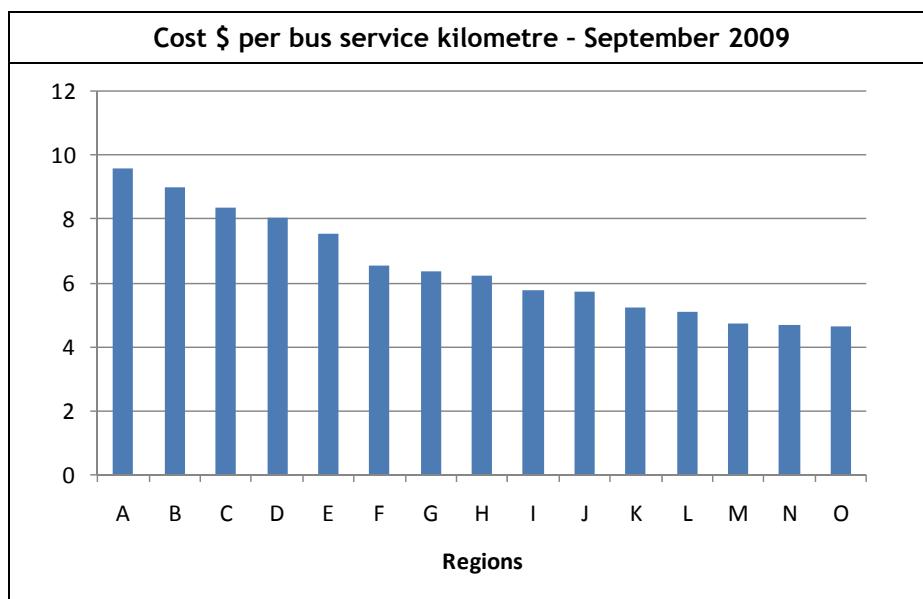
It found that by benchmarking the costs against other operators it was able to:

- establish that in 2008/09 the relative operating cost for STA was 14.3 per cent above the costs of other Australian public metropolitan bus operators (ACT, TAS, and QLD)
- recommend more efficient operating and capital cost estimates for STA for future years
- identify a number of potential savings measures in areas such as driver working conditions, absenteeism, running times and network scheduling.



Source: IPART, Total cost review of regular bus services operated in Sydney's four largest regions, 2009

We observed a wide variation in total cost per kilometre compared across metropolitan bus service regions, as shown in the following figure.



Source: NSWTI reported cost per service kilometre as at September 2009.

Note: Regions have been de-identified.

In our view NSWTI needs to complete the cost review and benchmarking that IPART was unable to do, by collecting additional performance data from private operators to establish an efficient cost of operation and, as necessary, improvements from those operators that exceed that cost.

Is performance information accurate and timely?

Conclusion

NSWTI relies on the bus operators self-reporting using their own existing systems to collect information and report performance. It has control measures in place, but this information carries a risk of unreliability and inaccuracy. In our view NSWTI needs to further strengthen its contract management reviews and its audit program. It also needs to ensure that bus customer satisfaction and usage surveys are undertaken more often.

Checking for accuracy and completeness

We found that NSWTI relies for the most part on bus operators to self-report their service delivery and performance.

NSWTI has long been aware of difficulties associated with this, including:

- limited ability to challenge information supplied by operators
- errors arising from manual processes
- inconsistent reporting by operators
- errors arising from faulty ticket machines
- use of estimates for travel by concession passes and school students.

This has, in the past, led to some incorrect assessments of service delivery and inaccurate payments by NSWTI that were identified and subsequently corrected.

Until new electronic systems are fully operational, NSWTI will continue to rely on the bus operators self-reporting using their own existing systems to collect and report operational and performance data.

Since July 2009 NSWTI's contract managers for each region have been reviewing the monthly operator reports to identify possible anomalies or data errors, and to seek explanations from the bus operators. This new control measure needs a policy and guidelines to ensure that the level of analysis is adequate, consistently applied, and the findings shared with the management team.

We found that NSWTI has engaged external auditors to verify the accuracy and completeness of data ultimately used as input to the monthly bus contract payments. The limits to this work are that such audits have:

- focused on fare box revenue, capital works, new bus acquisitions, and operator reported inputs into bus contract payments such as patronage, kilometres travelled, charter and advertising commission
- not focused on other key self-reported performance data such as late and early trips, cancelled or incomplete services, and bus full on route
- not verified whether the actual kilometres reported by the bus operators are accurate
- not included verifying operators' consistency in interpretation, methodology and compliance with contract reporting requirements
- have not formed a continuous sequence covering all reporting periods and all regions since commencement of contracts.

Making better use of audit

In our view NSWTI needs to strengthen their audit program so that it examines each operator's self-reporting systems and processes, and examines actual data reported to NSWTI with the aim of providing reasonable assurance that all key performance data is complete and reliable for the purposes of performance monitoring and measurement.

To do this, it needs to determine the full range of performance measures needed to effectively monitor and assess bus operator performance and specifically include that data as part of the audit. It then needs to adopt a risk management approach in selecting the bus operators to be audited, the amount of actual data to be verified, and the reporting periods to be covered in the audit. An operator risk profile needs to be established and maintained, including a database detailing problems identified and action taken.

Another key source of error arises because patronage data for school students is based on estimated 'bids' submitted by the bus operators in 2005. Actual school travel is not normally recorded as school travel is free. Until the new ticketing system is in place, NSWTI should consider conducting an annual school usage survey to assess the accuracy of school travel estimates so that at least it knows what it is paying for.

Information timely and useful The bus contracts require operators to submit monthly and quarterly reports to:

- enable the calculation of the bus contract payments
- assist in establishing appropriate benchmarks
- permit accurate and reliable performance measurement of bus services.

As discussed earlier, NSWTI has not been collecting a range of performance information. In our view it now should plan ahead to ensure it receives from operators all the data it needs for effective benchmarking and performance measurements.

Information on changing customer needs NSWTI monitors the overall number of bus passenger complaints, of which 31,200 were received in 2008-09. The main concerns raised concern bus reliability (53 per cent) and the behaviour of the driver (23 per cent).

ITSRR commissioned bus user focus groups in 2007 that identified the following attributes of bus services as being important to bus users:

- bus service (reliability, frequency, crowding, cost, ticketing, routes, time of first and last service, easy access to bus stops, journey time, connections)
- information services (website and telephone information service, timetables and route maps at bus stops and on board buses, on board announcements, real time information about time of next bus at bus stop, readily available information about prices and ticketing options)
- bus stops (safe, well lit, clean, spacious, shelter from weather, vandal proof, seats, open so approaching bus can be seen, queue management at busy stops)
- onboard the bus (cleanliness, lighting, seat size, comfort and leg room, enough handholds, space for luggage, prams, wheelchairs, air conditioning, safe and smooth driving, helpful and friendly driver).

We found that NSWTI conducted no routine bus customer satisfaction surveys in relation to such matters. It relied on complaints, feedback from proposed network changes, and results of a survey by ITSRR (which they have asked to be conducted annually).

This was surprising as the bus contract required that an independent survey of all operators be conducted by NSWTI every 6 months. We found that other jurisdictions regularly survey bus users, including the use of *Mystery Shoppers* using public volunteers, so that they can better manage the system on their behalf. In our view, regular surveys of this kind are necessary if NSWTI is to effectively manage the metropolitan bus contracts.

Is action taken to correct any deficiencies?

Conclusion Action is taken to address known deficiencies. No penalties for operator performance failure have been applied, although the contract does allow for penalties. The absence of adequate performance reporting means that NSWTI cannot provide assurance that it has reliably and consistently identified and addressed all performance issues that need to be addressed.

Addressing performance deficiencies We found that NSWTI has been working with the bus operators to resolve the shortcomings identified. However, we did not find an on-going progress status report which summarised the problems identified in each region and whether each had been resolved. As a result, we were unable to ascertain whether all material matters that had been identified had been adequately addressed.

We found that the contracts provide mechanisms for the gradual escalation and resolution of performance issues. NSWTI has its contract managers raise performance issues with the bus operators. The bus contracts provide for penalties (and potentially contract termination) if an operator provides information which is deliberately false or misleading. Some operators have received breach notices for various aspects of non compliance with contract requirements, such as late receipt of information and poor customer complaint management. No penalties have been applied, although the contract does allow for penalties.

As noted earlier, NSWTI has no plans to start negotiations with the bus industry on the incentives and penalties that will apply to the performance outcomes. Examples in other jurisdictions of performance incentives and penalties include:

- payment of bonuses if performance is above a certain level, to a maximum of 5 per cent of revenue, or imposition of penalties to a maximum of 2.5 per cent of costs
- penalty points for each performance failure that can accumulate and lead to cancellation of a contract
- compensation payments to customers (usually in the form of complimentary tickets).

Appendices

Appendix 1

About the audit

Audit Objective

Our objective in this audit is to determine how well NSW Transport and Infrastructure manages the performance of metropolitan bus services.

Lines of Inquiry

In reaching our opinion against the audit objective, we sought to answer the following questions:

1. Have clear performance objectives been set?
2. Is operator performance closely monitored?
3. Is performance information accurate and timely?
4. Is action taken to address any deficiencies?

Audit Criteria

In answering the lines of inquiry, we used the following audit criteria (the 'what should be') to judge performance. We based these standards on our research of current thinking and guidance on better practice. They have been discussed and agreed with those we are auditing.

For line of inquiry 1, we assessed the extent to which:

- objectives have been established for each significant activity associated with the provision of bus services
- objectives include measurement criteria
- objectives serve as key result areas to provide a basis for particular management focus
- operator business plan objectives link with Government objectives and the agency's network plans.

For line of inquiry 2, we assessed the extent to which:

- NSWTI's strategic objectives and the operator's operations objectives are being achieved
- actual performance is assessed against budgets, forecasts, prior periods, and other operators
- major initiatives are tracked - such as the development of new network plans, strategic corridors, and bus priority measures - to measure the extent to which targets are being reached
- performance indicators serve an operational purpose and also provide a basis for analysing and controlling operator performance
- bench-marking focuses on specific events or processes, compares measures and results using common metrics, and identifies improvement opportunities.

For line of inquiry 3, we assessed the extent to which:

- controls are performed to check accuracy and completeness of information
- pertinent information is identified, captured, and communicated in a form and timeframe that enable people to carry out their responsibilities
- up to date information is obtained on changing customer needs.

	<p>For line of inquiry 4, we assessed the extent to which:</p> <ul style="list-style-type: none"> ▪ action is taken to address performance deficiencies ▪ audit activities are effective.
Audit scope	<p>The audit focused on the role of the former NSW Ministry of Transport (now part of NSW Transport and Infrastructure) in managing Sydney’s metropolitan bus services contracts.</p> <p>The audit did not:</p> <ul style="list-style-type: none"> ▪ question the merits of Government policy objectives ▪ duplicate reviews already conducted.
Audit approach	<p>We acquired subject matter expertise through:</p> <ul style="list-style-type: none"> ▪ interviews and examination of relevant documents including guidelines, reports, studies, strategies and reviews relating to bus services ▪ discussions with relevant staff of NSW Transport and Infrastructure ▪ discussions with representatives of key stakeholders ▪ comparisons where appropriate with other states and countries ▪ government and best practice guidelines relevant to the above.
Audit selection	<p>We use a strategic approach to selecting performance audits which balances our performance audit program to reflect issues of interest to Parliament and the community. Details of our approach to selecting topics and our forward program are available on our website.</p>
Audit methodology	<p>Our performance audit methodology is designed to satisfy Australian Audit Standards AUS 806 and 808 on performance auditing, and to reflect current thinking on performance auditing practices. We produce our audits under a quality management system certified to International Standard ISO 9001. Our processes have also been designed to comply with the auditing requirements specified in the Public Finance and Audit Act 1983.</p>
Acknowledgements	<p>We gratefully acknowledge the cooperation and assistance provided by NSW Transport and Infrastructure, including STA and the RTA. In particular we wish to thank our liaison officers and staff who participated in interviews and provided material relevant to the audit.</p> <p>We were also assisted by discussions with a number of government agencies and external bodies including the Independent Transport Safety and Reliability Regulator, the Independent Pricing and Regulatory Tribunal and the NSW Treasury. We also spoke to the Bus and Coach Association, three major bus operators, transport unions and lobby groups such as Action for Public Transport, the Western Sydney Region of Councils, and NCOSS.</p>
Audit team	<p>Our team for the performance audit was Chris Yates and Jasmina Munari. Sean Crumlin provided direction and quality assurance.</p>
Audit cost	<p>Including staff costs, printing costs and overheads, the estimated cost of the audit is \$193,000.</p>

Appendix 2 Bus operators and their service areas

Region	Bus operators	Service area
1	Westbus, Busways	Blacktown-Penrith-Richmond-Windsor
2	Busabout, Interline	Liverpool-Glenfield-Ingleburn-Bringelly-Hoxton Park
3	Busabout, Metrolink, Hopkinsons, Westbus	Fairfield-Cabramatta-Liverpool-Wetherill Park
4	Hillsbus	Blacktown-Rouse Hill-Castle Hill-Dural-Parramatta
5	Punchbowl Bus Company	Lakemba-Mortdale-Punchbowl-Roselands
6	State Transit Authority	Sydney Olympic Park-Burwood-Ashfield-Leichardt-Campsie-Rockdale
7	State Transit Authority	North Sydney-Chatswood-Macquarie Park- Epping-Ryde-Parramatta
8	State Transit Authority	Palm Beach-Brookvale-Manly-Mosman-North Sydney
9	State Transit Authority	Bondi Junction-Randwick-Maroubra-Botany-Mascot-Surry Hills
10	Veolia	Hurstville-Miranda-Menai-Bankstown
11	Veolia, Caringbah Bus Service	Caringbah-Cronulla-Kurnell-Miranda
12	Shorelink	Berowra-Hornsby-Gordon-Chatswood
13	Veolia	Parramatta-Burwood-Bankstown-Liverpool
14	Forest	Chatswood-Belrose-Terrey Hills-St Ives
15	Busways	Campbelltown-Narellan-Camden



Appendix 3 Population within 400m of a bus stop

Region	Total Population	Population within 400m	% Population within 400m
1	446, 528	332,298	74%
2	137,521	98,797	72%
3	281,848	254,512	90%
4	298,088	205,810	69%
5	188,762	156,553	83%
6	465,923	429,652	92%
7	311,179	247,895	80%
8	240,514	215,468	90%
9	351,556	349,071	99%
10	266,017	188,548	71%
11	57,209	26,454	46%
12	165,737	112,825	68%
13	240,243	185,520	77%
14	65,703	36,728	56%
15	135,900	108,087	80%
Total	3,652,728	2,948,218	81%

Source: NSWTI Transport Data Centre, 2009

Note: bus stops with services at least once every 70 minutes.

Appendix 4 Key performance indicators benchmarked internationally by STA

1. Passenger journeys
2. Vehicle kilometres
3. Staff training
4. Passenger km/revenue capacity km
5. Actual/scheduled revenue km & hours
6. Dynamic customer information
7. Low floor buses
8. % buses on-time (punctuality)
9. Regularity
10. Customer satisfaction
11. % of fleet used in peak
12. Revenue/total vehicle km & hours
13. Staff absenteeism rates
14. Mean distance between failures
15. Lost vehicle km (internal/external causes)
16. Number of vehicle accidents per vehicle km & hours
17. Number of staff accidents per million staff hours
18. Number of passenger accidents per boarding
19. Number of third party accidents
20. Incidences of on-board crime
21. Total cost per total vehicle km & hour
22. Total operating cost per total vehicle km & hour
23. Service operation cost per revenue vehicle km & hour
24. Total fare revenue/total operating cost
25. Total operating cost per passenger boarding/ kilometre
26. Fare revenue per passenger boarding/ kilometre
27. Diesel fuel consumption per 100 total diesel vehicle km
28. CNG consumption per 100 total CNG vehicle km
29. Diesel fuel consumption per diesel passenger kilometre
30. CNG consumption per CNG passenger kilometre
31. % of fleet meeting EURO emissions categories
32. CO₂ emissions per passenger km & vehicle km

Performance Audits by the Audit Office of New South Wales

Performance Auditing

What are performance audits?

Performance audits determine whether an agency is carrying out its activities effectively, and doing so economically and efficiently and in compliance with all relevant laws.

Performance audits may review a government program, all or part of a government agency or consider particular issues which affect the whole public sector.

Where appropriate, performance audits make recommendations for improvements.

If you wish to find out what performance audits are currently in progress, visit our website at www.audit.nsw.gov.au.

Why do we conduct performance audits?

Performance audits provide independent assurance to Parliament and the public that government funds are being spent efficiently and effectively, and in accordance with the law.

Performance audits seek to improve the efficiency and effectiveness of government agencies so that the community receives value for money from government services.

Performance audits also assist the accountability process by holding managers to account for agency performance.

What are the phases in performance auditing?

Performance audits have three key phases: planning, fieldwork and report writing.

During the planning phase, the audit team will develop audit criteria and define the audit field work.

At the completion of field work we will meet with agency management to discuss all significant matters arising out of the audit. Following this, we will prepare a draft performance audit report.

We meet with agency management to check that facts presented in the report are accurate and that recommendations are practical and appropriate. Following this, a formal draft report is provided to the CEO for comment. The relevant Minister is also provided with a copy of the final

report. The final report, which is tabled in Parliament, includes any comment made by the CEO on the conclusion and the recommendations of the audit.

Depending on the scope, performance audits can take several months to complete.

Copies of our performance audit reports can be obtained from our website or by contacting our Office.

How do we measure an agency's performance?

During the planning phase, the team develops the audit criteria. These are standards of performance against which the agency or program is assessed. Criteria may be based on best practice, government targets, benchmarks, or published guidelines.

Do we check to see if recommendations have been implemented?

Agencies are requested to report actions taken against each recommendation in their annual report so that we can monitor progress.

The Public Accounts Committee (PAC) may conduct reviews or hold inquiries into matters raised in performance audit reports. These inquiries are usually held 12 months after the report is tabled.

Who audits the auditors?

Our performance audits are subject to internal and external quality reviews against relevant Australian and international standards. This includes ongoing independent certification of our ISO 9001 quality management system.

The PAC is also responsible for overseeing the activities of the Audit Office and conducts a review of our operations every three years.

Who pays for performance audits?

No fee is charged for performance audits. Our performance audit services are funded by the NSW Parliament and from internal sources.

Further information

Further information can be obtained from our website www.audit.nsw.gov.au or by contacting us on 9275 7277.

Performance Audit Reports

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
198	NSW Transport and Infrastructure	<i>Improving the Performance of Metropolitan Bus Services</i>	March 2010
197	Roads and Traffic Authority of NSW	<i>Improving Road Safety: School Zones</i>	25 February 2010
196	NSW Commission for Children and Young People	<i>Working with Children Check</i>	24 February 2010
195	NSW Police Force NSW Department of Health	<i>Managing Forensic Analysis - Fingerprints and DNA</i>	10 February 2010
194	Department of Premier and Cabinet Department of Services, Technology and Administration NSW Treasury	<i>Government Advertising</i>	10 December 2009
193	Roads and Traffic Authority of NSW	<i>Handback of the M4 Tollway</i>	27 October 2009
192	Department of Services, Technology and Administration	<i>Government Licensing Project</i>	7 October 2009
191	Land and Property Management Authority Maritime Authority of NSW	<i>Administering Domestic Waterfront Tenancies</i>	23 September 2009
190	Department of Environment, Climate Change and Water NSW Environmental Trust	<i>Environmental Grants Administration</i>	26 August 2009
189	NSW Attorney General's Department NSW Department of Health NSW Police Force	<i>Helping Aboriginal Defendants through MERIT</i>	5 August 2009
188	NSW Department of Health	<i>Tackling Cancer with Radiotherapy</i>	23 June 2009
187	Roads and Traffic Authority of NSW	<i>Improving Road Safety - Heavy Vehicles</i>	13 May 2009
186	Grants	<i>Grants Administration</i>	6 May 2009
185	Forests NSW	<i>Sustaining Native Forest Operations</i>	29 April 2009
184	NSW Police Force	<i>Managing Injured Police</i>	10 December 2008
183	Department of Education and Training	<i>Improving Literacy and Numeracy in NSW Public Schools</i>	22 October 2008
182	Department of Health	<i>Delivering Health Care out of Hospitals</i>	24 September 2008
181	Department of Environment and Climate Change	<i>Recycling and Reuse of Waste in the NSW Public Sector</i>	11 June 2008
180	Follow-up of 2003 Performance Audit	<i>Protecting Our Rivers</i>	21 May 2008
179	NSW Office of Liquor, Gaming and Racing; NSW Police Force	<i>Working with Hotels and Clubs to reduce alcohol-related crime</i>	23 April 2008

No	Agency or Issues Examined	Title of Performance Audit Report or Publication	Date Tabled in Parliament or Published
178	Greyhound and Harness Racing Regulatory Authority	<i>Managing the Amalgamation of the Greyhound and Harness Racing Regulatory Authority</i>	3 April 2008
177	Office of the Director of Public Prosecutions	<i>Efficiency of the Office of the Director of Public Prosecutions</i>	26 March 2008
176*	Better Practice Guide	<i>Implementing Successful Amalgamations</i>	5 March 2008
175	Department of Commerce Department of Primary Industries	<i>Managing Departmental Amalgamations</i>	5 March 2008
174	Department of Education and Training	<i>Ageing workforce - Teachers</i>	13 February 2008
173	NSW Police Force	<i>Police Rostering</i>	5 December 2007
172	Department of Primary Industries	<i>Improving Efficiency of Irrigation Water Use on Farms</i>	21 November 2007
171	Department of Premier and Cabinet Department of Commerce	<i>Government Advertising</i>	29 August 2007
170	RailCorp	<i>Signal Failures on the Metropolitan Rail Network</i>	15 August 2007
169	NSW Police Force	<i>Dealing with Household Burglaries</i>	27 June 2007
168	Ministry of Transport	<i>Connecting with Public Transport</i>	6 June 2007
167	Follow-up of 2001 Performance Audit: Ambulance Service of New South Wales	<i>Readiness to Respond</i>	6 June 2007
166	Follow-up of Performance Audit Department of Education and Training	<i>Using Computers in Schools for Teaching and Learning</i>	9 May 2007
165	Homelessness	<i>Responding to Homelessness</i>	2 May 2007
164	Department of Juvenile Justice NSW Police Force	<i>Addressing the Needs of Young Offenders</i>	28 March 2007
163	Legal Aid Commission of NSW	<i>Distributing Legal Aid in New South Wales</i>	13 December 2006
162	NSW Health	<i>Attracting, Retaining and Managing Nurses in Hospitals</i>	12 December 2006
161	Follow-up of 2003 Performance Audit	<i>The Police Assistance Line</i>	6 December 2006

* Better Practice Guides

Performance audits on our website

A list of performance audits tabled or published since March 1997, as well as those currently in progress, can be found on our website www.audit.nsw.gov.au.

If you have any problems accessing these reports, or are seeking older reports, please contact our Office Services Manager on (02) 9275 7116.