

# Planning and Management of Bus Services

## Executive Summary

Report 23: November 2017

### Introduction

This audit assessed the efficiency and effectiveness of the planning and management of bus services within the Perth metropolitan area. We focused on the following questions:

1. Are bus services effectively planned?
2. Are bus services delivered effectively and efficiently?
3. Are initiatives in place to increase patronage?

This audit did not include a cost-benefit analysis of different bus service operating models.

### Background

Buses form part of an integrated public transport system, and reduce demand on the road network, ease traffic congestion and provide a valuable community service. They provide high frequency services during peak transit periods that feed Perth's trains, and move people within and between activity centres. Buses are well suited to serve low residential densities and the increasingly dispersed employment, education, shopping and other trip-generating activities in Perth.

Public bus services in Perth have changed over the last 30 years. In the early 1990s the long-term cost trends for delivering public bus services were rising and service standards were declining. The operational part of bus services was put out to competitive tender, and all bus services were contracted out to private sector companies by 1998. At the time it was estimated the new operating model would save \$40 million per year.

Public Transport Authority (PTA) owns all Transperth buses, the majority of bus depots and the Transperth ticketing system. It controls and sets all routes and service standards. It also manages the bus replacement program and 11 bus service contracts operated through 3 specialist bus service contractors. The contractors are responsible for the daily operation and maintenance of buses.

PTA is responsible for all bus, train and ferry public transport services in the greater metropolitan area under the Transperth brand. The acceptable level of public transport services and associated fare structures are set by government policy. The Department of Transport is responsible for strategic transport policy, integrating transport planning solutions and coordinating investment decisions in collaboration with key stakeholders.

Bus services are more frequent in peak travel periods. Different timetables operate on weekdays, Saturdays, Sundays and public holidays. Where possible, PTA integrates bus and rail services. It also provides dedicated school bus services and buses for special events.

In 2017 PTA operated 1,469 buses along 68.2 million service kilometres. On a typical weekday it has over 15,000 standard service trips, including nearly 300 school service trips.

Demand for public transport can go up and down depending on population growth, the economy, availability of alternative travel options, cost of petrol, traffic congestion and availability and cost of parking. PTA has little or no control over these wider issues that influence demand.

Buses provide a non-commercial community based transport for people that often have no alternative transport options. Different types of services include high frequency buses, feeder services between suburbs and bus/train stations, and community and school services. PTA is

required to plan an appropriate balance of these services to meet community and government expectations.

The development and expansion of Perth between 2000 and 2010 led to strong growth in public transport patronage. In 2011 the government invested in bus services to address overcrowding issues and accommodate expected future growth. PTA measures its effectiveness and efficiency in providing accessible, reliable and safe bus services using performance indicators that include:

- passengers per service kilometre
- accessible public transport
- service reliability
- level of overall customer satisfaction
- customer perception of safety.

## **Audit conclusion**

PTA has been meeting its quality targets for accessible, reliable and safe bus services, but fewer passengers are getting on buses, reducing fare revenue at the same time as the cost of operating an expanded network is rising. As a result, bus services are less efficient and the cost to government is increasing, with the subsidy reaching \$410.5 million in 2016-17.

To prevent the subsidy from growing even further, PTA needs to reduce the cost of bus services and grow patronage. However, there are constraints on PTA's ability to do both of these things, and its plans to improve efficiency are, so far, limited. Increasing the frequency and reliability of services along mass transit corridors has improved patronage on some individual routes, however it has not improved efficiency across the whole network.

Retendering operating contracts has delivered price reductions. But PTA retains the cost risks associated with owning the bus fleet and its main options for cutting costs are to cut services on inefficient routes. PTA needs to identify the service changes that yield the greatest savings, while minimising the impact on patronage and the community. It has the information to do this, but needs to be more systematic in how it uses it.

Having better strategic transport planning and clearer goals would help PTA identify other initiatives to grow bus patronage and reduce costs. Reviewing the current model, which has been in place since the 1990s, would provide assurance to PTA that it has the arrangements in place to deliver a more sustainable bus network.

## **Key findings**

### **Bus services are meeting quality targets, but services are less efficient, and the subsidy has increased to over \$400 million**

Bus services have consistently met targets for accessibility, reliability, safety and customer satisfaction for the past 4 years. However, bus service costs have gone up as passenger numbers have fallen. Lower patronage has reduced fare revenue, so less of the operating cost has been offset, and the government has borne those costs through increases in the subsidy. Without growth in patronage, or reductions in costs, the cost to government will increase further.

It cost \$495.97 million to operate buses in 2016-17, compared to \$254.04 million in 2006-07, a 55% increase in real terms. This is mainly due to 355 buses and 18.3 million service kilometres being added to the network since 2006-07.

Despite increased capacity, higher frequency services and coverage of new residential areas, fewer people are using buses now than 4 years ago. As a result, revenue from fares dropped 7.7% between 2012-13 and 2016-17. Bus services are 28% less efficient than 10 years ago. It now costs \$1.18 per passenger kilometre compared with \$0.92 (in real terms) in 2006-07.

As costs have increased, and fare revenue has fallen, the total government subsidy has been rising, reaching over \$400 million in 2016-17. In 2016-17, revenue from bus user charges and fees, and other income, totalled \$85.44 million. This is only 17% of the \$495.97 million it cost to run bus services. PTA has estimated the total public bus subsidy will increase by \$38.1 million between 2016-17 and 2019-20. The cost to government will increase further without growth in patronage, higher bus fares or reductions in operating costs.

### **PTA retains cost and patronage risk so its scope to reduce costs and improve efficiency is limited**

The operation of bus services is contracted out to 3 companies, who provide the employees, and maintain buses and depots. Seven contracts have been retendered since 2009 with 6 of these generating reduced contract prices. PTA retains ownership of the bus fleet and depots and does this to reduce barriers to entry for new operators, and to avoid capture by incumbent operators. No new operators have won any of the 7 contracts that have been retendered, although 3 contract areas have moved between existing contractors.

Owning the fleet means PTA retains the cost risks associated with matching the fleet to passenger demand, buses being under-utilised and capital costs of fleet replacement. To reduce operating costs, PTA must reduce the number of service kilometres operated which is the primary basis of payment to its bus service contractors. PTA has reallocated service kilometres from low to higher patronage routes. While this may mean the buses are more efficiently used, it does not reduce overall costs.

The main way to reduce overall costs is for PTA to target service revisions that reduce overall service kilometres through improved service delivery planning that identifies overservicing, duplication and under-utilisation. To realise the full extent of cost reductions, PTA will need to dispose of any excess buses to avoid paying the costs of ownership when buses are not used.

Bus contractors are provided small incentives to increase patronage but the cost associated with falling patronage is borne by PTA. Temporary patronage safety net arrangements have resulted in total payments to contractors of almost \$9 million between July 2014 and December 2016.

While the current arrangements allowed PTA to contract out operation of the bus services and expand the network, arrangements have not been reviewed since introduced. Given the changes in demand for services and efficiency, PTA should review whether the current arrangements provide the best balance of competition, risk transfer and the flexibility to improve efficiency.

### **PTA is planning to spend almost \$680 million over a 10-year period to replace and expand the bus fleet**

PTA estimates that bus fleet replacement and expansion will cost nearly \$680 million from 2018-19 to 2027-28. Extending the life of the fleet, while it would affect maintenance costs, would be a way of reducing capital investment. However, PTA's options to defer replacement are constrained. This is because the operational lives of the 512 compressed natural gas buses that make up about one third of the fleet cannot be extended due to operational risks, and all have to be replaced by 2026.

New transport projects and forecast increases in demand drive the need to expand the bus fleet. PTA has, so far, identified the need for 26 extra buses to service the Forrestfield-Airport Link. It also forecasts the need for 28 extra buses each year to meet increases in demand, based on predicted population growth. Given current trends in patronage and inefficiency of the current network, PTA may consider reviewing these forecasts. PTA could also look at reviewing over serviced bus routes and reallocate existing fleet resources potentially reducing service kilometres and peak-bus requirements, rather than seeking additional buses.

### **PTA is not using its information effectively to identify where it can achieve the greatest efficiencies**

PTA has good information about bus routes and how passengers use the network, but it is not using it effectively to identify which service changes will produce the greatest efficiencies. PTA has used its information to track annual trends in patronage, and then reallocate service kilometres from low patronage routes to ones with higher demand by reducing or removing the service. This approach to reducing costs is limited if overall service kilometre delivery is not reduced, and because the routes with low patronage often represent a very small proportion of total costs.

We looked at routes which account for higher proportions of total costs but where patronage does not justify the level of service. Changing service frequency on these routes could offer greater efficiencies, with potentially less social impact, than PTA's current approach.

### **Better strategic transport planning and clearer targets would help PTA identify the best ways to improve bus patronage**

The *Perth and Peel Transport Plan for 3.5 Million People and Beyond* is intended to guide the development of Perth's transport network. However, there are no targets for the share of journeys that should be made by bus, or the increases in patronage that PTA should be aiming to achieve under the plan. The Department of Transport, PTA and Main Roads WA have started working on mode share targets for particular corridors and strategic centres and aim to complete this work by the end of 2018.

Bus priority lanes are one of PTA's key initiatives to improve patronage. In April 2017, PTA prioritised 24 additional projects to address current traffic congestion along mass transit corridors. But, PTA does not own the roads and there is no specific enabling legislation to establish bus priority measures. This often results in substantial delays.

PTA is also not able to demonstrate how much patronage changes in response to the frequency or reliability of services. This makes it difficult to demonstrate that the prioritised initiatives are those which will have the greatest effect. Although the Department of Transport and PTA are improving strategic transport planning, a broader range of initiatives are needed to increase patronage.

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## Recommendations

1. Given the unsustainable rising costs and declining patronage of bus services, PTA should by June 2018:
  - a. identify ways to reduce costs while balancing impacts on patronage, by using bus operations data more effectively to identify service changes that deliver greatest efficiencies
  - b. review how effectively the current arrangements transfer risk and provide flexibility to respond to changes in demand and manage costs
  - c. expand the focus of its initiatives to increase bus patronage beyond increasing services through mass transit corridors.
2. The Department of Transport and PTA should by June 2018:
  - a. set targets for the share of journeys that should be made by bus and patronage targets in order to measure achievements against the *Perth and Peel Transport Plan for 3.5 Million People and Beyond*
  - b. identify strategies that help facilitate bus priority measures (bus lanes and infrastructure) in a more timely manner.

## Response from Public Transport Authority and Department of Transport

The Public Transport Authority (PTA) is immensely proud of the Transperth bus, train and ferry services it delivers to the community of Perth. The people, systems and processes used to deliver these important community services are quite unique, like the operating model used by PTA to deliver Transperth bus services.

For over twenty years, representatives responsible for the delivery of urban public bus services from around Australia and across the world have visited and contacted Transperth to obtain a better understanding of the Transperth operating model and in many instances have gone on to adopt this model of operation for their own public transport networks. For those in the industry, our contract arrangements follow 'world best practice' that maintain an appropriate balance of commercial risk between Government and its contracted service providers, but most importantly, places the needs of Transperth passengers to the fore and promotes an industry-wide culture of continuous improvement.

Transperth's comparatively low-density operating environment brings with it the very difficult challenge of balancing its obligations to provide a reasonable level of service to the more vulnerable people in our community, who often have no alternative transport options, and making the most efficient use of our available resources. As with any business arrangement, the Auditor General has found some areas of improvement, like the need to improve some of our service planning processes and documentation arrangements, which we will attend to as a priority.

As always, Transperth is looking at new and innovative ways of improving patronage. Passengers using our new Perth Busport with its state-of-the-art dynamic stand allocation system can now wait in air-conditioned comfort for their bus, and very soon we will deliver a real-time bus tracking system that will provide passengers with accurate real time predictions of bus arrival times via mobile apps and the website, taking away the uncertainty of travel times. Despite these initiatives and all-time high customer satisfaction levels, the recent unprecedented decline in the local economy has been particularly challenging for Transperth, as it has been for many other service related businesses in Perth but we are confident that as the economy improves, so too will our patronage levels.

Most importantly, PTA are most pleased to see that the Auditor General has confirmed that Transperth is meeting or exceeding targets for accessibility, reliability, safety and customer satisfaction, as these matters represent aspects of our business that we and our passengers believe are vitally important to making public transport more desirable.