# Infrastructure Australia Potential cost savings from rail and bus franchising:

technical report

Infrastructure Australia

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April 2017



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This Report has been limited to estimating the potential operational cost savings from franchising select rail and bus services across Australia, based on the assumptions outlined in this Report. The direct impacts applied in the financial modelling have been collaboratively developed by PwC and IA and are based on findings of literature reviews, publicly available material and discussions with industry experts. The broad nature of the modelling is such that the estimated results are indicative only.

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## 1 Model Summary

### 1.1 Overview

The '*Infrastructure Australia Potential Franchising Cost Savings.xlsx* financial model (the 'model') submitted with this report has been designed to indicate the potential operational cost savings that could be achieved, assuming the right Government mandate, from franchising select rail and bus services in New South Wales, Victoria, Western Australia, South Australia, Tasmania, Queensland and the Australian Capital Territory (ACT).

PwC has created this model in collaboration with Infrastructure Australia (IA). PwC understands that IA have used the model to support some of their analysis in their paper titled: "Improving public transport - Customer Focused Franchising".

Tables 1 and 2 provide a range of the total potential operational cost savings that could be achieved from rail and bus franchising between 2017 and 2040. Any potential savings will be directly tied to the goals and priorities established by the relevant State/ Territory and the structure of the franchising arrangement. Two scenarios of the potential cost savings from franchising have been modelled:

- Conservative Scenario: Under this scenario, for example, the State may structure the procurement with a focus on improving customer services and thereby potentially driving patronage growth whilst still having an objective of achieving operational cost savings. The model assumes operational cost savings range from 5.0% to 15% in the first rail franchise term and 17.5% to 25.0% in the second rail franchise term. For buses, the assumed savings range from 10% to 15% in the first term and progressively increasing to 30% by the end of the third 8 year franchise term. (Detailed estimates are provided in Tables 4 and 5.)
- High Scenario: Under this scenario, for example, the State may structure the procurement with a focus on maximising potential operational cost savings while at least maintaining the existing service standards. The model assumes cost savings range from 5% to 20% in the first rail franchise term and 24% to 32.5% in the second rail franchise term. For buses, the assumed savings range from 10% to 20% in the first term and progressively increasing to 35% by the end of the third 8 year franchise term. (Detailed estimates are provided in Tables 4 and 5.)

It should be recognised that many customer, productivity and efficiency improvements can be achieved under government stewardship given the right mandate, leadership and government support. However, maintaining the focus on efficiency over time is often difficult given the changing political priorities and circumstances, as well as changes in political leadership. Franchising also provides the opportunity to "lock in the gains" from previous efforts to improve productivity and efficiency under government stewardship.

The magnitude of the operational cost savings that can be achieved from franchising may also vary according to the political environment and the Government's appetite for tackling difficult industrial reforms. Even under a franchising model, the Government retains the political risks around industrial disruption and must ensure the franchisee operates within an agreed mandate for industrial reform. Other factors that can influence the level of savings include:

- Levels of competitive sourcing that have already been implemented for certain business inputs like, for example, maintenance, security and cleaning;
- Customer facing staffing levels;
- Level of amenities offered;
- Timetables for refurbishment activities;
- Level of support services offered, such as security and cleaning;
- Access to, and implementation of, technology changes; and
- Contractual commercial arrangements including performance incentives and key performance indicators.

In addition, improved customer services can result in increased patronage for public transport services. As discussed in Section 3.3, the potential incremental revenue uplift that can be achieved is significant. Whilst this increase in demand would likely increase costs, costs per passenger would likely decline. The modelling undertaken for the purposes of this Report focuses only on the potential operational cost savings that could be achieved.

#### Table 1: Potential Total Real Cost Savings from Franchising, 2017-2040

\$M (2016) <sup>1</sup>	Rail	Bus	Total
Conservative Scenario	20,829	7,787	28,616
High Scenario	28,364	10,078	38,443

#### Table 2: NPV of Estimated Total Cost savings from franchising, 2017-2040

NPV (Real) <sup>2</sup>	4%	7%	10%
Conservative Scenario	16,510	11,551	8,438
High Scenario	22,229	15,544	11,331

NPV discounted on an annual basis to a base date of 1 Jan 2017

These results are preliminary estimates based on inputs detailed in Section 3 developed in collaboration with Infrastructure Australia. Whilst a number of other material and equally relevant key assumptions associated with the involvement of the private sector (e.g. additional patronage growth, improved fare box recovery, franchisee performance) have been identified (and referenced in Section 3), the impact of these have not been modelled or factored into this analysis of the potential cost savings. The model focuses only on the quantitative benefits associated with operational cost savings (and the associated franchising procurement costs) and does not take account of any potential qualitative benefits arising from franchising, some of which are noted in Section 4.

<sup>&</sup>lt;sup>1</sup> As advised by Infrastructure Australia, the Model has been created using real 2016 dollars and the summary outputs have been presented in the same manner.

 $<sup>^{\</sup>mathbf{2}}$  The selected real discount rates were discussed and agreed with Infrastructure Australia

## 2 Model Inputs

### 2.1 Franchising terms

The following table provides the modelled commencement dates for the initial franchising terms. The rail franchising terms are assumed to be 12 years while the bus franchising terms are assumed to be 8 years.

	Rail	Bus	Bus			
Sydney Trains	2017	State Transit Authority of NSW	2017			
Queensland Rail	2017	Brisbane Transport	2017			
Transperth	2017	Victoria - various metropolitan operators	2017			
Adelaide Metro	2017	Metro Tasmania	2017			
		ACTION Buses	2017			

### 2.2 Annual operating costs

The following adjusted annual operating costs<sup>3</sup> (indexed to 31 December 2016) were used in the calculation of the franchise savings. The values include employee and maintenance expenses but exclude depreciation, amortisation and financing costs, where separately identifiable.

]	Rail Opex	Bus Opex	Bus Opex			
Entity	\$M (2016)	Entity	\$M (2016)			
Sydney Trains	3,089.71 <sup>4</sup>	State Transit Authority of NSW	682.20 <sup>5</sup>			
Queensland Rail	1,115.02 <sup>6</sup>	Brisbane Transport	<b>301.3</b> 7 <sup>7</sup>			
Transperth	354.07 <sup>8</sup>	Victoria - various metropolitan operators	413.44 <sup>9</sup>			
Adelaide Metro	398.58 <sup>10</sup>	Metro Tasmania	48.05 <sup>11</sup>			
		ACTION Buses	134.93 <sup>12</sup>			

<sup>7</sup> Department of Transport and Main Roads, 'Annual Report 2015-16', Part 2, Appendix 4, pg 261. Values have been indexed to 31 Dec 2016 based on CPI.

<sup>&</sup>lt;sup>3</sup> PwC analysed the previous 5 years of actual operating costs for each service being modelled. However the latest available annual operating costs for each service was used as the base data for forecasting forward year cost estimates as the most recent data was considered more reflective of the current expenditure profile of each service. See Appendix for operating expenditures over the past 5 years for each service modelled.

<sup>&</sup>lt;sup>4</sup> Sydney Trains, 'Sydney Trains 2015/16 Volume 2 Annual report', pg. 4. Values have been indexed to 31 Dec 2016 based on CPI.

<sup>&</sup>lt;sup>5</sup> State Transit 2015-16 Annual Report, Volume 2' pg. 2. Values have been indexed to 31 Dec 2016 based on CPI. Note that this would include Newcastle bus services which will be privately operated by Newcastle Transport from July 2017.

<sup>&</sup>lt;sup>6</sup> Queensland Rail, 'Annual and Financial Report 2015 – 2016', pg.3 of financial reports section. Values have been indexed to 31 Dec 2016 based on CPI.

<sup>&</sup>lt;sup>8</sup> Public Transport Authority, 'Annual Report 2015-2016 Corporate Snapshot', pg.16. Costs are for total Transport hrain operations, reduced by a calculated estimate for depreciation, amortisation and finance costs. Values have been indexed to 31 Dec 2016 based on CPI.

<sup>&</sup>lt;sup>9</sup> Public Transport Victoria, 'Track Record, Victorian transport services quarterly performance bulletin, issue 67', pg. 14. This value includes 70% of the overall PTV payments to metropolitan bus operators, on the basis they are directed to private service providers other than Transdev (who operate the Melbourne Metropolitan Bus Franchise). We understand the other private service providers have historically not been selected through a comprehensive competitive tender process. Values have been indexed to 31 Dec 2016 based on CPI.

<sup>&</sup>lt;sup>10</sup> Department of Planning, Transport and Infrastructure, 'Annual Report 2015-16', pg. 13 of financial reports section. Values include both cost of Tram and Rail (which are not separately identifiable). It is assumed the cost of buses has not been included in the expenses shown in the annual report as buses have been tendered out to private operators. Values have been indexed to 31 Dec 2016 based on CPI.

<sup>&</sup>lt;sup>11</sup> Metro Tasmania Annual Report 2015-16, pg. 27 and 37. Values have been indexed to 31 Dec 2016 based on CPI.

<sup>12</sup> Territory and Municipal Services Annual Report Volume 1 2015-16, pg. 63. Values have been indexed to 31 Dec 2016 based on CPI.

### 2.3 Procurement costs

It is assumed that the States will run the procurement process to select the franchisee. Procurement costs vary significantly by project and are dependent on several factors including the complexity of the project and the level of involvement of the private sector. The model assumes the upfront costs to cover the State's procurement processes are approximately \$30m for rail procurements and \$7.5m for a major bus franchise (all values in 2016 dollars). This is a one-time upfront cost for each round of franchising and is netted off against the overall potential savings.

### 2.4 Estimated cost savings

Table 3 provides a list of savings achieved from previous Australian and international bus and rail franchises (or competitive tendering), as reported in various literature sources.

Caution should be used when interpreting these figures given that any franchise is dependent on the Government's objectives, including the mandate for difficult industrial reforms, and can result in a range of different financial and non-financial outcomes, well beyond the impact on headline (or in some cases normalised) costs e.g. different service and patronage levels, asset utilisation, customer experiences and road congestion impacts.

#### Table 3: Estimated Cost Savings From Previous Franchisings (or Competitive Tendering)

	Year of Initial Franchising	Estimated Initial Cost Savings
Melbourne Metropolitan Bus Franchise <sup>13</sup>	2013	18%
Transperth Buses (WA) <sup>14</sup>	1996 and 1998	20%-29%
Buses - various cities (Scandinavia) <sup>15</sup>	1989-2002	17-34%
Adelaide Buses <sup>16</sup>	1996-2000	38%
Buses (US) <sup>17</sup>		30-46%
Great Britain Rail Services <sup>18</sup>		13%
Rail Services (Sweden) <sup>19</sup>	1989	20-30%
Rail Services (Germany) <sup>20</sup>	1996	20%
Sydney Ferries (NSW) <sup>21</sup>	2012	12%

<sup>&</sup>lt;sup>13</sup> Tendering of Metropolitan Bus Contracts, Victorian Auditor-General's Report, May 2015

<sup>&</sup>lt;sup>14</sup> Competition Reform of Transperth Bus Services, WA Auditor General 1997; and Public Transport, Private Operators: Delivering Better Services Through Franchising, Tourism and Transport Forum and L.E.K. Consulting, July 2012

<sup>&</sup>lt;sup>15</sup> D.A Hensher, I.P. Wallis, Competitive Tendering as a Contracting Mechanism for Subsidising Transport: The Bus Experience, Journal of Transport Economics and Policy, 2005

<sup>&</sup>lt;sup>16</sup> D.A Hensher, I.P. Wallis, Competitive Tendering as a Contracting Mechanism for Subsidising Transport: The Bus Experience, Journal of Transport Economics and Policy, 2005

<sup>&</sup>lt;sup>17</sup> Public Transport, Private Operators: Delivering Better Services Through Franchising, Tourism and Transport Forum and L.E.K. Consulting, July 2012

<sup>&</sup>lt;sup>18</sup> Realising the Potential of GB Rail: final Independent Report of the Rail Value for Money Study, May 2011

<sup>&</sup>lt;sup>19</sup> Alexandersson, G. and Hulten, S. Competitive Tendering of Regional and interregional Rail Services in Sweden, Proceedings of the Competitive Tendering of Rail Services, ECMT Workshop, 2007

<sup>&</sup>lt;sup>20</sup> Brenck, A. and Peter B. Experience with Competitive Tendering in Germany, Proceedings of the Competitive Tendering of Rail Passenger Services, ECMT Workshop, 2007

<sup>&</sup>lt;sup>21</sup> Franchising of Sydney Ferries Network Services, NSW Auditor General's Report, 2016

Whilst not necessarily directly related to franchising or competitive tendering, it is also relevant to note that a 2015 IPART Report, prepared by the Centre for International Economics<sup>22</sup>, calculated an efficient cost gap of 29.3% for Sydney Trains and NSW Trains and 20.8% for NSW State Transit Authority buses (in 2014-15 dollars, normalised to expected 2018-19 service and patronage levels). It is acknowledged that many of these efficiency gains could be achieved under government ownership with the right mandate for reform, however, it is difficult for governments to maintain the necessary focus on efficiency over time under a changing political landscape.

The modelling for this Report assumes annual operating cost savings from franchising as detailed in Tables 4 and 5 respectively. The assumptions were informed by PwC confidential experiences in various transport tenders both in Australia and overseas, and at a high level considered against the percentage ranges from the noted literature sources.

Whilst each potential franchising transaction will vary based upon the Government's objectives and the efficiencies already delivered, the potential savings assumed in Table 4 are expected to be achievable through a combination of thoughtful labour reforms, investment in improved maintenance systems and processes, better utilisation of IT and management systems, enhanced procurement capability, as well as the evolution of a continuous improvement and performance culture. Clearly, this assumption is predicated upon significant and ongoing Government support for reforms, a rigorous franchising tender procurement process and attraction of best in class international rail operators/bidders.

Potential franchise operational savings will likely increase over the franchise term as opposed to being fully achieved on day 1, as detailed in Tables 4 and 5. This is particularly the case for the initial franchise term given there are likely to be some transitional and cultural adjustment issues in transferring from public to private operations as well as also potential initial business familiarisation issues.

Existing experience in franchising nationally and internationally has typically shown that whilst there are often some low hanging fruits to be gained in the earlier franchise terms, it generally takes at least 5 years or more for the franchise operators to truly create and embed significant structural and technological change within the organisation, along with the required cultural/industrial climate needed to drive through the more deep rooted efficiency gains. This is particularly the case within heavy rail operations. Hence our assumptions below are predicated upon incremental efficiency gains and improvements throughout both the initial and the secondary franchise terms, as well as for the somewhat slower cost saving build-up assumptions in the earlier years in the rail industry compared with the potential bus franchise operations.

<sup>22</sup> Efficiency of NSW public transport services, Independent Pricing and Regulatory Authority and The Centre for International Economics, December 2015

	Term 1						Term 2			
Year	1	2	3	4	5 - 12	13	14	15	16	17+
Conservative Scenario	5.00%	5.00%	10.00%	10.00%	15.00%	17.50%	17.50%	20.00%	20.00%	25.00%
High Scenario	5.00%	10.00%	10.00%	15.00%	20.00%	24.00%	28.00%	32.50%	32.50%	32.50%

#### Table 4: Potential annual rail operational saving

#### Table 5: Potential annual bus operational saving

	Term 1					Term 2			Term 3			
Year	1	2	3	4	5 - 8	9	10	11	12-16	17	18	19+
Conservative Scenario	10.00%	10.00%	15.00%	15.00%	15.00%	17.50%	17.50%	20.00%	20.00%	27.50%	27.50%	30.00%
High Scenario	10.00%	10.00%	15.00%	15.00%	20.00%	25.00%	30.00%	30.00%	30.00%	35.00%	35.00%	35.00%

## **3** Model Assumptions

The following section outlines key factors which could affect the potential savings due to franchising.

## 3.1 Specific performance of franchisee

The phased in potential operational savings assumptions in section 2.4 are based on the assumption of a successful well managed franchising procurement process.

The franchise saving model has not taken into account any potential market failures from franchising (i.e. franchisee default). Each franchise carries its own unique risks and challenges. Modern franchise agreements include increased security packages (performance bonds, parent company guarantees, etc) which may limit the State losses in the event of a franchisee default or other market failures. However, whilst the security package is unlikely to cover the complete loss, it could be expected to assist to mitigate the total risk, cover the cost of any subsequent refranchising process and partially offset any other potential losses to the State.

As the primary objectives and structure of future franchising arrangements have not been determined and as the specific performance of individual franchise operators cannot be readily forecasted, these factors are not included in the cost savings approaches.

## 3.2 State involvement and priorities

The State / Territory appetite for reforms and the goals in franchising will also play a key role in determining the potential level of savings and patronage growth that can be achieved through franchising. This report models a High potential cost saving scenario and a Conservative potential cost saving scenario.

The State itself plays a key role in the realisations of any potential operating cost savings to be achieved from franchising. Establishing the framework for any franchising opportunity is only part of the State's role. The State must also monitor the ongoing performance of the franchise based on contractually agreed Key Performance Indicators (KPIs) and ensure that the State does not re-take costs or risks which were transferred to the private sector.

## 3.3 Patronage growth following franchising

There have been strong precedents, both in Australia and internationally, for increased patronage due to perceived improvements in services as a result of the franchising of bus or rail operations.

As an example, a Tourism and Transportation Forum report (in conjunction with LEK) showed that in the decade following the franchising of the Perth bus system in FY1999 the cumulative average patronage growth rate was over 5% leading to an overall 60% increase in patronage<sup>23</sup> over the period.

Other successful franchising examples, where there has also been a large increase in patronage include Melbourne Tram and Rail, Sydney Ferries, and offshore the UK Bus and Rail sectors. For example, the Melbourne Metropolitan rail system grew by approximately 100% between the late 90's and the most recent franchising round in 2009. In the UK, rail utilization also grew by well over 50% during the period post privatization in the late 1990's.

While increased patronage can increase fare box revenue it may also result in higher overall operating costs due to increased wear and tear on the assets leading to higher maintenance costs. In the case of even more significant patronage growth, the increased capacity requirements may require additional or upgraded capital stock to accommodate the growth in patronage.

Patronage growth is also dependent on a range of other factors such as economic performance, employment, population growth, fuel prices etc. We have not attempted to model their effects for this report under either approach.

The effects of patronage growth can significantly impact the potential operational saving from franchising (and indeed can also create the necessity for increased investment as outlined above). We strongly recommend that Infrastructure Australia consider further in-depth modelling of this aspect.

<sup>&</sup>lt;sup>23</sup> Tourism & Transportation Forum: On the Buses: The benefits of private sector involvement in the delivery of bus services, February 2016.

### 3.4 Fare box changes

Due to an inability to predict future government policy changes to fare box recovery targets, whilst the potential savings under each scenario have been modelled, no change to the current fare box revenues have been modelled.

However we note across Australia, fare box revenues cover approximately 25% of the operating costs in the rail and bus industries (with the remainder being paid for by subsidies in some form), which is relatively low compared to what is achieved in major cities in OECD countries around the world with various types of rail and bus franchising structures in place. For example, according to their annual report, the Hong Kong Metro recovered 186% of operating costs through fare box revenue<sup>24</sup>.

### 3.5 Congestion reduction

The Model does not account for any potential benefit to time savings or environmental condition as a result of reduced road congestion that may occur from franchising, particularly if there is a significant increase in patronage as described in section 3.3. It is worth highlighting however that the associated cost to the Australian economy created by road congestion has been forecasted as approximately \$15bn annually and may rise to \$30bn annually by 2030<sup>25</sup>.

 $<sup>^{24}</sup>$  2012 Annual Report – Consolidated profit and loss account, MTR corporation

<sup>&</sup>lt;sup>25</sup> Australian Government: Department of Infrastructure and Regional Development, Information Sheet 74: Traffic and congestion cost trends for Australian capital cities

## 4 Qualitative benefits of franchising

## 4.1 Qualitative benefits

Qualitative benefits also play a key role in the overall value for money achieved through franchising in addition to quantifiable savings.

Key qualitative benefits from franchising may include:

- Significantly improved customer services and performance KPIs;
- Reduction in road congestion (as per Section 3.5);
- Potential major improvements in route management, timetabling and system integration;
- Technological innovations—both passenger and operations/maintenance related;
- Improved reliability and utilisation levels of existing assets (infrastructure/fleet);
- Increased investment in additional rolling stock/bus fleets/infrastructure;
- Introduction of new customer enhancements/benefits (passenger loyalty schemes, real time info, apps etc); and
- Risk transfer from the State to the private sector.

Infrastructure Australia should consider further examination of these qualitative benefits to franchising in order to deliver a holistic benefit assessment.

## 4.2 Potential challenges

In addition to the qualitative benefits described in section 4.1, Governments which may engage in rail or bus franchising must be made aware of the potential challenges associated with franchising:

- Government must take into consideration any rights and obligations under the franchise agreement before implementing changes to the transportation network that may impact the franchisee;
- Government needs to perform on-going monitoring to ensure that the franchise fulfils all of its contractual obligations and does not attempt to lower services in order to maximise profits;
- Government must retain a suitably experienced project team to ensure that the design and procurement of the franchise is done in order to accomplish the State's goals and objectives. Failure to properly design and procure the franchise may result in reduced operational savings and service levels;
- Government must confirm that the franchisee has sufficient financial strength, coupled with an acceptable security package, to support the long term viability of the franchisee to deal with changes in the market.

## 5 Appendix: Actual Adjusted Operating expenditures for past 5 years

AUD	2012	2013	2014	2015	2016
Sydney Trains	2,919,253000	2,832,066,000	2,923,422,000	3,039,820,000	3,050,387,000 <sup>26</sup>
Queensland Rail	1,240,569,000	1,207,945,000	1,158,564,000	1,058,140,000	1,100,833,000 <sup>27</sup>
TransPerth – train operations	238,914,000	312,440,000	340,359,580	346,760,450	349,564,350 <sup>28</sup>
Adelaide Metro (Tram & Rail)	372,662,000	379,981,000	382,892,000	376,209,000	393,503,000 <sup>29</sup>
State Transit Authority of NSW	680,123,000	578,537,000	590,566,000	598,780,000	673,516,000 <sup>30</sup>
Brisbane Transport	264,640,000	283,397,471 <sup>31</sup>	294,918,294	291,061,645	297,532,178 <sup>32</sup>
Victoria – various metropolitan bus operators			382,921,700	406,455,000	408,179,800 <sup>33</sup>
ACTION Buses (Canberra)	114,376,000	120,106,000	128,993,000	134,385,000	133,216,000 <sup>34</sup>
Metro Tasmania (Buses)	42,428,000	44,560,000	46,129,000	47,183,000	47,443,000 <sup>35</sup>

<sup>&</sup>lt;sup>26</sup> Sydney Trains costs include employee benefits expenses and other payroll costs, personnel service expenses and other operating expenses, with 2015-16 data sourced from Department of Transport, 'Transport for NSW: 2015-16 Annual Report, Volume 2', pg. 8

<sup>30</sup> State Transit Authority of NSW costs include fleet running expenses, personnel services expenses and general operating expenses (excluding depreciation and amortisation), with 2015-16 data sourced from 'State Transit: 2015-16 Annual Report, Volume 2', pg. 2. Note this would include Newcastle bus services which will be privately operated by Newcastle Transport from July 2017.

<sup>31</sup> Brisbane Transport data up to December 2012 is sourced from TransLink Transit Authority. On 1 January 2013, The Transport Operations (Translink Transit Authority) Act 2008 under which Translink was established, was repealed. Therefore 2012-13 data is the sum of the two six monthly amounts provided in: 'Translink Transit Authority Final Report (1 July 2012 – 31 December 2012), pg 18' and the Department of Transport and Main Roads '2012-13 Annual Report, Volume 1', Appendix 6, pg 87.

<sup>32</sup> Brisbane Transport costs are payments made to the operator by the Department of Transport and Main Roads to deliver bus services, with 2015-16 data sourced from Department of Transport and Main Roads, 'Annual Report 2015-16, Part 2', Appendix 4, pg 261

<sup>33</sup> This value includes 70% of the overall PTV payments to metropolitan bus operators, on the basis they are directed to private service providers other than Transdev (who operate the Melbourne Metropolitan Bus Franchise). We understand the other private service providers have historically not been selected through a comprehensive competitive tender process. 2015-16 data is sourced from Public Transport Victoria, 'Track Record, Victorian transport services quarterly performance bulletin, issue 67', pg. 14.

34 ACTION Buses costs include employee expenses, superannuation expenses and supplies and services, with 2015-16 data sourced from Territory and Municipal Services 'Annual Report Volume 1 2015-16', pg. 63.

<sup>&</sup>lt;sup>27</sup> Queensland Rail cost includes consumables, supplies & services, employee expenses and other expenses, with 2016-16 data sourced from 'Annual and Financial Report 2015 – 2016', pg.3 of the financial reports section.

<sup>&</sup>lt;sup>28</sup> Transperth costs are for total Transperth train operations, reduced by a calculated estimate for depreciation, amortisation and finance costs, with 2015-16 costs sourced from Public Transport Authority, 'Annual Report 2015-2016 Corporate Snapshot', pg.16

<sup>&</sup>lt;sup>29</sup> Adelaide Metro costs include employee benefit expenses, supplies and services and other expenses with 2015-16 values sourced from 'Department of Planning, Transport and Infrastructure, Annual Report 2015-16', pg. 13 of financial reports section. Values include both cost of Tram and Rail (which are not separately identifiable). It is assumed the cost of buses has not been included in the expenses shown in the annual report as buses have been tendered out to private operators.

<sup>&</sup>lt;sup>35</sup>Metro Tasmania bus costs include passenger transport operations costs, engineering & maintenance services and administration and general costs (excluding depreciation and amortisation), with 2015-16 data sourced from Metro Tasmania 'Annual Report 2015-16', pg. 27 and 37.