Contestability in urban transport
Committed to the right solution
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Contestability in urban transport

An effective and efficient urban transport network is essential to the economic prosperity and social well-being of our cities. The process of contestability helps ensure governments can achieve the best mobility outcomes for their citizens at the best possible price.

Contestability joins the fight against road congestion

Urban transport allows people to access places of work, education, healthcare and recreation. It also provides many with a sense of personal freedom and social inclusion.

But in cities around the world, congestion is undermining this mobility, imposing huge costs – not just on commuters or people out to run a simple errand, but on societies as a whole.

The social costs of congestion in Australian capital cities were estimated to be $9.4b in 2005, and are projected to rise to over $20.4 billion by 2020.

The comparative cost of congestion in Auckland has been estimated at NZ$0.6 billion in 2010.

Applying the process of contestability to the delivery of big city transport, whether through the provision of public roads or public transport (Urban Public Transport (UPT)), needs to be fully explored as a means of improving liveability and reducing social costs.

Figure 1: Urban Public Transport share of all day travel

<table>
<thead>
<tr>
<th>City</th>
<th>Mass transit all-day share (% of all motorised pkm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney</td>
<td>13.6</td>
</tr>
<tr>
<td>Melbourne</td>
<td>11.0</td>
</tr>
<tr>
<td>Brisbane</td>
<td>8.6</td>
</tr>
<tr>
<td>Adelaide</td>
<td>6.1</td>
</tr>
<tr>
<td>Perth</td>
<td>7.1</td>
</tr>
<tr>
<td>Hobart</td>
<td>3.6</td>
</tr>
<tr>
<td>Darwin</td>
<td>6.0</td>
</tr>
<tr>
<td>Canberra</td>
<td>4.3</td>
</tr>
<tr>
<td>Total</td>
<td>10.3</td>
</tr>
</tbody>
</table>

1 Estimating urban traffic and congestion cost trends for Australian cities, BTRE Working Paper 71. Social costs include delay time, travel time variability, increased vehicle operating costs and extra air pollution costs.

2 The costs of congestion reappraised, Ian Wallis and David Lupton, 2013.
A renaissance for public transport
Since the advent of affordable private vehicles in the post World War Two period, motorised urban transport has been dominated by private car use, making up over 75% of all travel in Australian capital cities.

At the same time, the market share of UPT went through a corresponding period of sharp decline, drifting slowly below 10% from the early 1980s.

But since 2005, growth in UPT usage has been on the rise, outstripping population growth through a combination of higher average fuel prices and service expansions. UPT usage in Melbourne grew by an average of 3.7% per year over the 10 years to 2013. Mode share of UPT is now above 10% across Australian’s capital cities (refer Figure 1), with the highest mode share recorded in Sydney.

UPT plays a much bigger role in moving peak period commuters, making up 17.9% of motorised trips (refer Figure 2). In Sydney, one in every four commuters chose to use UPT to travel to work.

This is where the fight against congestion is most important, and can deliver the greatest benefits. Analysis by Deloitte Access Economics indicates that a passenger who chooses to travel by rail instead of road can reduce costs to society by between $3 and $8.50 per trip depending on the city.

But given the continued dominance of private vehicle travel, the fight requires an effective and efficient road network as well as attractive UPT systems.

Patterns of demand will continue to change
Change is coming to transportation, whether we’re ready for it or not. You can see it in automakers’ focus on next-generation vehicles, in the arrival of services that help urbanites get around without owning a car, in the widening recognition that the ‘information everywhere’ world will utterly disrupt the transportation status quo. Sharing rides, bikes, and cars and other entrepreneurial business models are spreading, built on the recognition that empty car seats and idle vehicles form an immense ‘wasted asset.’

The ability to gather road and transit mobility data—from smartphones or dedicated transceivers—and push information back to users is changing everything from infrastructure planning to commuters’ daily experience 3.

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3 Digital-Age Transportation: The future of urban mobility, Deloitte.
So, what do these insights into the future mean for contestability in urban transport? While the answers are not yet clear, it’s essential that flexibility to adapt to changing travel demands, patterns and expectations is explicitly considered in evaluating and designing alternative service delivery models.

**Stakes are high given fiscal pressures**

According to research by Infrastructure Partnerships Australia, governments across Australia spend over $7 billion every year maintaining and renewing the country’s 800,000km of road infrastructure (both highways and local roads).

By way of comparison, the New Zealand Transport Agency (NZTA) spends about NZ$500 million per annum alone maintaining 11,000km of national highway running the length of the country.

And when it comes to providing UPT services, the costs rival those of road maintenance.

The Queensland Government spends around $1.5 billion each year delivering public transport services for South East Queensland.

Public Transport Victoria spent $4.1 billion in 2013/14 administering and delivering that state’s public transport system.

Over the same period, Auckland Transport committed expenditure of around NZ$1.1 billion for administering, operating, maintaining and renewing Auckland’s public transport and local road network.

While the scope of activities and accounting may vary, government funding required to maintain and operate our cities’ road and UPT networks is substantial.

And this is not counting the many billions of dollars of capital expenditure required to expand and modernise urban transport networks.

Especially in the current pressured fiscal environment, governments are obliged more than ever to ensure the best price is achieved for urban transport outcomes.

**Mobilising contestability in urban transport**

Contestability is about people and improving services for customers and users, and the long term sustainability of those services. Cost saving will often be a desired outcome of contestability and service delivery reform, but most not dominate objectives otherwise service and social outcomes can suffer.

The conversation needs to start by asking what outcomes do governments want to achieve and what services should they be providing to their communities?

What then follows is analysis of service levels expected and examination of alternative service delivery models to best provide required service quality and at what cost (including inevitable trade-offs made between service quality and cost).

Importantly, contestability is an ongoing process, with services subject to periodic review as the needs of society change and service delivery models evolve and mature.

For instance, the role of passenger ferry services on Sydney Harbour has been the subject to ongoing review and refinement over the last decade, beginning with the establishment of Sydney Ferries as a government-owned corporation in 2004 (refer to Case Study 1).
Case study 1: Reform of passenger ferries on Sydney harbour (2004-2014)

Sydney Ferries Corporation (SFC) was established as a government owned entity in 2004 to provide passenger ferry services on Sydney Harbour.

In 2007, following a major fatal vessel accident, the NSW Government commissioned a Special Commission of Inquiry into SFC. The report of the Inquiry contained 17 recommendations covering various aspects of SFC operations and existing governance arrangements.

The central recommendation was that the Government enter a service contract with a private enterprise for the provision of ferry services, subject to this being no more expensive than delivery by SFC under a similar arrangement.

The Government commenced a market review in late 2008, calling for bids from the private sector as well as SFC to operate ferry services. The review was abandoned after tenders were received, and SFC was awarded a contract to continue to provide services.

After two years of productivity and service improvement under SFC, the Government announced that ferry services would be franchised to the private sector. SFC was not able to bid and, in 2012, a seven-year franchise was awarded to a consortium comprising Transdev and Transfield.

Further reforms are continuing, with the 2014 tender covering commercial high speed ferry services between Manly and Circular Quay, operating alongside subsidised franchise services.

Similarly, NZTA has substantially revised its out-sourced service delivery model for highway maintenance in response to a taskforce recommendation to introduce advanced asset management practices to align activities with differentiated levels of service across the national network (refer to Case Study 2).

Service delivery models

Each industry has its own variations of delivery models to reflect differences in the characteristics of services being provided and industry structure. Urban transport is no different.

A summary of the different service delivery models and contract terminology in the road maintenance and UPT sectors is provided in Tables 1 and 2 (combinations of these models or hybrids also exist).

The different models vary in terms of the responsibilities transferred to the service provider and degree of associated risk and incentive.

We have focussed on models applicable to the maintenance and operations of existing ‘brownfield’ assets. A range of other models exist for the construction, maintenance and operation of new ‘greenfield’ assets. These include Public Private Partnership (PPP) and Design, Build and Operate (DBO) models. For instance, PPPs are used to supply and maintain new passenger rolling stock (e.g. Reliance Rail in Sydney) or highway extensions (e.g. Transmission Gully in Wellington).

Careful thought needs to be given to the interaction between different service delivery models within the same network, bearing in mind that policy settings and travel patterns can change and flexibility is needed to respond. For instance, a PPP can accelerate the delivery of new assets and smooth funding requirements for government, but are usually long term and lack flexibility.
Case study 2: Highway maintenance in New Zealand (2011-2014)

In response to recommendations by a New Zealand Government road maintenance taskforce established to identify opportunities to improve the effectiveness and efficiency of maintenance and operations delivery, the NZTA undertook a review of its outsourced delivery models in 2012/2013.

As a result, NZTA has introduced new fence-to-fence network outcomes contracts (NOCs) to replace a multitude of different contract models across the country. While the existing contracts took various forms, they usually involved NZTA engaging a professional consultant to manage a separate physical works contractor.

There will be 23 area-based NOCs incorporating maintenance and renewal activities, as well as asset management and professional services, within a defined geographic area.

Under a NOC, NZTA will engage a primary supplier who will engage subcontractors and consultants, while contract management has been brought back in-house.

Contracts terms will be for up to nine years, including extensions subject to performance.

Underlying the new contracts is a new road classification system and differentiated levels of customer service (based, for example, on speed, travel time variability, and amenity). This will in turn allow for more consistent asset management, targeted investment decisions and value for money, better benchmarking of service outcomes and provide for more consistent customer experience.
Table 1: Service delivery models for road maintenance

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-house</td>
<td>The traditional road maintenance model, employed almost universally in Australia until the 1980s. Under these arrangements, each state’s road agency retains complete control over decisions relating to the management of the road network and bears all risks associated with those decisions.</td>
</tr>
<tr>
<td>Schedule of rates</td>
<td>The road agency retains control over decision-making, budgets and prioritisation of work. The service provider is given a schedule of projects and only bears the risk on quality control and unit prices. This procurement model has been widely used across Australia, with most agencies and many local governments using it for at least part of their road network.</td>
</tr>
<tr>
<td>Performance specified maintenance contracts (PSMC)</td>
<td>This form of term service maintenance contract sees the supplier contracted to deliver maintenance outcomes (rather than outputs), inclusive of professional services. A PSMC manages the integrity of the assets using a cost effective long-term maintenance strategy, based on identifying, programming, prioritising and delivering services to agreed performance criteria.</td>
</tr>
<tr>
<td>Network outcomes contract</td>
<td>The Network outcomes contract is a combination of inputs, outputs and outcomes. The road agency has influence over the timing and type of some works (the input driven element of the contract). The performance measures are outputs, which are very much aligned with a PSMC form of contracting. These then reflect customer service levels.</td>
</tr>
<tr>
<td>Alliance</td>
<td>In an alliance, owner(s), contractor(s) and consultant(s) work as an integrated team to deliver specific activities under a contractual framework where their commercial interests are aligned with actual project outcomes. This delivery model can be applied to both asset improvement and asset management. The model uses a specific type of cost reimbursement method that seeks to drive the required ‘best for project’ behaviours.</td>
</tr>
</tbody>
</table>
### Table 2: Service delivery models for public transport service delivery

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-house</td>
<td>A stand-alone government-owned delivery business provides services and owns associated assets. An arms-length contract normally exists between the purchasing agency and the delivery agency.</td>
<td>Government-owned State Transit Authority provides bus services in Sydney under the name of Sydney Buses.</td>
</tr>
<tr>
<td>Outsourcing</td>
<td>Contracting out a business or service to a third party. Outsourcing in public transport can include activities like security, cleaning and call centres, as well as core activities such as rolling stock maintenance.</td>
<td>Sydney Trains has outsourced the cleaning of rail stations and rail carriages.</td>
</tr>
<tr>
<td>Gross cost contract</td>
<td>As integrated networks and fares have been introduced it becomes simpler for government to retain revenue risk. Under a gross cost contract the supplier is paid its gross costs and remits any fares collected to government.</td>
<td>Most private bus contracts across Australia.</td>
</tr>
<tr>
<td>Net cost contract</td>
<td>Less common, involves the transfer of revenue risk to the service provider, with a net payment to account for the difference between fare revenue and gross costs.</td>
<td>Melbourne rail franchises.</td>
</tr>
<tr>
<td>Performance based contract</td>
<td>Performance regimes should be applied to all service delivery models. Performance based contracts often refer to gross cost models with the addition of a performance regime.</td>
<td>All bus and rail contracts in New Zealand require a financial incentive mechanism.</td>
</tr>
<tr>
<td>Model</td>
<td>Description</td>
<td>Examples</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Franchise</td>
<td>Government generally retains ownership of assets (particularly for rail) and major policy levers (e.g. fares, routes and service standards), while the private sector provides management expertise and innovation.</td>
<td>Sydney Ferries.</td>
</tr>
<tr>
<td>Concession</td>
<td>The service provider typically owns assets and has a larger degree of influence over network design and fares in partnership with the local authority.</td>
<td>Longer term concession contracts are popular in France.</td>
</tr>
<tr>
<td>Commercial</td>
<td>Some users of services are prepared to pay fare levels sufficient to cover the full cost of delivery and a return for the service provider. This is known as a commercial service.</td>
<td>Airport bus services operated by Skybus in Melbourne.</td>
</tr>
<tr>
<td>Privatisation</td>
<td>The outright sale of assets to the private sector. In UPT, this is difficult as public transport provision usually requires ongoing subsidies and governments generally prefer to maintain long-term control of assets.</td>
<td>The Northern Territory Government’s public bus operation in Darwin.</td>
</tr>
</tbody>
</table>
Bundling and packaging of services

One of the most important drivers of value from contestability is the methodology used to bundle and package services within service delivery models. Bundling and packaging decisions for designing a service model need to be made at two levels:

- First, the scope of services and functions that are combined within a model
- Second, the number and scale of contracts within a defined market, often taken as a geographic area.

Decisions on the optimal scope of functions to be included within a service model will depend on a range of factors, including:

- The potential for operational efficiencies and cost synergies
- The potential for improved customer outcomes
- The attractiveness to potential service providers
- The view held by government of its role in providing certain functions, particularly at a network level across multiple service types.

Figure 3 provides a simplified illustration of the functional value chain for the delivery of passenger train services.

Passenger rail franchises in Melbourne are vertically integrated, meaning they include responsibility for operations and maintenance of stations, below rail infrastructure and rolling stock. Under this model the operator has clear responsibility for service provision. Fare collection is separately contracted under a Design-Build-Operate-Maintain model, with government and franchisees sharing responsibility for planning, marketing and information provision.

In other jurisdictions, rolling stock supply and maintenance is provided by the private sector under a PPP arrangement to an in-house public operator (such as in Sydney and Brisbane).

The number and scale of contracts within a defined market is the second aspect of the bundling and packaging decision.

In determining the optimal industry structure there is a trade-off between providing for economies of scale and ensuring sufficient supplier market depth and competition is maintained.
Maintaining supplier depth within a market is particularly important in remote markets or where market entry is more difficult and rivalry amongst incumbent suppliers is important to maintain competitive tension. Barriers may include access to strategic assets or regulatory constraints.

Market share is regulated in the Adelaide and London bus service markets, for example, to guard against market concentration and dominance by one or two players.

In its review of the new outcomes-based contract model for highway maintenance in New Zealand, the country’s Auditor-General recommended that NZTA monitor the model’s effect on market behaviour and pricing to identify evidence of further market concentration and reduction in competition.

**Performance regimes**

In addition to bundling and packaging, the development of meaningful and sustained performance incentives is a particularly challenging aspect of developing a new service delivery model.

Deloitte has developed a balanced performance incentive framework for designing performance regimes (refer Figure 4).

This provides a balanced combination of incentives and enforcement measures, with either financial or non-financial mechanisms, and an optimal performance regime that incorporates mechanisms across all four elements.

Reliance on a single element can fail to achieve desired outcomes and damage a productive relationship between purchaser and supplier.

Increasingly performance-based contract term extensions are featuring in contemporary contract models as a non-financial incentive. Tenure is a powerful incentive for suppliers, but targets need to be carefully calibrated to avoid setting expectations that are either too low or too hard, resulting in the supplier scaling back its effort towards the end of term.

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**Figure 4: Performance incentive framework**

- **Financial incentives**
  - E.g. financial risk sharing mechanisms designed to aligned supplier behaviour with government objectives.

- **Financial enforcement**
  - E.g. fines and penalties for incidents of poor performance or abatement of payments for unavailability of service.

- **Non financial enforcement**
  - E.g. KPI thresholds triggering call-in and cure plans to address the cause of poor performance.

- **Non financial incentives**
  - E.g. performance based contract term extension linked to objective measures and targets.
What’s next for contestability in urban transport?
Contestability is a continuous process whereby government contracting and delivery agencies need to seize windows of opportunity to re-examine and evolve their service delivery models to achieve better service people-focused outcomes.

Windows of opportunity occur prior to the expiry of existing contracts, but need sufficient lead time to allow options to be properly evaluated prior to commencing a procurement process. This can be two to three years in advance of expiry.

Other windows of opportunity are created through necessity, when fiscal pressures or decline in service standards create a stimulus for change.

One such window has been created with the Queensland Commission of Audit recommendations to introduce contestability into the delivery of passenger bus and rail services throughout Queensland. Similarly, independent inquiries in NSW have previously led to major reforms in the ferry and bus markets.

While a large portion of urban transport services are already provided by the private sector, a number of public sector service providers remain that can be benchmarked against best practice to ensure acceptable service quality and price.
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