

QUASI-COMMERCIAL BUS SERVICE CONTRACTS IN SOUTH AUSTRALIA

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PURCHASER AND PROVIDER GOALS

1. For twenty years metropolitan Adelaide's urban public transport has been provided by a subsidised, State-owned monopoly. This is now in the process of changing. South Australia is introducing competitive tendering and contracting of public transport services. This paper briefly summarises the measures taken to establish an appropriate tendering environment, and describes the development and implications of the contractual service provision model that has been adopted.
2. The separation of the 'purchaser' from the 'provider', and policy from operations, has become the prevailing model for public sector reform. Usually there is a move to introduce competition to achieve the best provider price for the services. In most cases, this means private sector providers are involved. This is happening in South Australia.
3. A key issue in this separation is the potential divergence between the motivations of the purchaser and those of the provider, which can mean that desired outcomes are not fully or efficiently achieved under a contractual arrangement.
4. The private sector provider will generally be motivated by the desire to increase profits in the long term, combined with less tangible aims such as improving the standing of the business in the community.
5. To increase profits the provider typically would:
 - seek ways to reduce costs and increase revenue within the scope of the contract;
 - seek ways to improve their prospects, and reduce their competitors' prospects, of winning future contracts.
6. These actions may not achieve the purchaser's goals, which in Government may include matters such as social equity, customer satisfaction and cost minimisation. The two key levers available to the purchaser to achieve its goals are:
 - the creation of the tendering environment;
 - the establishment of the contractual arrangements.
7. If the tendering environment and the contractual arrangements can be established to provide incentives to the provider to act in a way that also achieves the purchaser's goals, then there is the greatest prospect of mutually satisfactory outcomes.

8. In the case of public transport one effect (desired) of a subsidised monopoly is that the provider and its services are insulated from market changes, continuing to provide high standard services at low prices even if there is not the demand to sustain them commercially. Another effect (undesired) is that the organisation may become less responsive to customers and to market changes than would be the case with one that is dependent on its success in the market for its survival. It is the failure of subsidised monopolies to adequately achieve the Government's goals that has led to the adoption of competitive tendering and contracting (CTC) of public transport services.
9. Creating a quasi-commercial contract for public transport services is one way of aligning the goals of purchasers and providers. Government aims of improved customer service and greater market responsiveness can be aligned with operators' profit aims if their return on the contract is variable with patronage.

THE COMPETITIVE TENDERING AND CONTRACTING ENVIRONMENT IN SOUTH AUSTRALIA

METROPOLITAN ADELAIDE'S PUBLIC TRANSPORT SYSTEM

10. Adelaide is the capital city of the state of South Australia. It has a population of just over 1 million in an urban area of about 700 square kilometres (ie. the developed part of the metropolitan area).
11. The metropolitan area stretches about 40 kms north and south of the Central Activity District (CAD), between the sea and the Adelaide Hills (which are about 10 kms to the west and 15 kms to the east respectively).
12. There are four principal metropolitan train lines, to the north, the south, the north west and the south east, as well as one tram line between the CAD and Glenelg to the south west. The Adelaide O-Bahn guided busway runs over an 12 km route to the north east. Bus services operate on some 138 routes covering all the contiguous urban area.
13. There were about 46 million passenger journeys (62 million boardings) on the public transport system in 1994/95. This system comprises a fleet of approximately 670 buses, 120 railcars and 21 tramcars.
14. In the mid 1970's, the Government of the time acquired the private bus operators serving the outer parts of the metropolitan area and merged these with the existing Government owned bus and tram services, as well as the metropolitan parts of the State's train operations, to form a publicly owned operating monopoly: the State Transport Authority. There are now no significant private sector services in metropolitan Adelaide.
15. Over the period up to the mid-1980's the separate systems were progressively integrated. Service duplication was removed and bus, tram and train services were coordinated. There are now centralised passenger information services and an integrated, magnetic ticketing system allowing use of one ticket throughout the system.

16. With the assistance of increasing public funding during the seventies and early eighties, services were upgraded and extended, and fares kept low. Fare box cost recovery is now only just over 20% on average, with bus cost recovery higher and train cost recovery lower than this figure. In 1994/95 the Government subsidy, including make-up of concession fares, amounted to A\$167 million, out of a total operating cost of A\$209 million.
17. A large proportion of tickets, about 80%, are sold off-board vehicles through a network of about 1000 ticket vendors throughout the metropolitan area.
18. Over two thirds of public transport users are entitled to concessions, being students, seniors, unemployed persons or other welfare recipients. Nearly 80% of public transport boardings are on bus, with 20% on train and tram. About 30% of journeys involve a transfer between vehicles.
19. Public transport caters for only about 7% of daily metropolitan trips, a similar percentage to walking and cycling, with the balance being by private vehicles.
20. Public transport patronage has been declining at 2% to 3% per annum since the mid 1980's when Government funding ceased to increase. In recent years, Government funding has declined in real terms.

PASSENGER TRANSPORT POLICY AND LEGISLATION

21. Major passenger transport reforms were introduced by the new State Government following its election in December 1993. Government policy is for competitive tendering and contracting (CTC) of regular passenger services in the State. There is a stated target of achieving \$34m pa. savings in the cost of the metropolitan system after five years, which represents 25% of Government funding in 1992/93..
22. In addition to this savings target there is a strong commitment to improve services, for instance by using some of the funds freed up through the effects of competition. It is also Government policy to maintain the integrated system and subsidised fare structure.
23. New legislation was passed in the first half of 1994. This legislation:
 - * created the Passenger Transport Board (PTB) to fund, plan, commission and regulate passenger transport in South Australia;
 - * converted the former State Transport Authority into a new statutory operating body, TransAdelaide (TA), relieved of policy functions but not corporatised;
 - * abolished separate legislation and administration of taxis, charter buses, non-metropolitan route services, etc. and transferred these functions to the PTB;
 - * prohibits operation of regular passenger services (ie. to a fixed route or timetable) in the State, whether bus, tram or train, except under service contracts with the PTB;
 - * prohibits the PTB from operating services;
 - * ensures a common, multi-modal fare structure across the metropolitan area;
 - * sets a maximum term of 5 years for service contracts.

24. As the Government does not control the Upper House of Parliament, it had to accept some compromises to get the legislation through. These were principally aimed at ensuring TransAdelaide was given time to become more competitive and preventing large parts or all of the metropolitan system being let as a single contract (although this had never been the intention).
25. The legislation thus also:
- * prohibits the PTB from calling any tenders before 1 March, 1995;
 - * guarantees TA the opportunity to control the provision of at least 50% of services until 1 March, 1997;
 - * sets a maximum contract size of 100 vehicles.

ESTABLISHING THE BASIS FOR TENDERING

REQUIREMENTS OF EFFECTIVE COMPETITIVE TENDERING AND CONTRACTING

26. The unique situation in Adelaide, both in terms of the pre-existing public transport system and the new legislation, has determined the way in which CTC is being introduced.
27. However, underlying these constraints and requirements, and combining with them, has been the need to:
- carefully manage the transition from a State-owned monopoly to a market in which there are also competing private sector firms;
 - create a CTC environment that ensures both initial as well as ongoing contestability.
28. Both these ideals have had to be tempered by practical considerations in establishing CTC in Adelaide.
29. The key issues to resolve were seen as:
- access to and management of assets;
 - the basis for tenders by TA;
 - provision for continued central management of public information and integrated ticketing.
30. A brief description of the way these matters have been handled in Adelaide is given below.
31. In addition, an appropriate model for service provision, which is described in the next section, had to be developed to cover such matters as:
- the division of the metropolitan services into contract parcels;
 - the staging of the release of these parcels to tender;
 - the development of forms of contracts that would achieve the Government's goals.

32. The Government wished to commence with bus services, leaving train and tram services to be dealt with later. The remainder of the paper therefore deals principally with bus services. Issues specific to train and tram services have yet to be addressed.

ASSET TRANSFERS

33. An early decision was taken to transfer buses, bus depots, the central workshops and the Adelaide O-Bahn to a third party asset owner and manager.
34. The aims of this move were to:
- ensure strategic control over key assets, including protecting the State's investment in these assets;
 - enable any operator to have access to the assets on an equal footing with others through leasing;
 - lower the entry and exit costs for tenderers, and hence encourage competition.
35. The State Department of Transport (DoT) was requested to take on the asset owner's role in light of its asset management expertise. This coincided with a redefinition of the role of an organisation that was formerly the State's road and traffic authority to include marine and other transport infrastructure, marine transport regulation and broad transport policy and strategy responsibilities.
36. Choosing this path enabled relatively quick establishment of the desired conditions for tendering. In due course some of these assets may be disposed of or transferred to the private sector to manage.
37. One complication was the need for TransAdelaide's bus business to be structured on commercial lines. A debt to equity ratio of 50% was selected by TA as the appropriate capital structure. To achieve this without a capital injection from the Government meant TA has retained one bus depot and a bit less than half the bus fleet.
38. Enough buses are in DoT hands for the first few rounds of tendering at least. TA's ownership of buses and the depot may be reviewed if it is not successful in winning tenders.
39. Other complicating factors have been:
- * the existence of a major bus purchase contract, only partly filled, for 300 new buses over 6 years;
 - * differential employment conditions between TA and DoT workshop personnel;
 - * the need to phase out the requirement for major bus overhaul work to be performed at the workshops (whilst protecting the value of leased assets), and so subject them to competition.

TA TENDERS

40. As a Government owned operator TA is subject to both advantages and disadvantages relative to the private sector. These include taxation exemption on the one hand and Government employment conditions on the other.
41. To provide for as level as possible a playing field, TA is subject to tendering rules involving:
 - * a set of pricing rules for its tender bids based on full and fair cost distribution, to prevent under pricing and cross subsidies (given it will still be operating much of the system under general subsidies);
 - * a taxation equivalent regime, as well as return on asset targets. under which it makes payments to Treasury equivalent to those borne by the private sector;
 - * exclusion of certain costs from its tender bids, as input cost disabilities. which are separately funded.
42. The management of these arrangements has been allocated to the Department of Treasury and Finance (DTF).
43. DTF will also manage the phasing out of the input cost disabilities over a two year period. These include higher than commercial levels of superannuation, a proportion of the higher Government wage rates and certain other minor. Government imposed cost penalties.
44. The tendering rules are available for scrutiny by interested parties.

MAINTAINING SYSTEM INTEGRATION

45. Provision of centralised, coordinated and integrated information services is seen as important to customers' ease of use of the system. Similarly the integrated fare structure and ticketing system was to be retained.
46. At present TA provides these information services. which from 1 July. 1995 it does on behalf of the PTB. This includes both an overall telephone inquiry system and a customer service bureau located in the CAD.
47. Ticketing system management used to be distributed across various areas of TA. eg. finance, engineering, information systems and operations. Ticketing functions have been identified and transferred to PTB, along with the Crouzet magnetic stripe ticketing equipment that is used on all vehicles.
48. A Business Unit has been established in the PTB to manage the ticketing system. The equipment is leased to operators at rates that cover the full cost of the system. The network of licensed ticket vendors is also serviced by this Business Unit.

SERVICE PROVISION MODELS AND THEIR EVALUATION

DESIRED OUTCOMES

49. The approach adopted was to specify clearly the outcomes desired, and to weight these so that the benefits of alternative models could be assessed. To the extent possible, outcomes were defined and weighted in a way that minimised overlap or double counting.
50. Based on Government policy, as well as aims of technical and allocative efficiency, the desired outcomes were defined and weighted by the project team as shown in Table 1.

TABLE 1 - DESIRED OUTCOMES		
	Weight	Reasoning
<i>Service Outcomes</i>		
Better Customer Service	11	Primary Government commitment
Commercial Market Responsiveness	24	Key objective with direct and indirect influence on achieving other outcomes.
Ease of Service Integration	5	Desirable to maintain existing levels of integration and promote use through a "seamless" system.
Maintenance of Integrated Ticketing and Public Information	5	Government commitment to maintain the convenience and the benefits of the existing integrated ticketing/information systems
Service points	45	
<i>Financial Outcomes</i>		
Minimum Service Cost	24	Primary Government objective to achieve maximum efficiency and the key to providing resources to improve the system.
Revenue Protection	5	Minimisation of fraud is important but it does not yield as much benefit as cost reduction.
Minimum Government Financial Uncertainties	8	Needs certainty over financial outcomes balanced against the benefits of providing improved service.
Minimum Government Regulatory Costs	8	Overheads of contracting to be minimised. subject to achieving the other outcomes.
Financial points	45	
<i>Other Policy Outcomes</i>		
Encouragement of Local Operators	5	Government commitment to local industry balanced against the benefits of obtaining better services.
Responsiveness to Government Policy	5	Government desire to easily influence the services balanced against the advantages of allowing operators to respond to market signals.
Other policy points	10	
Total points	18	

51. It is worth emphasising that introduction of CTC is not seen in South Australia as purely a measure to reduce costs. The Government also has the aim of improving and extending services, lifting standards of customer service and increasing the use of public transport. The above weightings put cost reduction in context with other desired outcomes.
52. While definition of desired outcomes was fairly straightforward in most cases, interestingly the way in which cost minimisation should be expressed caused some debate. Should this be simply to minimise Government outgoings, or should this be to minimise the cost per unit of output? The latter was favoured, with minimum service cost being defined as the highest efficiency in operations, resulting in the lowest subsidy for a given level of service and fares.

SERVICE PROVISION MODEL OBJECTIVES

53. Models of economic regulation are concerned with two dimensions of economic efficiency:
- productive efficiency, i.e. minimising the costs of providing a level of service (sometimes described as "doing the thing right");
 - allocative efficiency, i.e. providing the optimum contribution of services and fares ("doing the right thing").

Productive Efficiency

54. Three different approaches have been adopted by various Governments in regard to the provision and regulation of transport services.
- Monopoly supplier. This has previously been the case in Adelaide, but was not to be retained under the State Government's transport reform policy.
 - Competition in the market, i.e. on the road, competition often referred to as 'deregulation'. The UK system (outside London) is one example of this. The SA Government rejected this approach in developing its transport reform policy.
 - Competition for the market, i.e. when operators compete for some sort of contract to provide services. Such competition would normally be through a competitive tendering process, although in some areas productive efficiency has been sought through the application of industry standards or benchmarks, maybe accompanied by the threat of tendering rather than through an actual competitive tendering process.
55. World-wide experience is that organisations that operate in contestable markets, i.e. competition or the threat of it, are often those most productively efficient. Competition in the market and competition for the market are consistent with providing contestability.
56. In order to improve productive efficiency in the provision of Adelaide's bus services the SA Government has adopted a policy of competition for the market through competitive tendering. Thus all the model options considered include the competitive tendering element.

Allocative Efficiency

57. Achieving allocative efficiency required the Government to consider the allocation of resources not only between public transport services, but also between public transport and other modes. It is often argued that in the case of urban public transport, this would not be achieved by the free market, as the marginal social cost of public transport use is below the average cost, taking into account the benefits of increased frequency for users and the relief of road traffic.
58. Recognising these 'second best' arguments, the State Government is pursuing a low fares policy, with integrated ticketing across all services. With inter-model inefficiency being reduced by fares policy, allocation of resources between public transport services is left to be addressed by the service provision model.
59. In some contracting procedures, service specification is undertaken by regulatory/planning authority. However, such authorities do not face appropriate incentive signals to optimise services. The alternative approach is to give responsibility for local service planning to the operator, and to ensure the operator is faced with appropriate quasi-commercial incentive structure so as to influence their service planning decisions. Here we are looking towards a 'quasi-commercial contract' model.
60. The allocative efficiency dimension of any model in this case revolves around two aspect:
- The structure of operator payments, including the basis on which the tender prices are evaluated. Of particular relevance here is the extent to which payments provide the operator with incentive to carry extra passengers, and thus to provide market-oriented services to attract these passengers.
 - The responsibility for the specification of services (rates, frequencies, etc.) and in particular its division between the operator and the regulator.
61. These two aspects have to be considered together. If the operator is to be given incentives to attract extra passengers, then obviously they should be given the ability and responsibility to adjust the services as they consider appropriate. Conversely, if the regulatory authority is responsible for defining the services in detail, there is limited value in providing incentives to the operator to attract extra passengers.
62. Thus the models considered for the contracting process in Adelaide were characterised by:
- the extent to which the services would be specified by the regulatory authority; and
 - the methods of operator payment, including those components to be fixed by the regulatory authority and those to be subject to bid by the tenderer.

RANGE OF OPTIONS

Service Options

63. Three levels of geographic specificity of services were considered:
1. Routes, centrally planned and identified specifically with no flexibility for variation.
 2. Corridors, within which a route is to run with some flexibility to determine the route and make demand responsive alterations.
 3. Areas, in which minimum coverage or accessibility standards are specified, giving the flexibility to determine and change many routes.
64. Similarly three levels of frequency specification were considered:
1. Timetable, as with routes, services are centrally planned with the full service timetable specified.
 2. Headway and Frequency, in which a maximum headway as well as a minimum frequency is set, in various time periods.
 3. Headway only, in which the maximum headway is set for various time periods but not minimum frequencies.
65. In practice, not all of the nine potential service/frequency combinations are sensible. Seven combined options were defined, as shown in Table 2.

<i>Geographic specification</i>	<i>Frequency specification</i>		
	Timetable, TT	Headway and frequency, HF	Headway only, HO
Routes. R	R/TT	R/HF	R/HO
Corridors. C	C/TT	C/HF	C/HO
Areas. A	n/a	n/a	A/HO

Note: n/a = not appropriate

Funding Options

66. Table 3 sets out five specific funding approaches (with various sub-options) that were identified as worthy of further consideration. Those funding options involve a fixed sum component and a component relating to the patronage carried essentially differ in the relative importance of these two components. i.e. in the extent to which the operator payment varies with the passengers carried. as in a fully commercial market. rather than be fixed and independent of patronage. Obviously, the more the payment is variable the greater the operator incentive to adjust services to match market needs.
67. The options also differ according to whether the operator bid is to be based on the fixed sum or the patronage related component. It was decided against allowing operators to bid on both components, as this would have made the evaluation task considerably more complex without much (if any) offsetting benefit.

68 Table 3 shows, for each defined option:

- the funding formula to be used;
- the parts of the formula to be established by PTB (included in the Request for Tender documents), and the part on which the tenderer quotes;
- the extent to which the operator payments would vary with levels of patronage;
- some examples of where similar formulae are used in other urban bus contracts.

69. The five specific funding approaches that were identified as most promising are:

1. Commercially Based Funding. The payment to the operator is based on a rate per passenger and/or per passenger kilometre for the actual number of passengers carried. The payment per passenger thus is close to what the operator would charge each passenger if there were no subsidy, and would approximate a commercial operation (although the passengers themselves would not be subject to the commercial signals).
2. Net Funding. The operator receives a share of the actual ticket revenue or retains revenue from the sale of tickets. The PTB then pays an annual fixed sum subsidy to the tenderer to cover the difference between revenue and operating costs.
3. Gross Funding plus Incentive. This is similar in effect to "Net Funding" but the payment of a variable amount could be tailored to provide a desired level of incentive to meet objectives other than cost minimisation.
4. Gross Funding. The operator is paid a fixed sum to operate specified services for a specified period. The prime incentive for the operator would be to reduce costs, with weaker incentives to meet customer and market needs (eg reduced prospect of winning a subsequent contract).
5. Unit Resource Funding. The operator is paid a rate per hour or per kilometre to operate services fully specified by the PTB. The rate could vary by time period and circumstances eg. higher for extra peak buses.

70. In Adelaide's environment the Net Funding options would provide very little additional incentive to the contractor. This is due to the low level of cost recovery and the very low level of revenue collected directly by operators (compared with that collected through third party outlets). Sharing the revenue pool provides too indirect a benefit to any one contractor as return for their own efforts, assuming of course that there are eventually several operators in the metropolitan area. Retaining the actual revenue collected at depots and on bus would amount to only 2 - 3% of costs. Net funding was therefore not considered further.

71. Gross plus Incentive options can overcome this problem as it is possible to set the incentive component at an appropriate level. However, since a small incentive component would have the drawbacks of the Net Funding options, and because a small Gross component would approximate the Commercial option, subsequent evaluation was based on approximately equal proportions of the funding being delivered by each component, ie. about 50% Gross and 50% Incentive.

TABLE 3 - FUNDING OPTIONS

	1. Commercial	2. Net		3. Gross + Incentive		4. Gross	5. Unit resource
	(Funding based on patronage) $Q=z(b+Ak)$	2a. (Share of total revenue) $Q=S+R(b+\Delta k) / \Sigma(b+Ak)$	2b. (Actual rev. collected) $Q=S+r$	3a. (Annual payment fixed) $Q=S+z(b+Ak)$	3b. (Rate per passenger fixed) $Q=S+z(b+Ak)$	(Annual payment fixed) $Q=S$	(Unit rates fixed) $Q=y*v$
PTB sets: (1)	A	A	-	S and A	z and A	route km and capacity	timetables, vehicles, etc.
PTB provides information on:	patronage and min. route km.	patronage, min. route km. and fare structure	patronage, min. route km. and fare structure	patronage and min. route km.	patronage and min. route km.	route km.	route km.
Tenderer quotes:	z	S	S	z	S	S	y
Variable part of the formula:	Totally depends on patronage	30% under Adelaide fare structure	2% in Adelaide (low on-board sales)	Adjustable	Adjustable	None ie fixed	Varies if resources are varied
Comparison comments:		Effectively a special case of 3b.	As $r \rightarrow 0$ this is effectively 4.	High $S = n/s$ Low $S \rightarrow 1$.	High $S \rightarrow 2$. Low $S = n/s$		
Examples:	Inner Melbourne (National Bus)	London, (Proposed)	UK, NZ, Hallett Cove, Aldinga (2)			US, NZ, London, Outer Melbourne,	Tyneside (UK)

Definitions: Q is the total return to the operator, b is the number of boardings, k is the number of passenger kilometres, r is the actual operator-collected revenue, R is total system revenue, v is vehicle km, vehicle hours, etc., A is a weighting constant set by PTB to weight the relative importance of b and k, S is a fixed payment Sum (per year), z is the \$ rate per passenger, per kilometre or per passenger kilometre, and y is the \$ rate per vehicle, vehicle km. or hr.

Notes: (1) When the part set by the PTB is large (either S or z) then the tenderer is only quoting on the marginal part and in the worst case, if too generous, the marginal part could be negative. (2) Hallett Cove and Aldinga are two Adelaide areas with small feeder services on contract.

Combined Options

72. Each funding method has characteristics which make it more suited to some particular route and service specifications than to others. In general, as discussed earlier, the more the funding varies according to success in the market, the less restrictive the service specification should be, and vice versa. The service specification options and the reduced set of funding options were combined to come up with alternative service provision models for evaluation.
73. Some models would operate very similarly to others so there was little point in evaluating every combination feasible combination of service specification and funding method, especially as the assessment would necessarily be subjective. Instead a representative range of options was selected using the most appropriate service specification for each funding method, whilst still giving coverage to the full range of service specification options.
74. The selected options are shown in Table 4, marked ***.

Service Specification	Funding Methods			
	1. Commercial	3. Gross + incentive	4. Gross	5. Unit resource
R/TT				***
C/TT				
R/HF				
C/HF		***	***	
R/HO				
C/HO	***			
A/HO	***			

EVALUATION OF OPTIONS

75. The effectiveness of each option in achieving each objective was scored, relative to other options, over a scale from 0 (worst) to 5 (best). By applying the weights assigned to the desired outcomes, a weighted score was derived for each option, so they then could be ranked overall.
76. Sensitivity testing was undertaken for changes to the weights. Service was weighted at 30% and at 60% (with financial conversely weighted at 60% and 30% respectively), and relative weights for sub categories were kept unchanged. This had no effect on the overall rankings of these options.
77. The option evaluation is presented in Table 5.

TABLE 5 - SERVICE PROVISION MODELS: WEIGHTED SCORES						
OUTCOMES DESIRED	WEIGHT	1. A/HO	1. C/HO	3. C/HF	4. C/HF	5. R/TT
Services						
Better Customer Service	11	55	55	33	11	11
Commercial Market Responsiveness	24	120	72	48	0	0
Ease of Service Integration	5	10	15	20	20	25
Integrated Ticketing/Public Information Services	5	15	15	15	15	15
Total Points Services	45	200	157	116	46	51
Financial						
Operator Unit Cost Reduction	24	120	96	72	72	48
Revenue Protection	5	25	25	20	0	0
Minimising Government Financial Uncertainty	8	0	8	40	32	32
Minimising Government Regulatory Costs	8	40	40	32	32	24
Total Points Financial	45	185	169	164	136	104
Other Policy						
Encouraging Local Operators	5	10	15	20	20	25
Government Policy Responsiveness	5	0	10	15	15	25
Total Points Other Policy	10	10	25	35	35	50
TOTAL	100	395	351	315	217	205

78. As can be seen from the evaluation results, the desired outcomes would be best achieved by options that provide a high degree of incentive to the operator to focus on better serving the market, and give the operator a large degree of control over services subject only to meeting minimum standards. The reason for this is the assessed superiority of such options in the both the two key areas of Commercial Market Responsiveness and Operator Unit Cost Reduction.

THE SELECTED APPROACH

CONTRACT PARCELS

79. This led to a decision to divide the metropolitan services into franchise areas, together with use of some small, specific route service contracts required to cover inter-area services. The required maximum contract size was 100 vehicles, and some allowance was made when determining contract parcels for the effect of the potential substitution of minibuses in increasing the fleet size.
80. The metropolitan area has been divided into 10 area franchises, and 3 route contracts. Based on existing operations, the size of contract parcels ranges from a high of 83 buses in the Outer North East (using the Adelaide O-Bahn) to a low of 10 buses for one of the route contracts.
81. This range of contract parcels was selected to achieve a spread of sizes to appeal to both the larger operators as well as the smaller local operators, on the basis of coherent geographic areas.

COMMERCIAL FUNDING IMPLICATIONS

82. A commercially based funding formula, combined with only a basic minimum service specification would carry a number of risks for the Government as well as the operator.
83. In the operator's case Government policy changes present a major risk, in that these could create significant changes in demand. Examples include Government action to restructure fares, improve road capacity, alter levels of taxation and support community transport.
84. It might be argued that any business faces risks due to Government policy changes. However, in the case of public transport, and particularly given that price is not controllable by the operator, the risks are much higher than in other fields of activity. Of concern to the Government on the one hand and the operator on the other, is the prospect of windfall gains and losses.
85. For the Government the risks arise from the operator's potential response to this commercial funding. These include the risks that services will be no more than the minimum specified in many cases, that increases in demand, or even an extremely successful operator, will cause budget blow-outs and that fraud may be encouraged.
86. Given that public transport costs vary by time of day and day of week, it would be necessary to set funding per passenger at different levels in each period if it is to cover costs fully. This would be very complex and would not necessarily solve the problem of an operator diverting resources to the most profitable times within any period, or within the area served in that period, at the expense of the overall service coverage desired. In addition, per passenger funding would have to be very high for certain services, eg. late night, leading to strong incentives to gain the marginal passenger (or even falsify records). And small fluctuations in demand would result in large changes in revenue.

87. A particularly successful operator would highlight the dilemma faced by Government. It wants more people to use public transport but does not have the budget to achieve this at current fares, and yet fares are too politically sensitive an issue for it to be able to use them to balance the books.
88. This is particularly true in peak periods, when services are used to capacity and an increase in demand means more resources are needed, at high cost. In Adelaide's case, as one example, there are numerous schools which charter their own services, or have no direct service. An operator could easily target the school travel market and provide a lot more services, if the funding was set so that marginal revenue in peak times covered marginal costs. This may well be more profitable than the less predictable commuter market - leading to an outcome the Government would not want.
89. However, if the commercial funding were based on average costs (ie. across all time periods), this would provide too little marginal revenue to cover the marginal cost of extra peak services, and therefore would reduce this risk.
90. Additionally, since ticket prices are so low the operator could even afford to buy tickets and discount them, or give them out free, under some circumstances. To the extent this generated additional patronage, the operator would gain and the cost to Government would rise. Again this is not a desired outcome. This is true for some ticket types at some times even with average funding.
91. Finally, the temptation for operator fraud by inflating passenger statistics would be high.
92. Strong public concerns have been expressed that there may be deterioration of services due to introduction of competitive tendering. From a political perspective such an outcome was unacceptable.
93. As a result two changes to earlier thinking were made, namely:
- minimum service specifications were set to be equivalent to current service levels, but with flexibility to vary actual services within these specifications;
 - a gross plus incentive funding model was adopted, with only about 50% of a contractor's income being variable according to patronage.

SERVICE SPECIFICATIONS

94. Minimum service specifications have been set to be equivalent to current service levels in various categories. For instance, the same route coverage and average service frequencies are required. Operators however can alter services within their franchise areas, subject to approval of the PTB and at least meeting these standards. Service connections are specified where needed to maintain integration with other contract parcels. Funding based on boardings provides an incentive to ensure such coordination works well, as lost patronage is lost revenue.

95. There are times when additional services have to be provided, such as for special events. These have not been specified but tenderers are required to provide quotations for provision of such additional services on a gross cost basis (by vehicle, hr or km for different times).
96. The degree of exclusivity is defined, including the rights of other operators to service destinations within or operate through the area. Passenger transport services not covered by the legislation (ie. not involving fares or other financial considerations, such as free volunteer services) or not subject to service contracts (ie. not operating to regular routes and timetables, such as taxis) may freely operate within the area.
97. Contract negotiation will be needed if the Government wishes to introduce specific services, or vary the service standards for policy or budgetary reasons.

VEHICLE SPECIFICATIONS

98. Vehicle specifications have also been set, equivalent to the standard of the vehicle fleet currently used in the area. This would apply only to operators who did not lease all their vehicles from the DoT. Minimum essential features are specified, such as facilities for people with disabilities, together with point scores for additional features. Operators can trade off additional features to achieve the required aggregate point score for their fleet. Only features of benefit to the customer (such as seating, air-conditioning, etc.) or the community (such as low pollution engines) are specified and scored.

CONTRACT FUNDING FORMULA

99. The Gross plus Incentive model is based on the formula shown in Table 3. The decision was made to have operators quote the fixed annual sum, and for the PTB to set the boarding and passenger kilometre components. The formula therefore becomes:
- $$Q = S + b(p + q.k)$$
- where Q = payment to contractor, S = tendered sum, b = number of boardings, p = price per boarding, k = average trip length per boarding in kilometres and q = price per passenger km (k).
100. This formula mirrors a commercial fare structure, with a 'flagfall' component and a 'distance' component. The relativity between these components was based on observation of commercial fare structures applying elsewhere in Australia.
101. Given that the aim was to have about 50% of the current cost of the services covered by revenue from patronage, the selected values were 50c per boarding and 10c per passenger kilometre. The implication of these is that the Government is prepared to pay up to this amount for additional passengers in recognition of the social, economic and environmental benefits this may provide.
102. Passenger kilometres are calculated from average trip length per boarding which will be determined from surveys. Consideration was given to allowing tenderers to quote these figures but in the end this was seen as too complex and open to quotes that defeated the objective of this incentive structure.

103. Tenderers are required to quote a fixed price to operate services in each year of the contract. To do this they need to determine their optimum service provision, based on its cost, including profit margin, the patronage generated and their expected revenue, based on the funding formula above.
104. This model reduces the variability of payments for both operator and Government, as patronage varies, and reduces the problems set out above. However, if necessary, service specifications could be reduced in subsequent contracts to meet budget targets. Over time it will be possible to fine tune the incentive component in light of experience with its effects on performance.

VARIATIONS TO THE FUNDING FORMULA

105. Tenderers are advised that adjustments will be made on an annual basis to the contractor payment according to movements in a public transport cost index. This index is being developed for the PTB by the Australian Bureau of Statistics.
106. In addition, to provide some protection to operators from policy driven fare changes, the following adjustments will also be made:
- * for average fare increases less than or equal to 1.2 times the CPI increase in any year:
 - no adjustment to funding;
 - * for average fare increases greater than 1.2 times the CPI increase in any year:
 - an adjustment based on the real price elasticity of demand, which in Adelaide is estimated at 0.2.

OTHER TENDERING AND CONTRACTING ISSUES

FRAUD AND FARE EVASION

107. A major advantage of passenger based funding is that it is in the operator's interest to ensure every passenger has a valid ticket when boarding, and validates it using the Crouzet ticketing system. It is data from this system that is used to determine the number of boardings upon which the funding is based. This approach strongly aligns both PTB and operator goals.
108. Nevertheless, there are circumstances, such as prevention of use of concession tickets by those not entitled to them, or over-riding on short distance tickets, that will require ongoing enforcement.
109. On the other hand, although the incentives for falsification of claims are lower with only 50% of revenue based on patronage, there is still potential for operator fraud. This will be monitored through audit procedures and minimised through software controls.

SERVICE TENDERING TIMETABLE

110. The release of parcels of bus services to tender is being phased in over a two and a half year period. The reasons for this phasing are primarily:
- * to allow the parcels that are easier to separate out to be dealt with first;
 - * to gain some experience and reduce risks through initially shorter contracts and limited application of the adopted service provision model;
 - * to provide for an ongoing process of retendering of service parcels that reduces the impact of loss of a contract on an operator, and ensures continuing competition.
111. Two or three service parcels will be released each six months for terms that start at 2½ years and increase by six months for each subsequent release, up to a term of 4½ years. One or two contracts will then come up for retender every six months, with each let for a five year term.
112. While not a prime consideration, this phasing also enables the PTB to meet the requirement to provide TA with the opportunity to control 50% of services until 1 March, 1997. Whether or not the program will need to be adjusted will depend on TA's success in winning tenders.
113. One practical issue still being resolved is the fact that breaking up the system into maximum 100 vehicle contracts does not match the existing bus depots (three of which have more than 100 buses) and is likely to force the breaking of through-routed services in the city centre. Both these factors will increase costs, roughly guessed to amount to around 3-5%.
114. By selecting appropriate pairs of contracts to release to tender at the same time the possibility will exist of one tenderer winning both and therefore being able to maintain some of the current efficiencies of either through running or use of a single depot.

BASIS OF TENDER EVALUATION

115. The basis used for tender evaluation would warrant a complete paper and only a very brief summary is given here.
116. The evaluation being undertaken eventually involves a trade-off between price and non-price factors. A series of non-price attributes have been defined, within the following headings:
- service plan proposals;
 - customer service quality aspects;
 - planning and consultation;
 - support facilities;
 - implementation and disengagement aspect;
 - management practice;
 - previous experience;
 - financial capacity.

117. Each of the individual attributes has been given a relative weight, and a scale has been established to assist in consistent scoring for each tenderer. On some critical attributes, a pass/fail criteria has also been established: if a tenderer does not meet the minimum standard, then that tender is rejected.
118. The sum of the weighted scores for each tender is derived. These relative scores are then used to adjust the bid prices, to give a "quality adjusted price". The preferred tenderer for this part of the evaluation is the one with the lowest "quality adjusted price". In addition, wider "whole of Government" considerations may be considered in arriving at the final recommendation to Government.

AWARENESS AND CONSULTATION

119. As South Australia was embarking on a new approach to public transport service provision it was felt that it was important to generate interest in tendering and awareness of the PTB's proposals, as well as obtain feedback on these from the industry and other interested groups
120. Preliminary proposals were promulgated in a discussion paper, and this formed the basis of an industry seminar held in November 1994. The discussion paper, although written for the industry, was also provided to other interested groups, such as the conservation movement, local government, planning bodies and welfare bodies. The seminar and the responses to the discussion paper lead to fine tuning of the proposed approach.

CURRENT STATE OF PLAY

TENDER BIDS

121. On 4 March 1995 the first round of tendering commenced. Tenders were invited for bus service provision in the Outer North and Outer South areas of metropolitan Adelaide. Tender documents were released on 20 March 1995. These two areas, based on Elizabeth and Lonsdale bus depots respectively, cover about 20% of existing bus services.
122. The Outer North tender is for a two and a half year contract, and the Outer South for a three year contract. These contract terms have been set so that when the whole system has been put to tender, future five year contracts can be put to tender at intervals of six months.
123. Eleven firms obtained the tender documents (which were priced at A\$5000 for each area). These firms included Australian, UK and multinational companies.
124. Tenders closed on 29 May, 1995. Five organisations have bid for the Outer North services and four for the Outer South services. Tender evaluation is expected to be completed by September 1995, and the successful tenderer is expected to commence operations in January 1996.

NEXT TENDER ROUND

125. Feedback is being sought from tenderers and potential tenderers on the tender process and specifications adopted for the first round. This will be used to refine the approach for the next tender call.
126. Work is underway to review and update the tender program based on the most efficient combinations of service parcels to release at each six month interval.
127. The service parcels to be released in September 1995 will then be decided, and the tender documents will be produced for these, incorporating refinements from experience with the first round. This tender call will include the North East services that use the Adelaide O-Bahn. It will also include one or two other related service parcels.
128. Tenders will then be called at six monthly intervals for the rest of metropolitan Adelaide's public transport services, subject to any special circumstances that may arise. Meanwhile work is also underway on the form of contracts to apply to intra-state services.

EFFECTIVENESS OF THIS APPROACH

129. It will not be possible for some time yet to draw conclusions on the effectiveness of this approach in achieving the Government's goals. One positive sign so far has been the healthy interest in bidding to provide these services. However in the longer term it is the responsiveness of services to customers and the market, and the strength of ongoing competition for tenders, that is most important to achieving the Government's goals.
130. The approach adopted in South Australia for metropolitan Adelaide public transport service provision is designed to ensure, as much as possible, that:
 - tenderers can enter and leave the market at a relatively low cost;
 - there is ongoing competition for tenders;
 - once successful in winning a contract, the operator has a strong focus on meeting customer needs.
131. The aim of these contractual arrangements is to achieve as much congruence as possible between the goals of the 'purchaser' and those of the 'provider' so as to create the most favourable climate for achieving the Government's goals: namely to provide a public transport system that better meets the needs of its customers and the market.
132. The contracts to be used in South Australia create a situation that parallels (but is not identical to) a purely commercial operation from the operator viewpoint, with returns from the contract driven by success in the market, subject to meeting the minimum standards specified. The shared goals in these quasi-commercial contracts are at least the improvement of customer service, encouragement of public transport use, reduction in fare evasion and effective service coordination. And this approach does not require the politically unacceptable fare increases that would be involved if a fully commercial situation were to be established.

133. As with all contractual relationships, there are risks involved. However, to quote Dr. Graham Scott, a New Zealand-based consultant and ex-head of the NZ Treasury, from a paper given to senior public service managers in Adelaide on 12 April, 1995:

“Short term profit maximisation and opportunism is unlikely to be seen by the owners of a private service provider as commercial objectives in (an) area where they are dependent on the goodwill of what are often monopoly purchasers over long periods of time for their survival”.

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