

IPART 2008 Submission

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1 Introduction

The 05 June IPART discussion papers present a new approach to determining CityRail's revenue requirement and how it should be funded, and then to deciding on the consequent structure and level of CityRail fares. The approach to determining the revenue requirement looks logical; start with an estimate of efficient costs based on a building block approach, estimate external benefits that justify non-user earnings and collect the remainder from fares for a viable outcome overall. This remainder is effectively seen as determining the equitable minimum level of total fare revenue.

The new approach would move away from seeking to close the gap between fare revenue and actual running costs (the revenue shortfall) and towards one of considering total benefits and efficient operating, maintenance and capital costs. The Ministry notes that the latter could be lumpy and partly subject to other whole-of government priorities not under the influence of CityRail, and suggests that considering just operating and maintenance costs would be preferable. Even if this were done, the equitable minimum level of total fare revenue would not be expected to change; just its proportion to considered costs.

However there's still an elephant sized problem. Under the analysis presented, real fares would need to rise between 20% and 30% to reach the new minimum, and this, due to fare elasticity, would reduce patronage by between 6% and 9% in apparent contravention of Government policy. Lower patronage, in turn, would reduce both the fare revenue collected and the external benefits earned, and thus undermine the intended viability. Further raising fares, or cutting efficient costs, in response would just continue a downward spiral towards some lower level of service.

There is also some uncertainty as to how much the patronage would change. If, as seems possible, the estimate for efficient costs is too low because it does not adequately reflect higher wages for the implied improved skill sets, then fares would need to be even higher and patronage would be further reduced. Conversely, the rising cost of petrol, and/or opting to directly charge motorists a share of the road-based benefits attributed to CityRail, could lessen the reduction in patronage.

The alternative to creating a downward spiral is to increase both internal and external benefits through an increase in perceived value and hence patronage, and to re-estimate the minimum equitable fares that would then apply for a viable outcome. This value increase can be achieved in two ways, better performance and improved fare products. Both are covered in this submission.

2 Performance

CityRail is slow compared with other operators when normalised for the average distance between service stops. This has already been explained, along with several corrective suggestions, at some length in my 2006 submission on CityRail fares. Rolling stock design and legacy infrastructure both contribute to the problem, and it seems unlikely that the CSIP will address this issue in any significant way.

Double deck rolling stock, with its long dwell times and traction constraints, has helped make the rail system slow and difficult to manage. The reaction to these difficulties has been to slow the system further in the interests of better safety and consistency. Long dwell times also limit the frequency of services. This slowness and infrequency reduces the perceived value to users, and consequently reduces the internal and external benefits that can be generated.

Many rail operators employ double deck trains, but most usually on long commuter runs to a terminal station where internal train flows are mostly unidirectional at each stop and the terminal dwell time on a dedicated track is not important. Sydney's trains are a compromise, having end vestibules and platform level doors to facilitate a mix of a metro and a commuting style of operation. However, with Sydney evolving into a multi-centred city and with more transport interchange points, the metro (simultaneous loading and unloading) component of the mix has increased, and is likely to do so further. Running full double deck trains at maximum track capacity over parts of a complex network simply adds to the ongoing management difficulties.

The announcement of a North West Metro over a dedicated route, with prominence given to travel time and service frequency, suggests that the Government is well aware of the limitations of double deck rolling stock, the existing infrastructure and partly related work practices. However, there are seemingly no plans to reform CityRail services by converting and segregating the worst affected services to metro style single deck operation, allowing also better express running for the double deck trains that would remain. I have made two submissions to SydLink on such metro conversions, and other matters relating to improving the alignment between rail transport and the metropolitan strategy. There are also seemingly no plans outside Clearways to improve existing CityRail infrastructure.

Thus the IPART approach of determining efficient costs does not tell the whole story, it is also necessary to determine efficient internal and external benefits and identify the extent to which CityRail falls short. The implication of CityRail generating less than efficient benefits is that fares would need to be lower, as they now are, in recognition of the reduced value to users, but viability of the whole network would then be questionable. Although infrastructure capital costs would rise to generate the additional benefits, operational costs should fall due to better rolling stock utilisation and lower track maintenance, such that the important gap between benefits and costs would still increase. This work could also help close the gap between actual and efficient costs, as this gap may be partly a consequence of present rolling stock and infrastructure limitations, rather than just excess labour.

3 The Importance of Time

The generalised cost of travel is comprised of both time and money costs, with the former being dominant. The following table of European elasticities (for road travel) has been extracted from <Saving Oil in a Hurry>, a draft paper by the IEA, and presented below. It confirms that elasticities with respect to time are substantially higher than for pecuniary costs, and particularly high for commuting. This shows why timesavings are of primary importance for generating rail benefits, both internal and external, and why a commitment to the best possible service speeds, as advocated in my 2006 submission, is desirable.

TRACE, 1999, The Elasticity Handbook: Elasticities for prototypical contexts (deliverable 5), Costs of private road travel and their effects on demand, including short and longer term elasticities, contract no. RO-97-SC.2035, Prepared for the European Commission Directorate-General for Transport.

Table 2-3: Key Results from TRACE Project

Trip purpose	VKT with respect to		VKT with respect to parking charge				
	fuel price	travel time	average	distances 0-5 km	distances 5-30 km	distances 30-100 km	distances over 100 km
<i>Short term:</i>							
Commuting	-0.15	-0.48	-0.02	-0.10	-0.02	-0.01	-0.01
Business	-0.02	-0.05	0	0	0	0	0
Education	-0.06	-0.05	-0.01	-0.12	-0.02	0	-0.00
Other	-0.22	-0.19	-0.08	-0.30	-0.06	-0.01	-0.02
Total	-0.15	-0.28	-0.03	-0.18	-0.03	-0.01	0
<i>Long term:</i>							
Commuting	-0.25	-1.04	-0.04	-0.13	-0.06	-0.02	0
Business	-0.22	-0.15	-0.03	-0.02	-0.02	-0.03	-0.03
Education	-0.38	-0.84	-0.03	-0.17	-0.06	-0.01	0
Other	-0.47	-0.86	-0.16	-0.36	-0.18	-0.05	-0.00
Total	-0.31	-0.80	-0.07	-0.22	-0.10	-0.03	-0.02

VKT: vehicle kilometres travelled.

4 Fare products

Although CityRail funding is commendably being moved towards a consideration of total benefits and efficient costs, the existing fare products seems firmly anchored in the revenue shortfall mindset. The failure of Tcard has been partly attributed to the present complexity of public transport fare products, and this adds to the case for reform. Additionally the Government has recently requested the Ministry to advise on options for restructuring public transport fares and has undertaken to subsequently inform IPART of its view.

The following comments on existing fare products considers both the IPART discussion paper and the above observations.

4.1 Single Fares

These are currently structured around a flat flag fall and a distance related charge. There is clearly some flexibility with apportionment between the two, and with the distance step size, to arrive at a total revenue outcome. The work on efficient costs doesn't offer any specific guidance on this issue.

The above structure works well with a point-to-point rail trip. However there are problems with making a mode change, a journey break or a journey extension, as each additional "trip" presently requires the payment of an additional flag fall. Each tends to discourage multi-trip public transport journeys. A low flag fall would reduce these problems but introduce another; very low fares for short distances. There seems to be consumer acceptance for a reasonable flag fall, albeit with some perception of short distance fares being too high and excessively cross-subsidising others. Multi-mode journeys also need to be supported by adequate service frequencies and/or coordination.

Tcard, or its successor, should be capable of charging users a single flag fall for each multi-trip journey, and I understand that the Tcard team was working on the mode change issue for buses where GPS based location information is needed. Some sort of direction and/or time limit would also need to be applied. Other administrations have avoided the multiple flag fall complexity by issuing zone-based tickets instead, again with a time limit. Zone fares are covered more fully below.

4.2 Return Fares

Return rail fares are presently priced at twice the single fare, except for the discounted off-peak return fare for journeys commencing after 9 am.

In 2006, IPART responded to a concern about off-peak returns being usable in the afternoon peak by partially accepting CityRail's recommendation for a real increase in these fares. This response seemingly ignored the balancing issues of full fare returns being used in the off-peak and the reduction in some off-peak services that had occurred. An apparent shift from off-peak to peak is now reported, which doesn't seem particularly clever under the present circumstances of peak capacity constraints.

While more off-peak services would be beneficial, introducing additional ticket products to more tightly manage the issue seems futile. All return tickets, be they full fare or off-peak, can be seen as an artefact of the present rail ticketing environment. Under Tcard, the time of day would be known for each forward and return journey and could be priced accordingly, and this practice could encompass all modes.

4.3 Periodical Fares

Periodical tickets are presently available for durations between one week and one year for regular rail travellers. IPART has asked if the same, and constant with distance, 20% discount recommended for TravelTen bus fares should apply to rail periodicals.

There is a difficulty with this proposal in that periodical tickets allow for unlimited travel, including breaks, between the designated end stations, whereas TravelTen tickets do not. It is reasonable to expect that any additional travel opportunities thus taken would form a smaller proportion of the total as the periodical ticket distance increases. Additionally, some longer distance, but still regular, commuters may work less than five days per week and, without access to an alternative discounted product such as an equivalent to the bus TravelTen multi-ride ticket, would get no benefit at all under a constant 20% discount.

There is another aspect to rail only periodicals. Although unlimited rail travel is possible, no travel on other modes within the same area is allowed. This looks like the old mindset of minimising revenue shortfall, rather than maximising value to boost patronage and benefits. It is therefore logical to consider scrapping all rail-only periodicals and replacing them with TravelPass type products as the only form of periodical. Similar comments would apply to the new private bus-only weekly. TravelTen type tickets would also not be necessary under Tcard, as the equivalent of a multi-ride discount could be offered for all modes by being absorbed into an incentive for using Tcard. However there is a special situation for cash fare bus users, who, to minimise boarding delays, should be able to bulk buy pre-paid single tickets.

5 Zone Fares

IPART has made some valid observations about the difficulties with concentric zone base fares in Sydney, but a cellular zone structure, as used extensively in Austria, Germany and Switzerland, would overcome most of these. An example for the Sydney Metropolitan Area showing 22 zones, or alternatively a coarser structure of 9 zones, is shown at Annex A to this submission. The 22 zones correspond with the location of major regional centres. Fares outside this area could be covered by either a rail distance add-on or an extension of the zone system.

The zone boundaries would be subject to detailed investigation to maximise community of interest considerations. Thick boundaries between zones may also be necessary for the same reason and to address the particular situation where four zones meet at a point.

Another past problem with zone fares has been the division of revenue between operators. Under the new IPART rail proposals, it appears that the private bus model could be followed whereby the Government retains the fare revenue and reimburses costs. If this is done for all modes, the issue of revenue division between operators largely disappears.

A peak period surcharge to the CBD could be incorporated by either providing an additional smaller zone inside the Sydney zone, or adding an access fee at CBD stations, bus stops and ferry terminals, during peak periods times. However there seems to be no particular advantage over the present approach of offering off-peak discounts. As well as it being easier to sell a discount rather than a surcharge, off-peak discounts could be packaged up as part of the overall incentives for users to adopt Tcard.

The provision of long haul bus routes within the Sydney Metropolitan Area, and the corresponding need for distance based fares, suggests that tag-off will be retained for buses under the successor to Tcard, despite some inconvenience to users. The retention of tag-off would also help support the operation of zone-based fares.

Given that the need to restructure public transport fares is now recognised, the above comments have been used to construct and present a possible fares package under Tcard's successor at Annex B.

6 Summary

IPART has taken a structured approach to estimating efficient total costs and external benefits for CityRail, and thereby inferred the fare revenue requirement as the difference. However, the fare increase of 20% to 30% needed to fully meet this requirement will reduce patronage and thus require some service pruning to achieve an even lower level of efficient costs in response to the lower revenue. Although the most subsidised services would logically be pruned first, the downward spiral of efficient costs and patronage could lead to a much smaller public transport system before a point of economic viability is reached. This downward spiral would seemingly contravene Ministry policy expectations that envisage a much increased use of public transport in the future.

This submission has indicated that CityRail is most likely offering less than efficient internal and external benefits, in terms of performance and fare products, in addition to having the higher than efficient costs as identified by IPART. As a result, CityRail services are perceived as less valuable than they could be; making real fare increases more problematical than necessary. There are three possible pathways towards achieving a more stable outcome without loss of patronage that should be considered, either singly or in concert, by IPART:

- Lower than IPART recommended rail fares to compensate users for less than efficient value. This reflects the current situation but, on the information presented, is not viable;
- Improved CityRail performance, particularly speed, to build patronage and benefits; and
- Simpler and more attractive fare products to similarly build patronage and benefits.

It is only the last two pathways that can improve economic viability.

The government would clearly expect its new metros to generate efficient benefits with fares set accordingly. Improving CityRail's performance would allow a better alignment of fares between the two rail modes and facilitate the integration of simpler and more attractive fare products across the entire public transport network.

Annex A

Diagram showing possible public transport fare zone centres for the Sydney Metropolitan Region

Solid line ring:

22 zones, each including a major centre, with separations of approximately 10-15km.

Heavy line ring:

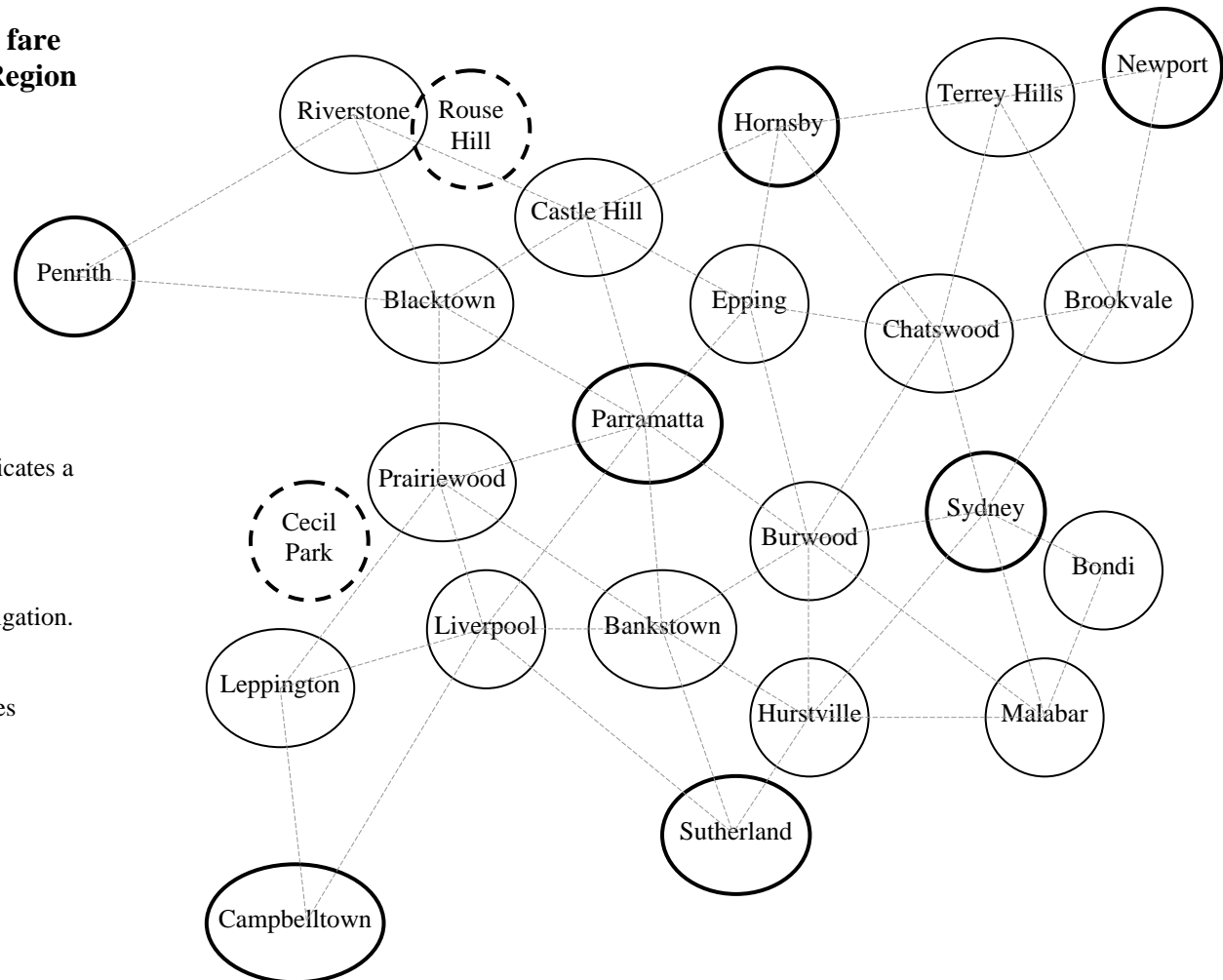
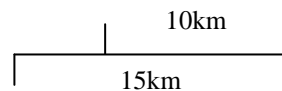
9 Zone alternative based on 20-30km separations.

Dotted grey line:

Indicates zone adjacency. Intersection of two lines indicates a point where four zones touch.

Notes:

1. Zone boundary details would be subject to investigation.
2. Diagram is approximately to the scale below.
3. Bondi includes Bondi Junction
4. Malabar includes Maroubra Junction and Eastlakes



Annex B

A Proposal for simplified fare products under the successor to Tcard.

Cash Fares

Single cash fares for each mode, without transfers, would be available for those without Tcard. Access fees (see below), where appropriate, would be included as part of the fare. Bus users would need to pre-pay to avoid delaying services, either through single tickets from street machines or a discounted 10-fare pack of single tickets from retail outlets. A cash Day Tripper would also continue to be available.

Pay-as-you-go

Cash purse, or pay-as-you-go, operation would always be available under Tcard. Under pay-as-you-go, single journeys could be made over multiple modes based on one flag fall, distance, and appropriate access fees, within determined direction and/or time rules. The flag fall and distance prices would be discounted with respect to cash fares in recognition of regular use as signified by Tcard possession. It would seem logical to align the single fare structure with the zones used for the TravelPass type products discussed next, as this would avoid the present Tcard complexity of needing to know bus route details, as well as position, to compute travel distance.

Daily fares would be capped by an amount determined by the zones and times used, rather than just by the Day Tripper fare. Such capping would be similar to that presently available in London, except that this daily TravelPass like product would only be available to Tcard holders. Lower caps would be possible in the off-peak and for evenings, and a single cap could be applied for the whole weekend to reflect the original availability of weekend return tickets. Some peak period travel outside the Sydney zone could also be included in an off-peak cap. Access fees would not be included in the cap, and would be paid separately from the cash purse as incurred.

Periodicals

Multi-mode TravelPass type products for registered users would be stored on Tcard for any period from (say) one month to one year, along with the cash purse. Shorter periods would be covered by the daily capping arrangements described under Pay-as-you-go above. A typical zone fare product could be “Burwood Two Zone” which, from the diagram at Annex A, would allow travel from Parramatta to the CBD as one of many possible journeys involving Burwood and any of its adjacent zones. Alternatively, a more restrictive product could be offered, nominating just the zones permitted, at the expense of product complexity.

Fares outside the Sydney Metropolitan Area could be covered by either a rail distance add-on or an extension of the zone system to include the whole GMR. It is also proposed that access fees not be absorbed into the periodical, but added per trip from the cash purse for better equity. The fare increments for additional zones should be progressively smaller in recognition of the proportionally lower opportunities for additional travel as total distance increases, as noted previously. The cash purse would also be needed for travel extensions outside the zones designated by the particular periodical product.

Access fees already apply for the Domestic and International airport stations where the revenue goes to the private operator. An access fee could also be applied where the fare for a particular service is noticeably out of step with the “universal” fare structure, for example the Manly ferry services, both conventional ferry and JetCat. Concession fare gate charges would be accessible to Tcard concession and PET fare holders through the cash purse.

Another candidate for an access fee, for Tcard holders, could be the monorail. Non-transport products could also be purchased with the equivalent of an access fee, as is already possible in Hong Kong. However, access charges seem less appropriate for the light rail and the non-airport stations on the airport line, due to their more normal transport functions, and these fees could be avoided by separate compensation arrangements with the Government.