Rail construction costs not so straightforward

Peter Newman

Estimating construction costs for the new rail projects in Perth is a bit like the proverbial piece of string. Good luck, Treasury.

As a member of the advisory council on Infrastructure Australia, I am constantly shown estimates of rail construction costs and, more importantly, the benefits. It is clear that the costings from five years ago were a lot lower than now. But I find it hard to understand why they have doubled or trebled in such a short time.

The benchmark for me is Perth’s southern rail, which opened in late 2007. It was built for $17 million per kilometre (but if you include the other extension north and to Thornlie, then it was $22 million per kilometre) and includes a tunnel under the CBD, two bridges and multiple overpasses.

Why now do we get estimates for Metronet of $51 million per kilometre from the Labor Party and $85 million per kilometre from the Government, $78 million per kilometre for Labor’s proposed airport line compared with $220 million per kilometre for the Government’s tunnelled option, and $82 million per kilometre for Max, the light rail (which is meant to be cheaper than heavy rail)?

All these projects do not require land acquisition and they are in flat, sandy terrain already engineered for roads or railways.

The first response you hear is that the resources boom pushed up costs beyond any expectations. This is obviously how markets work and many subcontractors did very well at a time when they could charge almost anything as long as they dropped everything and got going on Pilbara work.

But that has now changed. The boom has gone off the boil. Estimates from construction people I trust suggest that the pre-boom costs have returned.

The second response you hear is that rail is always costly and risky so you have to add a contingency. One European expert, Bent Flyvbjerg, suggested you should always add 63 per cent to big rail projects.

This “optimism bias” as it is called may have happened in Europe in the past but it did not happen in Perth where we always seemed to estimate and manage road and rail construction pretty well. There was no Flyvbjerg factor on the southern rail and the same team will drive the next major rail projects.

The third possibility is that it’s all just political. You just can never trust governments to estimate opposition projects with any degree of fairness.

I refuse to accept this. In my experience, Treasury officials are tough on any proposal and their integrity is important to them.

It will be important to resolve what is actually being assessed — whether you really need to double the tracks on the Midland line, as well as the detail on the different routes for the airport rail line. Indeed, this will be why estimating any of the options will be hard, they are all far from complete. But at least we are all trying to build rail.

We could avoid a lot of the problems if we took a different approach to how we planned and built the next rail options in Perth. As rail growth has increased so dramatically it suggests that we could perhaps do this infrastructure with more of a market-based approach.

I would call for expressions of interest from consortia that could design, build and even run the new lines. Such competition will ensure costs are realistic. This was how the Gold Coast light rail was built at a much lower rate than our proposed light rail and that involved buying a lot of land.

Moreover, the consortia should involve land developers to help reduce the total cost of construction by building around rail stations.
A major part of the costing issue should be a true estimate of the benefits associated with the projects to show that they can be higher than the costs. This is a long and costly process and will not be possible before the election. It depends on the patronage attracted and there are some consultants being sued by governments in the east for getting toll road numbers wrong. The Perth southern rail has been much more attractive than anyone predicted, but will this happen again?

Our estimates of these rail projects show that the benefits will more than pay for the costs if the savings in new land development at the urban fringe are considered as well as time savings and health and productivity gains. Finally, if the Government wanted to adopt the latest rail-building technique it could use value capture to help pay for construction and maintenance of rail projects. Railways do increase the value of land — usually by more than 20 per cent for residential and 50 per cent for commercial. So residents and businesses can gain on selling their properties and stamp duty and capital gains taxes will be higher because of the increased value of the properties.

What do governments do with this extra money? What do local councils do with the extra rate money that is collected due to land values increasing? Value capture is just governments saying these extra funds should be ring-fenced and put back into paying the construction costs. This is not yet done in Australia though it is now on the agenda in four States.

So we need to consider real costs, not resources boom costs, strong government control of the procurement process, potential cost changes if the private sector competes to reduce them, probable savings from value capture and various patronage estimates. Treasury will need luck sorting through it all. Professor Peter Newman is director of Curtin University’s sustainability policy institute.