NSW "Business Cases" for Major Project Development Paths

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INTRODUCTION

There are **lies, damned lies and statistics**. The modern way of government is to throw a bright image on a screen and flash numbers that have no relationship to value for money. "Bust congestion" is the classic which is dissected elsewhere on this website. Here we look at the red tape, which is becoming translucent and then invisible. **Government is expert at the deceit and lies which hide lobbies' corporate manipulations.**

This critique was written in 2017 after a long series of specific critiques of failed Business Cases under the BOF/Baird/Berejiklian fiascos:

- *Eastern Suburbs Tram*
- *WestConnex*
- *Newcastle Tram*
- *Northern Beaches*
- *The Bays and Google being smashed by Berejiklian's twisted ideological obsessions, and*
- *sundry others including the Tibby Cotter non-bridge and move of the Powerhouse to oblivion.*

NB a separate critique of the football stadium disgrace was prepared subsequently.

It was circulated then to Ministers and MsP but, as with the valuation of dysfunctionalities associated the corrupt dismantling of the Bradfield system, no one took notice.

From Western Sydney being neglected, its failed Labor stooges found ways to redirect funding, succeeding because of the camouflaged "Howard's battlers". The State's predilection of "***too big, too risky, too expensive and too late***" was applied to the West Metro, Parramatta Tram, Western Sydney Rail and the new Badgerys Airport. The Port Botany monopoly slid under the radar to destroy the re-balancing of east/west employment.

The Turnbull Federal agencies came in to support the crippled Greater Sydney Commission and their rail and airport reports come under the "business case" banner sufficiently to be included here. Baird's head of Treasury in the critical de-democratisation phase of 2011-15 acts as if he is a guardian of the original blunders as they have metastasised in the Turnbull and Morrison Governments, a judgement based on recent events.

Again, the non-business cases were used as weapons, being full of empirical and methodological mistakes. Correcting those mistakes is fundamental to fixing Sydney's crisis.

Updated text is in boxes.
Bring in WS Rail and Scenarios of iA

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CONTENTS

RECENT HISTORY

Business Cases have been the framework for options testing and benefit/cost analyses for many decades, as enshrined in UK and Australian Treasury (1970) Guidelines. The incoming Coalition set up iNSW to strengthen such protocols, to reform Labor's "planning stench" and its series of recycled press announcements, unfunded projects, cancelled projects, dis-engagement of communities (with growing cynicism), and short-term Premiers and Ministers.

Evasion of probity and prudential legitimisation procedures has dominated professional and political discussions of freeway, metro, tunnel, bridge and tram projects. Process and technical issues remain to be resolved if Sydney's planning systems are to achieve demographic, economic and environmental outcome indicators and targets. In particular, an "infrastructure pipeline" requires *community acceptance* of outcomes and methods, and *willingness to pay*: the prospects are further away in 2017 than they were in 2011.

The CEO of the **NSW Business Chamber** was reported in February 2010 as

> "*welcom(ing) the commitment of the NSW Coalition to establish Infrastructure NSW as a means of* ***identifying, prioritising and delivery of infrastructure*** *for NSW". The creation of such a body, accountable to the Premier, is an important step in re-establishing trust in the selection process for the infrastructure process in NSW," said Stephen Cartwright ... NSW can deliver infrastructure better and the model proposed by the Opposition would directly improve governance and transparency in this area. The prioritisation and sequencing of infrastructure, as proposed by the Opposition, also ensures a pipeline of projects providing greater capacity for government to control costs and greater certainty of work in the sector.*

Then quickly followed in 2012 iNSW's cost-effective transit proposals in its State Infrastructure Strategy, which was monstered by then Transport Minister Berejiklian, and the Coalition's first Business Case issues which arouse in the WestConnex and NorthConnex roads. As iA later put it about WestConnex, there was a "Cycle of a submission in October 2012, a July 2013 business case, a revised cost-benefit analysis in 2014 and a revised business case in 2015 that included further revision to the cost-benefit analysis – '*A more comprehensive options analysis may have identified these evolutions or other approaches earlier in the planning and delivery process, potentially mitigating some risks around project certainty and scope*'".

The final Summary Business Case led to significant community and Council of the City of Sydney complaints, with unanticipated consequences including the loss of some 80 homes in the special heritage village of Haberfield. Some 200 resident action groups were reported to have sprung up. Then followed the NW to Chatswood thence Bankstown Metro (which its own community war) and the Eastern Suburbs trams with loss of trees and questioned service changes.

THE METRO HAS SEEN ERUPTIONS ALONG ITS NORTH SHORE AND BANKSTOWN AXES DUE TO GSC'S FAILED HOUSING TARGET APPROACH AND ITS INABILITY TO DELIVER THE "NEW PARADIGM OF ENGAGEMENT". SIMILARLY WESTCONNEX'S WIDELY-CRITICISED BUSINESS CASE WILL SEE IT NOT REDUCE CONGESTION IN MANY SECTORS AND NOT PAST 2031.

THE CONSEQUENCE IS PROFOUND: THE LACK OF PROPER NEEDS ANALYSES AND BUSINESS CASES, THE BEREJIKLIAN "IDEOLOGY & STUPIDITY" MODE, HAS DEFEATED THE WHOLE "BAIRD MODEL", SO THAT SYDNEY'S FUTURE IS BASED ON A LONG LIST OF UNPRODUCTIVE, INSOLVENT, LOBBY-IMPOSED STAND-ALONE PROJECTS.

WESTCONNEX

SGS Economics & Planning undertook a comprehensive professional critique of the final edition and highlighted three main groups of contentions. (Only a small sample is discussed here.)

The first was **omissions**: they found a footnote on page 240 saying that costs excluded "land acquisition, network enhancements and development costs"; after on page 222 "The components of real capital cost ... include property, design and construction contracts ... and urban renewal works". SGS showed just two examples of loss of economic value amounting to $3.7 billion. There can be no doubt that this is a material issue (adding to what CoS says up to a total over $50 billion) but in addition there was dishonesty: WestConnex appears to have misled the community.

SGS pointed to the exclusion of critical linkages such as M4 to M5. Construction and route closure effects on transit and personal transport as well as increased severity of accidents were excluded.

It has become clear that an additional $1.9 b might be required for KSA and Port Botany linkages (SGS noted the exclusion). SGS also pointed to findings that many sections of Parramatta Road would have higher congestion levels, and that the Western Harbour Tunnel would further overload WestConnex, to close to capacity. (It is noted that 20,000 more vehicles per day will be loaded on the Anzac Bridge which has not been included in disbenefits.)

This seems ridiculous but SGS reported that "*In its presented format, forecasts are difficult to read due to the small size of maps and illegible legends. The implications of the analysis presented are also unclear. For example, it is not clear where Sydney's residents will be working in 2031, and whether the trips made to and from work would require the construction of WestConnex*.

SGS rejected the 50% degree of confidence adopted for estimates (iA wanted 10% uncertainty).

Second were **errors**. SGS suggested modelling to just 2031 was inadequate and that is endorsed here.

SGS found a mathematical anomaly in a table of ratio calculations on page 231, and made a sequence of adjustments of costs (order of magnitude $500 m). They seem to have missed a table on the previous page (230) where costs had been redacted and where WestConnex's calculations emanated from. SGS should have clarified the two tables with RMS albeit the factor is probably not material.

The Present Value of costs on page 231 of $13.547 b is different to the $15,083 b on page 223. SGS did not comment on whatever significance lies there.

SGS repeated the results of sensitivity testing of discount rate levels. This was the most significant of sensitivities – 4% = 2.59, 7% = 1.64, 10% = 1.09; with 7% being the "central scenario". They missed the discussion on page 240 that 12% had been used by the proponent. It is likely 12% would have produced a negative BCR. It is likely that 7% was used but again SGS did not comment.

Third were **disputes**. Induced demand was adjusted at iA's request. SGS valued the change at 3% in overall benefits and that 30% had been a Melbourne experience. iA's assessment reported the change had "*reduced estimated benefits by about 25%, which is partially offset by changes in the calculation of vehicle operating cost savings, in accordance with revised national guidelines*". SGS's report predated iA's.

SGS reported that some 60% of travel time benefits related to reductions of 2.5 minutes or less per trip. They valued the reduction in BCR from excluding 5 minutes at minus $7 billion, taking the ratio from 1.64 to 1.12.

Business trip benefits were criticised at length, taking off a further $2.6 billion in benefits. Assuming 320 working days per year instead of 345 would reduce benefits by $1.6 b.

The total of adjustments here mentioned only, excluding the more sophisticated re-working proposed by SGS, amount to $15,5 billion (with land at a nominal "opportunity cost" of $4 b and likely to be must higher). That would turn a *positive* BCR of 1.64 to a negative BCR of about *minus* 1.3.

There is a reasonable degree of confidence in the conclusion that WestConnex had a negative economic potential.

The Committee for Sydney observed that

> *Capturing value is of no benefit unless you ensure it is delivering the right projects. New funding measures need to be partnered with a mode-neutral evaluation, appraisal of transport projects or investments.*

METROS

The first BCA appears to have been instigated by Ministers Watkins and Costa and produced total rejection by then metro-obsessed Premier Morris Iemma who left the top job just months later:

The Steer Review – drawn from Jake Saulwick, "*Metro a $12b disaster, says buried report*", SMH 30 July 2008:

> *The Iemma Government was warned a month before it announced the $12 billion north-west metro line that it would damage the NSW economy and should not proceed, in a damning top-level report commissioned by the Treasurer and buried by the Premier's office.*
>
> *The document … demolishes the metro proposal and the "optimistic" assumptions underpinning it. Written by Jim Steer, a world-leading transport consultant and executive with Britain's former Strategic Rail Authority, the report says the planned 38-kilometre Euro-style subway - from Rouse Hill to St James Station - is too long to be viable as a metro, is predicated on a poor business case and will do little to alleviate the CityRail congestion crisis.*
>
> *"The business case for the north-west metro is weak, reflected in a poor benefit-cost ratio. In fact, the evidence presented to the review, with a set of explicit, yet fairly optimistic assumptions, suggests that the project benefits are substantially outweighed by its costs.*
>
> *"In such circumstances, there would have to be good reasons not present in the appraisal work to date that create the case for proceeding to implementation."*
>
> *The report also suggests the project could be at risk of an enormous cost blow-out. It says that the capital cost for the project is estimated at $7.2 billion in 2007 dollars "excluding any explicit allowance for 'optimism bias'"…. On top of this, the project's costings had been based on the unit prices of the Epping to Chatswood line and only "limited work" had been done on comparing these with other metro systems around the world: "The comparators chosen in the work that has been done are not necessarily the most appropriate to the circumstances in Sydney. At this early stage of the project it would be wise … to assume that OB [optimism bias] of perhaps 40 per cent should be applied," the report states." Clearly, this change would further worsen the benefit-cost appraisal as it stands."*

The Final Summary Business Case for the confusing new Stage 2 to Bankstown (there had been 3) was released some 8 months after the Environmental Approval for the section to Sydenham kicked-off the Harbour Tunnel construction (see "Red Flag the Bankstown Metro" for chronology and analysis) – **with 110 redactions of all key cost and revenue parameters**. This writer analysed that in these terms:

This publication presents a summary of the Final Business Case that was prepared to enable the NSW Government to make an informed decision on the timing, scope, funding and delivery strategy for the Sydney Metro City & Southwest project (the Project).

The Sydney Metro City & Southwest Business Case summary:

identifies the problems the Project will address

demonstrates the feasibility of its scope

establishes the benefits to be realised

identifies the cost and justifies the investment of funds for development

outlines the project implementation plan.

The Final Business Case was based on the analysis completed during the Project development phase in 2015. Further refinements will take place as the Project moves into the procurement phase. Any changes to the Project will seek to improve value for money, and reduce risk and community impacts.

This Business Case summary reflects the structure of the full Final Business Case. Some details have been amended and updated as the Project has been further refined.

Sydney Metro City & Southwest has a cost range of $11.5 billion to $12.5 billion.

A benefit cost ratio (BCR) is the ratio of a project's benefits relative to its costs.

Given the Project's cost range of $11.5 billion to $12.5 billion, this represents an equivalent BCR range of about 1.47 to about 1.6. The BCR for the project is 1.53 at the midpoint of this cost range.

To put it more simply, the Project will deliver $1.53 worth of benefits for each $1 invested

All variations to date have <u>increased</u> costs (due to uncertainties in planning stages). The main strategic factor to be assessed is non-spreading services to (say) 80% of 700,000 new dwellings over 15 years, the selected option not increasing scope/capacity by more that about 1% of that load. Thus the strategic challenge to be assessed is

- Continuation or cancellation, or
- Augmentation as in Eddington Bedrock and others' ideas.

Note blacking-out ratio results on page 26 v revelation of details on pages 7/26 = suggestion of a failed conspiracy. We saw this in LG "reform", it is a bad look.

The cost range of $11.5 billion to $12.5 billion is counter-intuitive. This is too low if it includes Metro City & Southwest (page 8)* or too high if just Sydenham to Bankstown. The benefit/cost ratio of 1.53 is questioned due to the practical understanding of an expert economist and the previous Jim Steer results of <0.5. Road user benefits at 13% of total benefits is "crazy". Low benefits result from Waterloo (p 73) decries spending on a new station where there are two stations already and iA proposes a tram route! There are too many credibility gaps.

Note: equity is stated to be an important consideration (page 36 including "There is a real challenge to provide additional transit amenity to the north west and south west of Sydney"); but there is no equity mapping of options and equity will not be improved by replacing Bradfield services at great cost with metros on the same alignment, with the intrinsically inequitable Betterment Capture hitting spatial and intergenerational dimensions.

Use of Computable General Equilibrium methodologies is apparent but the claimed results (page 58) are out of alignment with those of previous studies, including as praised then by Ms Berejiklian.

It seems that insufficient attention has been given to transfer congestion at the new "dual gauge problem" points.

There is no specific indication of how the Business Case analysts treated the following (desirable: individual dimensions calculated for each Option (NB pages 43-50 is not a satisfactory discussion of options)):

- comparative valuations in BCA and related formats and other feasibility/justification indicators of Options, using Treasury discount and other sensitivity testing requirements
  - Government's preferred
  - status quo
  - option 1: Christie/iNSW - Greiner
  - option 2: East Hills alignment including KSA
  - option 3: orbital in lieu of 2nd Crossing with each of above
  - option 4: use of Swiftas or similar on existing tracks except for new orbital

*Since reported to be $20 billion and with real estate speculation revealed but not quantified

Specifics of

- value of travel time savings being 14% of claimed benefits (noting reservations expressed in Peter Self's "Nonsense on Stilts" and BTE/BTCE reports etc) – pp 64/70 are inadequate

- effects of high standing ratios over medium-to long commute distances and of station herding mechanisms – after all, the Bankstown station zones are being reconstructed at great expense for such herding without community engagement about loss of the "Australian Way" at suburban locations)
- value of real estate upgradings to private owners – p 73 shows this as productivity but this is very contentious (see AECR critique)
- value of real estate upgradings to UGNSW and other State agencies
- value of consequential financial, operational and strategic damage to the Bradfield heavy rail system
- congestion effects of axial densification and deprivation of "terrace" zones (slight mention on 36 is a waste of space)
- affordability effects of densification v terraces/medium density
- "heat sink" effects as per UNSW research
- damage to businesses, schools and hospitals, and other important facilities from diversion of services away and/or deprivation of new services available to competitors
- use of train services v seats/passengers due to metros' publicly questioned capacity

It is here speculated that the farebox revenue is irrelevant to the project and real estate speculation by metro operators and others is the key driver – not revealed in meaningful terms, with the contingent subsidy (closure of Bradfield lines and investment in underground Melbourne-type trains with no increase capacity) to overseas investors.

Therefore the Business Case is entirely subverted by internal project assessments that are "commercial in confidence".

TRAMS

The Summary Business Case for the CBD and Southeast light rail was released by then Minister Berejiklian in November 2013. It claimed a BCR of 2.5 with $707 m in operating savings, over $2 billion in benefits to users, $264 m benefits to road users, and $333 million in benefits for pedestrians.

All costs amounted to $1.6 billion which has since blown out to over $2 billion, with the Auditor-General finding that due to "omissions and mispricing" and the Grattan Institute reporting that "Mike Baird can make real reforms ..." (SMH 9 Dec '16) – NB iA has described a BCR of 1.3 as "low" in its documentation:

> The first lesson: Only promise infrastructure after you've done your due diligence
>
> Kristina Keneally was the first politician to commit to the Sydney Light Rail project, in 2010, at a cost of $500 million – before the route had been determined. In 2012, Barry O'Farrell revised the project's cost up to $1.6 billion – without a properly assessed business case. Given how little homework had been done on the project, it's unsurprising that the cost shot up to $2.1 billion by the time Mike Baird signed contracts, in late 2014.
>
> The Sydney Light Rail is a textbook case of premature announcement. Grattan Institute analysis has found that 75 per cent of the value of cost blowouts come from projects where a politician made the first cost promise too early – before a formal budget commitment and generally before a proper business case. This is because these prematurely announced projects need larger cost upgrades not just early on, but throughout their lives.
>
> The current guess-and-check approach to planning multi-billion dollar investments is negligent. If Premier Baird wants to deliver projects "on time and on budget", the first lesson to take from the Sydney Light Rail would be to improve the governance of project announcements. Proper business cases should be reviewed by Infrastructure NSW or Infrastructure Australia and tabled in Parliament before public funds are committed.
>
> The second lesson: Learn from history

The fate of the Sydney Light Rail project demonstrates that that we need to get scientific about estimating projects' cost risks. Cost estimates for Australian transport infrastructure projects are systematically optimistic – over the past 15 years, these projects have cost 24 per cent more than first estimated.

The saga of the Sydney Light Rail is a perfect illustration of this problem. For a large project that is announced prematurely, expect the cost to be substantially higher – 38 per cent on average – by the time a contract is signed. Nor are the overruns over and done with at that point. Projects with troubled beginnings like the Sydney Light Rail typically incur an additional 10 per cent cost overrun during the construction period. If this were to occur on the Sydney Light Rail, the project's benefit cost ratio would fall further, to below 1.3.

Of course, insiders may explain the cost overruns on infrastructure projects by pointing to scope changes. And it's true that scope changes do explain a modest share of cost overruns – 9 per cent, in this latest cost hike. But even where the scope changes are so substantial as to alter the whole character of a project, cost changes matter because it's unlikely that the project will be cancelled even if it is no longer worth building.

If Premier Baird wants his legacy projects to finish on budget, he should demand much more than closer monitoring of costs as projects are built. The actions that would really make a difference would be to curb his fellow politicians from promising to spend public money before a business case and project evaluation have been tabled in the Parliament, and to publish the post-completion report on projects afterwards. Then perhaps Mike Baird could be the Australian premier that finally nails "on time and on budget".

Grattan's summary understates the level of community disturbance this project caused unnecessarily. The loss of trees has been reported extensively. Less well known are consequential changes to bus service patterns that inconvenience elderly residents in the main Randwick areas. They will be collated and described later.

Two apocryphal quotes re trams come from eminent persons. The meaning and consequences do not need to be explained:

An illustrative example of where things went wrong at all levels of government appeared in the *Daily Telegraph* on 1 July 2011 together with an editorial "Just do it Barry"- on the project that tripled its cost due to poor pre-planning (as noted by iA re WestConnex's Business Case):

THE man who invented Infrastructure NSW yesterday told Barry O'Farrell to just get on with building light rail from the CBD to Randwick after the Premier squibbed on a decision. Mr O'Farrell instead ordered a feasibility study into the $1 billion project.
Max Moore-Wilton, who came up with the idea of Infrastructure NSW and is soon to be appointed to its board, said the government was dragging its feet on what could be the iconic project of Mr O'Farrell's first term. The government has been accused of dithering on big issues, avoiding decisions and instead setting up a Kevin Rudd-like number of reviews since the March 26 election. The latest study will look into a light rail servicing the Sydney Cricket Ground, Sydney Football Stadium and Randwick Racecourse.
"It's a project where people would see an improvement quickly and see the O'Farrell government was focused. I don't think we should do massive studies and all the rest," Mr Moore-Wilton said. Mr Moore-Wilton said the city's existing state of "gridlock" was untenable - and light rail was cheaper than heavy rail projects and could be built relatively quickly. "If we're going to extend it through to Randwick - and I think we need that to be a great sporting city - it makes sense to take it into the city as well," he said.

Finally, the newest and most expensive tram project illicitly replaces the Parramatta to Epping rail link which has vast operational potential across a range of Sydney systems. It came out of ParraCity's extensive investigation of potential tram systems and was founded on anxiety to sterile the rail corridor. Then Roads Minister Duncan Gay was reported in the SMH on 27 Nov '15 as saying "We will be having light rail, that will be coming through this sector". He later backed off, saying no decision had been made – but it had been.

The Western Sydney Leadership Dialogue (WSLD) issued a blog, published in the AFR, called "An

Revolution By Any Name" (22 Oct 2015). It was a mixture of the relevant and the questionable. By referencing it, we can cover the background quickly:

WSL Dialogue:	**Comment:**
In the 1980's, then-Treasurer Paul Keating famously said that "every mug in the pub is talking about micro economic reform" while few really knew what it meant. A modern day equivalent of a little known economic concept which everyone seems to be talking about is "value-capture", where the private sector contributes to the costs of public infrastructure. It was kicked along this week when the Federal Government announced that its ambitious Victorian major projects agenda would feature this unique funding mechanism.	*Value capture generally refers to short-term "economic rent" (cf Murray national inquiry) rather than "betterment" over the life of a project (up to 20 and more years). There's* ***nothing unique*** *about current proposals. (The iNSW quote above referred to special levies, presumably of the §94 style, below.) It is not little known at all.* *The "private sector" is a misnomer. Different taxes have different incidence, most of them on the community. Some motives are driven by real estate profit expectations and by cost-shifting.*
Value capture goes by different names in different jurisdictions. American State governments are pioneers and use the term 'tax increment financing' while their municipal counterparts prefer 'impact fees'. (The Consult Australia report referred to later made the statement that "Value capture funding methods arose in California in the 1960s" – almost 300 years behind London. This is presumably the incremental approach.)	*Most governments include such mechanisms at some point in their lives: few achieve them. They have been defeated twice in Sydney's twentieth century, both by property-orientated conservative governments.* ***How such national and state governments now think they will overcome past travails is a mystery.***
Former NSW Treasurer, Andrew Constance … broke down his former agency's 50 year obsession against 'hypothecation', allowing State developer levies to be quarantined for use in specific projects, and not dumped into Treasury's consolidated revenue. He is now the State's Transport Minister and is promoting the scheme to fund his own projects, but the politically-savvy Constance prefers the softer descriptive term of 'value-sharing'. Meanwhile, Labor's Federal infrastructure spokesman, and urban transport advocate, Anthony Albanese is a fan of 'value uplift'.	*Hypothecation has long applied in the transport and roads sectors of NSW and was the basis of the failed "urban budget" thinking at different times.* *Pioneers were in England from 1427 and the private docklands in London in the C17 . "Incremental" means a different thing to most concepts of "value capture". US systems are technically precise (accounting manuals etc) as they form the basis of municipal bond issues. They are extremely complex. ("Sharing" is an invalid term under most models. "Rapacious communities" is a weird term to use.)*
Of course, while Federal and State Governments in Australia are recent converts to this partnership approach, local councils have been doing it for years under the banner of 'Section 94 contributions'. Other community projects have utilised 'voluntary planning agreements' to fund development. Essentially, developers (and their eventual customers) share the benefit of increased land values and densities that flow from the provision of rail lines past their planned apartment block…. Capturing and taxing the increased value of private land that follows the provision of new infrastructure is the best chance that cash strapped governments and rapacious communities have in financing the backlog of infrastructure this country demands.	*§94 levies represented partial cost-recovery for local roads and footpaths etc and became politically invalid due to the escalating rate, the unfairness in spatial applications, the effect on land and house prices, and the levy-type (not incremental) of the impost. They were levies for construction, not betterment taxes. Developer lobbies were the harshest critics.* ***Why this would be re-imposed is a mystery.***

The WSLD strongly supported the Parramatta to Olympic Park tram. It said that "*This potential windfall to local developers was quantified in a recent Deloitte report for the WestLine Partnership landowner consortium. It calculated that local rezonings and developer levies could generate $3 billion to help defray the cost of rail lines and remediation of the old industrial sites.*" The report gave optimistic levels of redevelopment of the corridor, no analysis of options, no indication of application of accepted assessment methodologies, and its estimate of voluntary contributions ranged from $1.6 to $2.9 billion (the 81% variation suggesting guesstimates). The rest of the "defray" was presumably private, which could be fair unless the landowners seek site bonuses for the same (as they often do). There is an impressive list of endorsees including the NRMA and Business Chamber.

The study reported the following (which are largely generalisations):

- Drawing on the work of Duranton and Turner (2012), Deloitte Access Economics estimated that for rail, a 10% increase in Sydney's rail infrastructure was assumed to increase population by 0.04% per year, which has a subsequent positive impact on economic growth. (NOTE: the cost of a 10% increase would be astronomical.)

- In America, price premiums of between 6.4% and 45% have been observed for housing that was situated within 400 m to 800 m radius of rail transit stations, compared to equivalent housing outside of these areas. A premium of between 8% and 40% was also observed for commercial properties (NOTE: not light rail)
- the construction of a tram line in Portland in 1997 was found to increase the density of developments from less than half the allowable density prior to the construction of the tram line to 60–90% of allowable density post construction. Over $3.5 billion in private capital has been invested within two blocks of the tram line, including more than 10,000 new apartments and 5 million square feet of commercial space (NOTE: generalised, needs more analysis)
- The Flemington Markets could potentially relocate to Badgery's Creek Airport … boosting employment in outer Western Sydney and improving access for Markets vendors, this would reduce vehicle congestion on Parramatta Road and free up the 43 hectare site for redevelopment - 6000 apartments for over 13,000 residents.
- By connecting Parramatta to Sydney Olympic Park over 300 hectares of land will be rezoned and remediated developing new communities connected to major employment centres and recreation centres. By delivering this missing link, a network is created connecting major hospitals and universities to one another. A light rail solution would connect isolated communities in the precinct and free up local roads currently burdened by heavy traffic as the only feasible connection to the precinct is by road.
- The light rail could have the capacity to move 5000 passengers per hour in both directions through The Corridor. This is equivalent to 40 light rail services in place of 200 buses
- A 7 km link between Camellia and Olympic Park is estimated to cost between $210m – $420m in capital costs. (NOTE: the rest of the report talks about a 15 km route.)
- Building a 15 km light rail through The Corridor, with approximately 16 stops will create an enabler for future dwelling, population and job growth in the precinct.
- In the absence of detailed capital costs, it is estimated a 15 km link will range between $30m to $60m per kilometre based on historical figures. Historically costs have usually blown out due to relocating services and tunnelling costs. The higher estimated cost takes into account this uncertainty. It will provide 1800 to 4200 jobs during construction
- What is proposed to fund the Olympic Corridor Light Rail is a shared benefit mechanism that leverages off existing planning legislation. The contribution is voluntary and paid by land owners who elect to take up the density incentives offered by Government. The rate is based on the uplifted areas by applying an agreed per square meter funding rate. The rate varies based on the complexity of the area (i.e. service relocation or environmental remediation) and the level of infrastructure and services already established in the area. No contribution is sought from the owners of existing developments unless they have the opportunity to add to their buildings. These people are considered to have made adequate contribution by providing the base demand driving this project.
- Some areas within The Corridor will require remediation before any reuse will be possible. This approach could be applied with a higher density offered and rate charged to raise the funds to undertake these works. Alternatively this approach could be coupled with some form of remediation levy or charge.
- The model has the flexibility to be applied at a targeted or general level ways. The first method applies the rates to a negotiated radius (ranging from 150 to 400 m) around the stations along the route between Camellia and Sydney Olympic Park. Using this approach it is estimated that between $545 m to $1,090 m in voluntary contribution funding could be raised. Alternatively the approach can be applied to the whole Olympic Corridor. This approach presents an opportunity to unlock the full land reuse potential of The Corridor. It is estimated that if all density uplift opportunities were exercised voluntary contribution funding of between $1.6 billion to $2.9 billion could be generated.
- 231,551 total jobs in The Corridor by 2036, representing 108,000 additional jobs or 12% of total metropolitan jobs growth. Relocation of Sydney Markets could allow 6,000 apartments for over 13,000 residents. Potential to accommodate more people and jobs than Green Square, Barangaroo, Central to Eveleigh and Bays Precinct combined.

It is important to note that BRT was not assessed as an option to trams (as would be required by iAust and Treasury Guidelines); and for a tax yield of say $1 billion to cover capital costs (and lifecycle costs must be included), assuming a 25% value uplift and 15% capture, the value of land covered would need to be about $55,000,000,000. Is that realistic? The Voluntary Contribution approach requires a small number of investors in a discrete area. The proper model combines fares, Government contribution and landowners' contribution as in CrossRail.

Conclusion

iA's Chairman, iNSW's too, have called for faster production of high quality business cases. Their guidelines are clear. The problem is, those guidelines are observed by exception – redactions, gaps, failure to consider options and proper sensitivities, and ideological modal biases contrary to the PM's condemnation of "ideology and stupidity", are the *mode de jour*.

They destroy community confidence and undermine proper pipeline planning.

No forward progress has been made since 1995 and especially since 2011.