Response to Inquiry | 06 December 2019

Options for financing Faster Rail

Response to inquiry

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Introduction

Arup is pleased to provide this submission in response to the Standing Committee for Transport Infrastructure and Cities' inquiry into options for financing Faster Rail. We agree with the Government's response to the Inquiry into Regional Development and Decentralisation that our smaller cities and regions need support and to take pressure off our three big cities. A strategic approach needs to be taken that support smaller cities and towns to reach their potential. This will require a range of policies, initiatives, and supporting infrastructure including Faster Rail. Providing fast and reliable rail connections between our smaller cities and to our three largest cities is required to stimulate development in our regions. However, it is important that the Government takes an integrated approach to planning, designing and delivering Faster Rail recognising it is more than a rail project. It is place making project that will shape the future of our country. In this context funding and finance options for Faster Rail must be considered as part of the vision and strategy for Australia's future and not in isolation.

Arup has for many years promoted the virtues of land use and transport integration and an awareness of the transformation in places and communities that can be achieved through strategic transport planning and investment. Our commitment to such integration was indeed a founding principle of the firm and one that we have always sought to embody in our approach.

Arup can provide insight from the best examples of city and regional planning worldwide together with a comprehensive understanding of the role transport plays in shaping our cities and regions. Our approach goes further and aims to deliver broader outcomes which support sustainable communities, improve health and encourage economic regeneration. Understanding how innovative funding and finance mechanisms can contribute to better cities is again the key theme of our submission.

This submission builds on our previous submission on the role of transport connectivity in stimulating development and economic activity. It provides a summary of some key issues associated with financing Faster Rail and highlights some examples for the Government to consider that will help shape Australia's future. We would appreciate the opportunity to present our considerable knowledge and views in more detail to further inform the committee.

About Arup

Arup is an independent, global firm, owned in trust on behalf of our staff. With no external shareholders or financiers to satisfy, we can approach our work with a unique flexibility and a collective dynamism. Our independence places us in an ideal position to collaborate and advise Government. Arup is truly a multidisciplinary practice, with services ranging from consultancy advice in a range of market sectors including urban planning, business case development and transaction advice through traditional design and construction areas. Thus we provide a unique combination of strategic thinking that contributes to shaping our cities whilst understanding the issues, practicalities and possibilities of implementation.

Arup is recognised for their significant contribution to major projects worldwide, ranging from the Sydney Opera House in Australia and Channel Tunnel Rail Link in the UK.

Research and innovation

Research and innovation is fundamental to Arup's pursuit of technical excellence and integral to the way it does business. Arup undertakes diverse research projects globally. Examples of our research are available on our website including our thought piece Future of Rail 2050, which can be viewed and downloaded here, and our paper on Making the Total Value Case for investment in infrastructure in the built environment, which can be accessed here.

There are a range of funding and financing options available

Arup's understanding that major rail projects can be profoundly city and region-shaping in nature led to its deep involvement in one of the most transformative of such initiatives, the Channel Tunnel Rail Link via Stratford into Kings Cross. Our contribution both to the advocacy for CTRL to be built on an East London alignment and to its subsequent construction was significant. Arup's leadership in the mid to late 90s played a key role – using initially the company's own resources – in proposing an alignment for CTRL which replaced the original plan for a terminus at Waterloo with one at Kings Cross, with the line coming into London from the East, north of the Thames. It did so because it recognised the city-shaping outcomes and land-use transformation of the new alignment – the benefits for London, for Londoners but also the wider Southeast and indeed the nation – were far superior to the initially proposed one.

Without CTRL on its East London alignment the transformation of Stratford would not have happened – and without the emergence of Stratford there would have been no 2012 Olympics with its significant economic and social legacy for communities across 6 councils in the region impacted. Plans for a new town of over 100,000 people are now being implemented as a Transit Oriented Development around the Ebbsfleet CTRL station – an area now within 18 minutes travel time of Kings Cross in London compared with the 60 minute journey by road. Kings Cross itself has gone from a dilapidated red light district to an innovation district with commercial rents now higher than those of the City's financial district since the CTRL opened. And the value created has not been confined to just the curtilage of Kings Cross/St Pancras as the evidence shows a greater uplift in retail and housing values and quality up to 2 kilometres away.

The ultimate 'uplift' is of course that Google has decided to locate its campus in Kings Cross because of the combination of connectivity and amenity now found in the area, with profound economic consequences to follow, as yet, uncharted but certainly that this will be a technology rich, high value job-dense neighbourhood. This also reminds us that heavy rail connectivity and stations tend to support the agglomeration of economic activity – very important in the knowledge-job era in which such jobs – and tertiary education nodes - are clustering in well connected, amenity rich, mixed use urban centres not dispersed across ex-urban landscapes in single use locations.

The funding cocktail: the move towards forms of value capture

Although there were innovative elements to CTRL and the Kings Cross development in terms of public-private governance, risk-and profit- sharing and bond finance, it would be the Cross Rail project which saw the first moves in the UK towards value capture mechanisms. However, value capture mechanisms remained a work in progress, reaching a peak of innovation with the subsequent extension of the Northern Line to Battersea Power Station which has been enabled and substantially paid for by residential development and value uplift/sharing. Arup was deeply involved in design and construction of Crossrail and our Global Planning leadership team helped design the value capture approach finally used.

Cross Rail – now the Elizabeth Line – was first mooted in the late 80s as a way of extending rail capacity from, west to east, essentially between London's business districts and Heathrow. Having failed for lack of government funding and private finance in the mid 90s it was resurrected and extended to incorporate East London in the early 2000's by London First and London's business community in partnership with the East London councils. They saw the opportunity to open up under-served development areas on both sides of the Thames east of Tower bridge via revamped Cross Rail. The key to success was London First, Canary Wharf, London Councils and the new London Mayor,

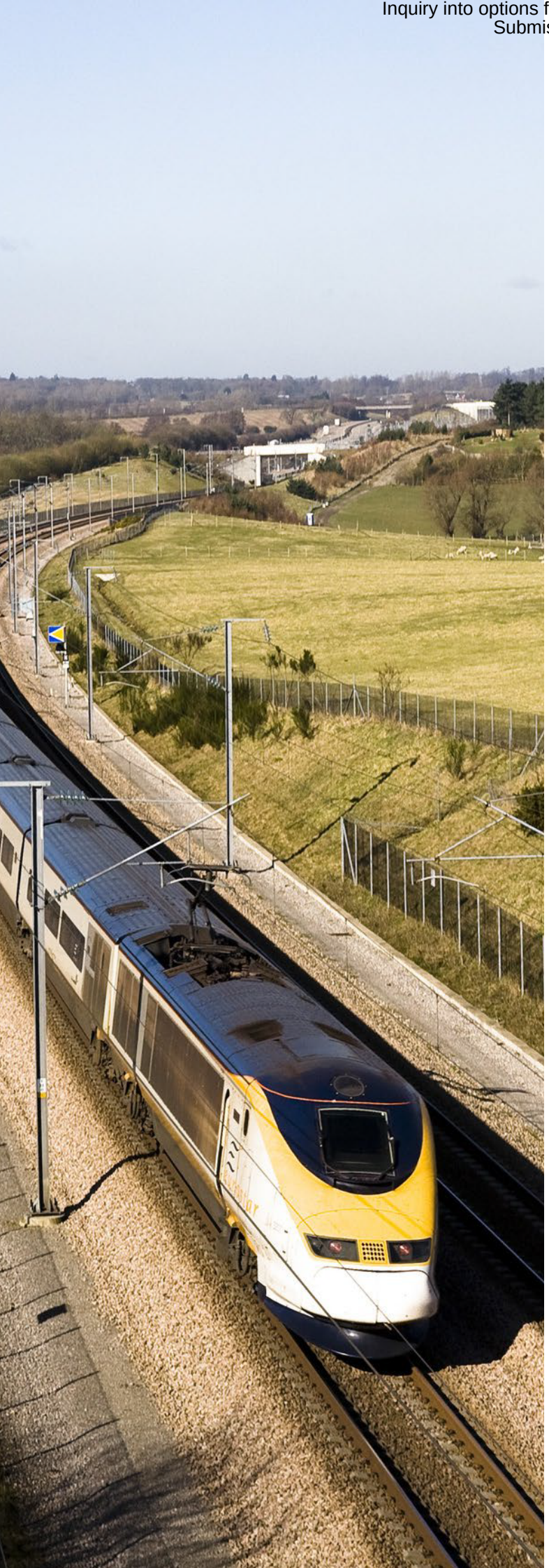
co-designing and brokering an agreement that there would be two new forms of value capture mechanism enabling the public sector to share in the benefits created by publicly enabled infrastructure. Firstly businesses benefiting from the Cross Rail alignment agreed to pay higher business rates and secondly all developments across London above a certain scale would pay a development levy contribution to Cross Rail. The extra resource created by these forms of value capture while paying only a portion of the total capital cost and no contribution to operating costs, were sufficient to encourage the formerly sceptical UK Treasury – which had initially rejected Cross Rail at the appraisal stage, to support the project.

Case Study: HS1 UK

This 108 kilometre high speed rail line and 4 stations were delivered through a 38-year concession agreement (2010-2047). The Special Purpose Company (SPC) is owned by Borealis Infrastructure and the Ontario Teachers' Pension Plan. Majority of revenues through track and station access charges levied on a Train Operating Company (TOCs). Government guarantee in place to underpin domestic TOC demand.

A SPC took over the asset, upgrading it and operating it, over the concession term, in exchange for payments over the lifetime of the concession.

The SPC levies an investment recovery charge and operating charge on Network Rail / the TOC, subject to the system being fully operational, enabling the capital costs to be recovered over time. The level of charges is agreed between Network Rail and the SPC as part of the bidding process.

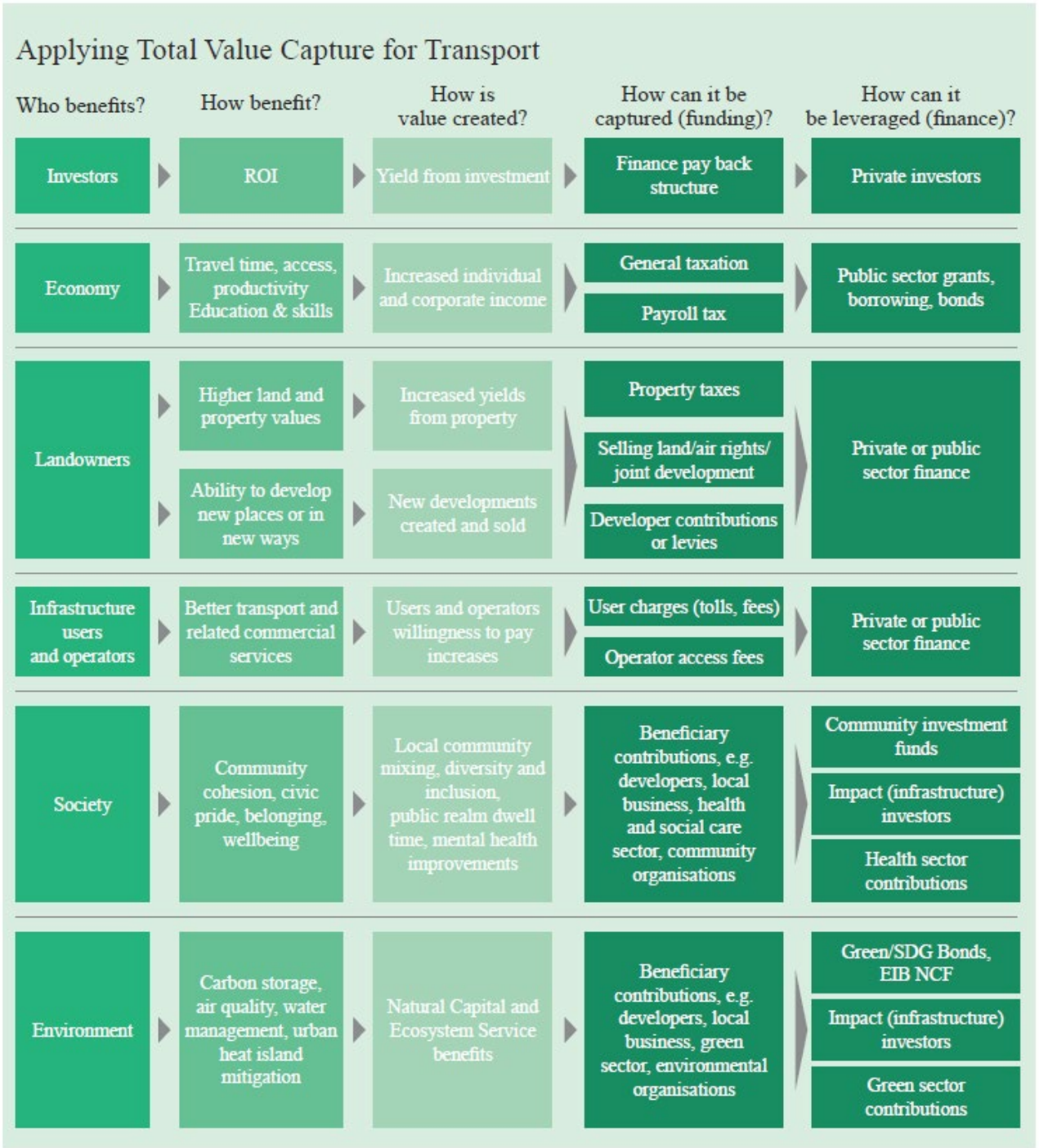


Building on the mechanisms: Battersea Power Station

The principle that publicly enabled infrastructure creates value that is legitimately shared between the community, business and government, was a basis of the discussions with the developer of the troubled Battersea Power Station development. Arup's current global transport leader led the London Mayoral team and TfL on discussions with the developers of the Power Station development. On this occasion, the contribution from development paid for the total capital cost of the extension of the Northern Line to Battersea. Also, whereas Crossrail had accessed increased business rates but no share from uplift in residential densities and values, residential uplift was the major source of development contribution in the Battersea model. The timing of the value sharing agreement was unfortunate in coming at the start of the Global Financial Crisis which saw a collapse in house-prices and indeed residential building. This meant that income to the developer proved less reliable and less substantial than anticipated – so slowing down and reducing contributions to the cost of the Northern Line. However, the construction got back on-track as did contributions and the model is deemed to be a win-win-win for government, developers and the community which now has both much-needed homes and a significant new rail line.

Varieties of value capture / beneficiaries pay mechanisms

There are of course a long list of potential value capture or innovative funding mechanisms. Our experience from all these examples is that value capture generally contributes a relatively small proportion of the total capital cost of a rail project in the case of Cross Rail this was about 14% of the cost of the project. Funding the ongoing operating cost of rail is also a key consideration given the large costs often borne by the public sector through subsidies.


Applying Total Value Capture for Transport
Who benefits?
How benefit?
How is value created?
How can it be captured (funding)?
How can it be leveraged (finance)?
Investors
ROI
Yield from investment
Finance pay back structure
Private investors
Economy
Travel time, access, productivity Education & skills
Increased individual and corporate income
General taxation
Payroll tax
Public sector grants, borrowing, bonds
Landowners
Higher land and property values
Increased yields from property
Ability to develop new places or in new ways
New developments created and sold
Property taxes
Selling land/air rights/ joint development
Developer contributions or levies
Private or public sector finance
Infrastructure users and operators
Better transport and related commercial services
Users and operators willingness to pay increases
User charges (tolls, fees)
Operator access fees
Private or public sector finance
Society
Community cohesion, civic pride, belonging, wellbeing
Local community mixing, diversity and inclusion, public realm dwell time, mental health improvements
Beneficiary contributions, e.g. developers, local business, health and social care sector, community organisations
Community investment funds
Impact (infrastructure) investors
Health sector contributions
Environment
Carbon storage, air quality, water management, urban heat island mitigation
Natural Capital and Ecosystem Service benefits
Beneficiary contributions, e.g. developers, local business, green sector, environmental organisations
Green/SDG Bonds, EIB NCF
Impact (infrastructure) investors
Green sector contributions

Making the Total Value Case for Investment in Infrastructure

The ‘value’ of infrastructure can be defined as the perception of worth, or benefit, that accrues to stakeholders, communities and other beneficiaries over time. Conventional methodologies for identifying and quantifying this value as a part of the cost-benefit decision-making process typically take defined categories of financial and economic benefit into account.

Public sector business case and appraisal frameworks provide for the capture of wider benefits. We also believe the range of benefits identified could often be extended. However, when identified, these impacts are rarely afforded the same weighting as more commercially driven impacts. The unidentified and uncaptured elements of value often relate to natural and societal factors which are considered to be more difficult to capture and monetise, yet are critical to making informed decisions. To realise the full value of investment in infrastructure, we need to make this wider value visible - include it across public and private sector decision making criteria.

We are supportive of the growing movement towards taking a more holistic account of value and Arup are extending the application of this thinking to capture wider social value (i.e. value to society (the benefits accruing to stakeholders, local communities and end users) in the infrastructure and built environment sector. An understanding of total value across the life cycle of Faster Rail, and its contribution to needs within the communities it serves, will allow the most valuable, socially, and environmentally, viable decisions to be made.

Total Value can capture, measure, and communicate wider value opportunities, harness new value streams, and open up new delivery models for infrastructure through the encouragement of collaboration and integrated approaches.

Examples of early adopters

Transport: The Rail Safety and Standard Board recently commissioned a piece of work to develop a common framework for understanding and measuring social value impacts across Great Britain’s rail industry organisations, projects and programmes. It will allow a variety of rail sector stakeholders to understand and capture the wider benefits of their projects and schemes. However, it excludes environmental impacts which means that stakeholders cannot include these kind of benefits in their decision making.

Financing Models

We have discussed innovative funding methods that could be considered in Australia. There are a range of PPP financing models that could be applied under various funding models. These modes could be broadly grouped into those outlined below.

"Growth Zone"

New designated zone encompassing the development area, which could enable the collection of various forms of tax revenue associated with the uplifted value.

Developer Finance

Directly financed and delivered through a developer using corporate finance. Transport asset element is handed back to public sector at end to maintain and keep in good repair.

Corporate Finance

Corporate financing by a major contractor or contractor JV, potentially leveraging their own balance sheet strength.

Project Finance

A special purpose company takes over the asset, upgrading it and operating it, over the concession term, in exchange for payments over the lifetime of the concession.

RAB Finance

Existing transport asset is carved out from the public agency, and long-leased to private partner through a special purpose company to operate and upgrade it as a regulated asset, with a guaranteed RAB return as part of revenue.

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Achieving our vision

Supporting our future population plan

“Australia’s major cities of Sydney, Melbourne and Brisbane have grown significantly in recent years.

This growth is expected to continue with Sydney and Melbourne forecast to reach around 8 million by 2060 with Brisbane around 5 million. This level of growth, if not planned for adequately, will exacerbate existing concerns regarding housing affordability, congestion and sustainability and ultimately impact upon our quality of life. These factors and others have the potential to reduce the productivity of our most important assets - our cities.

Well-connected cities and regions can take the pressure off our larger cities and mean that opportunities can be distributed across a wider population. Faster Rail can bring distant communities within close proximity of each other and help to address these issues. An integrated approach to city and regional planning, including a focus on transport infrastructure that supports strong connections, holds the key to ensuring our ongoing prosperity.

Regions and smaller cities can play a pivotal role in the future of Australia’s economic development. A better connected national transport system, including a significant role for Faster Rail, is crucial to realising this potential.

Catalysing change in our smaller cities and regions

Supporting our regional cities and towns requires a co-ordinated approach that goes beyond Faster Rail. A range of policy measures are required to support investment in the regions encouraging jobs, services and facilities. Evidence from other locations shows that Fast Rail has been successful in catalysing growth in smaller cities and towns when combined with policy initiatives.

Ultimately cities and regions will change as a result of Fast Railer and the government, communities and businesses need to develop a shared vision for these towns and communities. The improved connectivity between towns, regions and centres will encourage economic and social benefits.

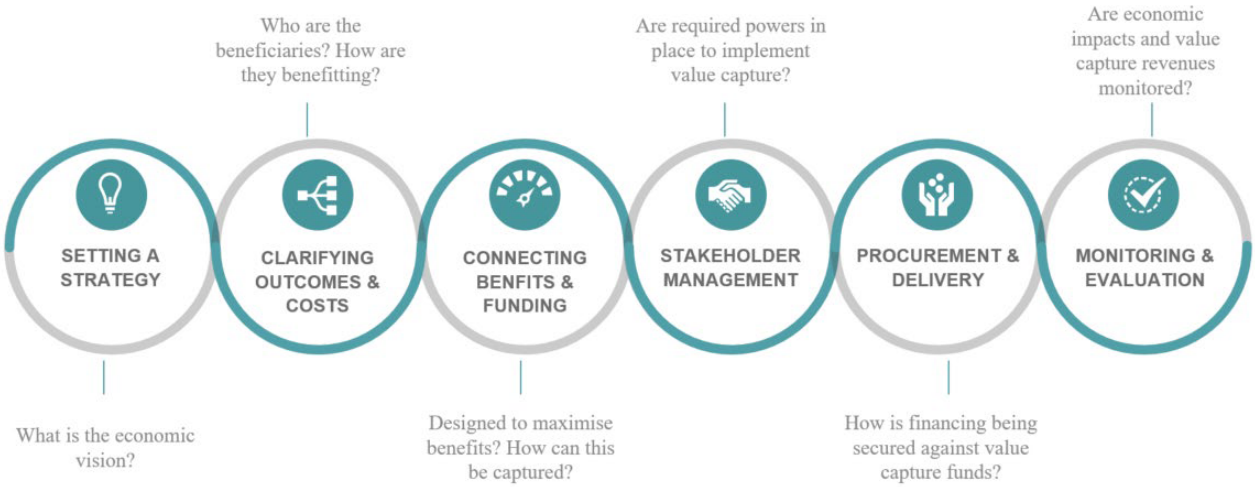
There are a range of factors that impact the potential for growth in regional areas, including the availability of natural resources such as water.

There is a risk that without economic development and supporting urban policy, Faster Rail will engender long distance commuting creating dormitory towns for our big cities. It is therefore important that cities and towns serviced by Faster Railer build on their existing assets to become economically sustainable regional cities, creating more diverse economies and urban centres that provide a range of services and facilities for their region.

Requires a system wide approach

We need to have a comprehensive vision and plan for Australia and its regions and develop an integrated transport network to respond to that. The “Hub and Spoke” model outlined in Future Transport 2056 for Regional NSW is an example of a plan that recognises this issue. There are choices to be made in developing a transport network that connects regional cities and towns to our major cities. Important considerations include understanding current customer requirements, the potential of each city or town to develop and grow and the competitiveness of rail with other modes. Not all towns need to be, or indeed can be, serviced by Faster Rail. However, they can be connected to Faster Rail by other transport networks.

Our smaller cities and regional centres such as Canberra, Newcastle Wollongong, Geelong, Ballarat, Bendigo, Gold Coast, Sunshine Coast and other centres could all realise benefits of Faster Rail with good planning and design. To fully realise the benefits the approach needs to consider the strategy, benefits, funding and stakeholders together.



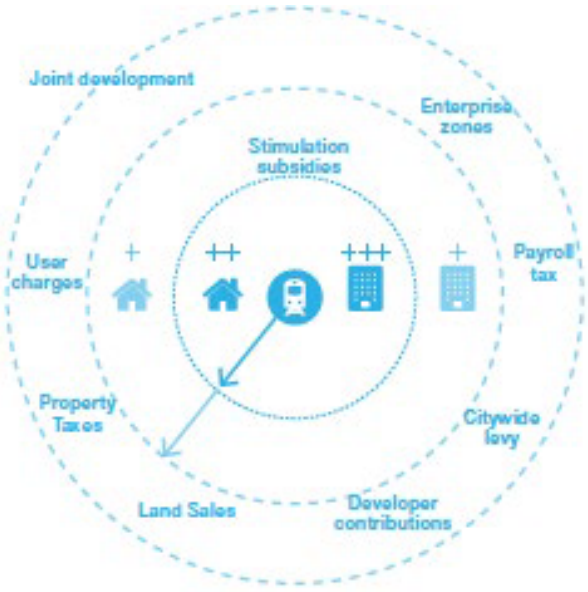
Developing an efficient solution

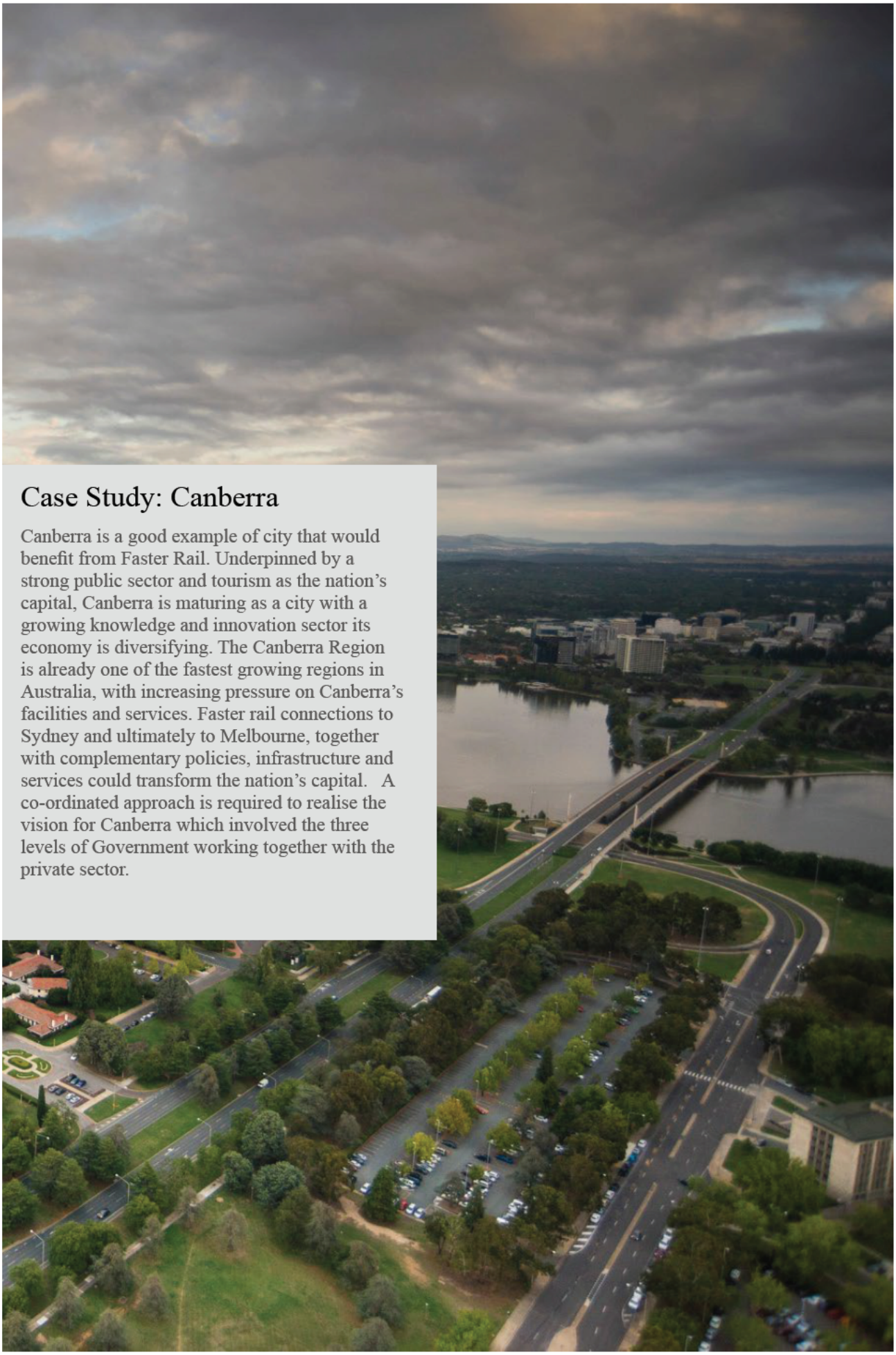
There are a number of trade off's that need to be considered when designing Faster Rail in the context of an overall strategy and vision for Faster Rail. From this perspective door to door journey time is a more critical requirement to meet rather than focussing on maximising the speed at which services can run. Critical components other than speed could guide the design, such as the position of stations and proximity of connections; a service driven by stopping patterns, corridor limitations first, rather than technology (speed of rolling stock, signalling systems etc.).

Faster Rail corridors tend to focus on upgrading existing rail lines through augmentation of the assets. An important consideration when planning this is the standards and specifications adopted. Consideration needs to be given to aspects such as the traction systems (maintaining a diesel fleet, or electrifying), signalling systems (conventional, or high capacity such as ETCS) and rolling stock (whether an upgrade is warranted to achieve higher speeds, or the existing fleet is adequate to meet the speed, and capacity. Given the likely increase in patronage and disruption of works on existing corridors it is important to consider future proofing when specifying technologies, especially if there are longer term aspirations for the corridor to be capable of supporting high-speed services (in excess of 250kph).

Where stations should be located to gain most benefit from Faster Rail?

The international evidence suggests that cities have generally benefited most from locating regional rail stations in areas proximate to central business district. Developing new transport hubs can help revitalise inner urban areas that have a legacy of strong public transport connections to the metropolitan area. The combination of regional and urban connectivity can result in significant value uplift around the station. There are options in the medium to long term on where regional rail will terminate in our larger cities – particularly in Sydney. These decisions need to be carefully considered in terms of social and economic objectives and will have implications on funding streams.





Case Study: Canberra

Canberra is a good example of city that would benefit from Faster Rail. Underpinned by a strong public sector and tourism as the nation's capital, Canberra is maturing as a city with a growing knowledge and innovation sector its economy is diversifying. The Canberra Region is already one of the fastest growing regions in Australia, with increasing pressure on Canberra's facilities and services. Faster rail connections to Sydney and ultimately to Melbourne, together with complementary policies, infrastructure and services could transform the nation's capital. A co-ordinated approach is required to realise the vision for Canberra which involved the three levels of Government working together with the private sector.

A whole of Government approach is required

A co-ordinated approach is required

Brisbane, Sydney, Melbourne, Australia's three largest East Coast cities are now reaching crucial stages in their development. The 20th Century post war suburban low-density model of urban fringe development based on cheap available land and car dependency is reaching a critical point. The costs of this model are being reconsidered in light of the financial, social and environment impacts on the community. Congestion, lack of affordability, social isolation and dysfunction are all symptoms threatening the liveability and the dynamism that draws the talent and supports economic growth to these major cities. This model cannot continue infinitum at current levels.

Mass transport is crucial to providing skilled workforce to the CBD locations to support high levels of productivity where agglomeration and collaboration are essential. The prospect of efficient Faster Rail offers settlement options and economic growth in regional cities as a way of supporting regional growth and economic development that shares in the economic growth of the major centres. It also allows attractive alternate settlement options at the regional centres.

The role of governance is vital in major transport infrastructure investment like Faster Rail. The current governance and expenditure model is not optimal.

Each level of government within Australia currently draws revenue from the results of large scale infrastructure project investment. In almost all instances these revenues are returned to their individual consolidated revenue and not identified or nominated as returns from specific projects or project investment. Australian Federal government through taxation and GST, State governments through Land tax and stamp duties, and Local government through council rates.

A shared governance model which acknowledges the benefits of shared investment and revenue streams would allow for advancing projects and acknowledging and recouping the benefits in a shared manner.

Australian Governments have governance precedents on large scale projects like the Olympic Games delivery or Commonwealth Games delivery and often major disaster relief authorities/agencies. In these instances, the 3 tiers of Government working under a stand-alone, shared single governance authority, have seen highly successful delivery with shared investment and shared returns at community and/or financial level.

Faster Rail as part of a ‘Mega-Region Deal’

Just as innovation is required in terms of the cocktail of funding needed to progress major infrastructure projects in an era of constrained public finances, so too will it be needed around governance and cross government collaboration to maximise the benefits and impacts of such projects.

Also critical as part of this process is to understand that Faster Rail is not simply an infrastructure project: it is a catalyst for transformation and development at the scale of a mega-region of networked cities and towns. Planning for and leveraging this fully requires governance innovation and greatly enhanced coordination across government and between Federal and State Governments and local councils. Fundamentally it requires that the proposed strategic rail investment be positioned as part of a broader business plan for the development of the corridor in which it is located. Specifically a rail plan should be developed to maximise the impact of stations along the route and their potential for new Transit Oriented Development to optimise the benefits for existing centres and communities.

There is much innovation taking place at the moment which this project can be informed by. The arrival of ‘City Deals’ from the UK has led to some relevant innovation both around governance and ‘regional business planning’. The Western Sydney City Deal for example is based on a new partnership around leveraging the new airport and now a new ‘city-shaping’ north-south rail network connecting towns of Western Sydney to Badgerys and the ‘aerotropolis’. That partnership includes a vertical collaboration between Federal and State governments , their various agencies and Local government and a horizontal collaboration between 8 councils. This model has at its core the drive to ensure the biggest bang for the public buck from major infrastructure investment. This has meant that the tiers of government are coordinating land use planning , transport and social infrastructure as never before and that the councils in particular are working to maximise housing, jobs and business opportunities for local and new communities. It also means planning at the scale of a city rather than a series of piece meal initiatives. Note that the Greater Sydney Commission (GSC) has played a role in bringing the levels together and in developing approaches to coordinated leveraging of key public infrastructure in tandem with work to improve the understanding of the strategic opportunities by the private sector. Elsewhere in Sydney, the GSC has been doing similar work around coordinated infrastructure planning linked to the opportunity created by the new Sydney Metro West in and around Greater Parramatta and the Sydney Olympic Park in what is termed its Place Infrastructure Compact(PIC) initiative. Such a PIC and similar governance arrangements as we see in the Western Sydney City Deal would seem necessary for the strategic Faster Rail investment anticipated. The model can work with Sate Governments working in collaboration with appropriate councils.

An innovation around funding via such a model could be the extension of powers possessed by local councils to implement an ‘area betterment levy’ to help fund enabling infrastructure beyond the boundary of a single council. In this way, a unified levy regime across multiple councils would add to the cocktail of funding required. This was essentially how the 120 mile light rail project for the Denver region was funded (called ‘Fastrack’), and in that case all the councils in the region agreed to levy a unified sales tax increase of the same amount at the same time hypothecated to the Fastrack project. Although we do not have devolution of GST levels to cities or councils in Australia, the principle of using a joint approach to a betterment or development levy is similar – and recommended.

Reviewing infrastructure appraisal and funding mechanisms to give priority to rail

It should be stressed also that behind all these mechanisms is the recognition that major publicly enabled infrastructure creates benefits and positive externalities which create private and community value. Not all of this value has been recognised by governance systems charged with selecting and appraising infrastructure or sufficiently shared between the producers of the infrastructure and its consumers or other beneficiaries. Rail projects suffer from this imbalance, particularly in competing for scarce public funding with major roads. In our view, sometimes when a rail investment would actually create more value and public benefits than a road investment – and suit the needs of a city or a region better – the latter is preferred because it already has a form of value capture model or sustainable income stream behind it in the form of a tolling regime. In this context having a value capture approach for rail projects should produce more of a level playing field when Treasury selects appropriate modes to deliver strategic land use and transport objectives. In some forms – where value uplift from infrastructure investment happens to existing occupiers of land or homeowners, not just to those in new developments, the value capture mechanism can be more than a one-off development levy and take the form of a continuing annual payment by beneficiaries.

It is also crucial to ensure that the full city-and region shaping impact of major rail investments – such as those we saw at Kings Cross, Stratford, Canary Wharf and Battersea Power Station are fully embraced in appraisals. These projects all failed conventional Treasury appraisal tests based largely on travel time reduction and increases in mode users. Historically, rail projects have had their overall strategic impact upon land- use transformation and city/region-shaping under-estimated or not counted fully by official appraisal systems, while other modes had their impact on congestion over-estimated.

We think it important in the matter of assessing the full region /city-shaping impact of Faster Rail, that the right appraisal framework is used: one that values the impact on ‘place’ and not just ‘movement’ and the transformational impact on centres and communities as opposed to the narrow benefits of mode users. It is important in this context that the Department for Transport in the UK has recently consulted on going beyond recognising wider economic benefits in their appraisal methodology - reflecting the value of what they term ‘transformational investment’. Extending the Jubilee Line to Canary Wharf created urban transformation – and a 100,000 high value jobs in a place which had lost its entire economic rationale. Creating CTRL changed the future direction of London. Faster Rail in this region of Australia will be similarly transformative. The appraisal system needs to recognise such high level projects and value them as much as the market always subsequently does.

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Justin's career includes 15 years in the Victorian State Parliament, having held seven Ministerial portfolios within successive Victorian Labor Governments across 11 years, including Minister for Youth Affairs and Minister Assisting the Minister for Planning, Minister for Sport and Recreation, Minister for Commonwealth Games, Minister for Planning and Minister for the Respect Agenda.