

PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA

Harnessing Value, Delivering Infrastructure

*Inquiry into the role of transport connectivity on stimulating
development and economic activity*

Standing Committee on Infrastructure, Transport and Cities

November 2016
CANBERRA

© Commonwealth of Australia

ISBN 978-1-74366-584-8 (Printed Version)

ISBN 978-1-74366-585-5 (HTML Version)

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia License.



The details of this licence are available on the Creative Commons website:
<http://creativecommons.org/licenses/by-nc-nd/3.0/au/>.

Contents

Foreword.....	vii
Abbreviations	xi
Terms of Reference	xv
Members	xvii
List of Recommendations	xix
Executive Summary.....	xxv

The Report

1	Introduction.....	1
	Conduct of the inquiry	1
	Structure of the Report.....	2
2	Transport Connectivity	5
	Aims and benefits of transport connectivity	5
	Urban Connectivity	9
	Importance of public transport	11
	Regional Connectivity	22
	Decentralisation	23
	Rebalancing patterns of settlement.....	27
	High Speed Rail	33

	Other technologies	67
	Committee conclusions	74
3	Property development – creation of value	79
	Mode and uplift	88
	Zoning	95
	The limits of uplift	98
	Committee conclusions	104
4	Role of Government	107
	Planning	107
	Corridors.....	121
	Coordination and funding.....	127
	Hypothecation	140
	Different approaches to government involvement	143
	Collective bargaining	146
	Committee conclusions	148
5	Value Capture	153
	What is value capture.....	153
	Purpose of value capture	154
	Limits of value capture.....	158
	Methods of value capture	160
	Capital gains tax	161
	Land taxes/stamp duties.....	164
	Broad-based and benefitted area levies	167
	Tax increment financing.....	173
	Development rights sales	176
	The Entrepreneur Rail Model	178
	The value-uplift model	182

Other methods	188
Committee conclusions	192
Coordinating value capture	195
Cooperation across levels of government.....	196
City deals	202
Committee conclusions	209

End Matter

A. List of submissions	213
B. List of exhibits.....	219
C. List of public hearings and witnesses	223

Foreword

Improving transport connectivity, and finding innovative ways to pay for transport infrastructure, is essential to the future development of Australia's cities and regions.

The issues of concern that lead to this inquiry were the imbalance of settlement and its consequences; the deficit of infrastructure in our major cities and the resulting congestion; the constriction on growth that these cities produce through the lack of long term planning and timely construction of infrastructure; and the decline of the regions and lack of economic opportunity.

These four core challenges defined our problem, and this Committee has searched for a suite of recommendations that will commence the process of how to address them.

The enquiry heard from those with direct hands-on experience with how other countries have dealt with similar challenges and their outcomes.

Australia's settlement and the development of our cities has unfortunately been characterised by an absence of planning for both housing and essential infrastructure. The ad hoc nature, to this point, of planning infrastructure and the lack of process for the determination of land use has produced poor outcomes in terms of cost and current needs. As we continue to grow, this will have drastic consequences.

One of our first conclusions is to address this need with a plan for our settlement and our cities with long term vision. Furthermore, it is essential that this planning take place through engagement across the three levels of government.

The extremely high cost of land in our cities has made the cost of resuming land prohibitive, making the retrofitting of infrastructure difficult at best and impossible at worst. It has also regularly led to the decision to tunnel, but when tunnelling is too expensive nothing happens. This challenge is exacerbated by the pressure of growth that our cities shoulder.

From this evidence, we have come to some inevitable conclusions as to what must occur to remedy this set of challenges.

There must be put in place a plan of decentralisation to relieve our cities of the full burden of growth by providing regions with economic opportunity and prospects for settlement. This can be achieved through high speed connectivity to major urban areas.

This respite will allow long term plans for the retrofitting of infrastructure attached to land use. This will allow us to rebuild our cities to world's best practice models.

In both scenarios of decentralisation or urban renewal, the combination of infrastructure and land use optimises land values—this is the essential ingredient to maximise funding through value capture.

Value capture represents the most equitable method to fund infrastructure, with the added benefit of relieving demands on consolidated revenues.

Long term master planning and sustainable funding through value capture can only be achieved through the alignment of the three tiers of government, land owners and developers.

It is imperative that the three levels of government recognise that the opportunity to sustainably fund infrastructure depends on their ability to co-operate. They must be willing to forego individual revenues to ultimately maximise total revenues.

Vision and innovation needs to replace debilitating political argument to look at these challenges that can be converted to opportunities to rebalance our settlement, rebuild our cities and undertake the facilitating infrastructure funded by the wealth it creates. The wealth that can be liberated by growth in our regions will come through ready access to the economic powerhouses of our major cities.

This is the central purpose of High Speed Rail.

Contrary to popular belief, High Speed Rail's prime purpose is not an alternate mode of transport between capitals. Rather is it a tool to effect dynamic regional growth as land near regional stations will then compete with the most expensive land in the world, namely that of Sydney and Melbourne.

Evidence claimed that the corridor between Melbourne and Sydney represents the greatest potential for uplift of land values anywhere in the world when connected with High Speed Rail; this can therefore provide the precondition for value capture to completely fund this major infrastructure. It is essential that the government establishes an Australian model of value capture that addresses our unique opportunities.

The development of our value capture model should consider the private consortia that are committed to the development of High Speed Rail funded by profits of their privately held lands.

A comprehensive Federal Value Capture Model, when partnered with private consortia highly motivated to play a critical role, should be facilitated by an appropriate government body that will determine when this national transformation can proceed.

This plan of urban renewal and decentralisation, facilitated by strategic planning of infrastructure, will deliver an abundant affordable housing supply for generations to come.

I would like to thank all those who have contributed to this inquiry. The Committee received a great deal of high quality evidence from people committed to the development of Australia. This report will hopefully see that commitment turned to action. I also thank my Committee colleagues and the secretariat for their hard work and enthusiasm during the inquiry and their contribution to the report.

This report prescribes the solution to many of Australia's current planning, financing and population problems. I look forward to its recommendations being accepted, and Australia returning to the fast track.

Mr John Alexander OAM, MP, Chair

Abbreviations

AAF	All Aboard Florida
ACT	Australian Capital Territory
ALGA	Australian Local Government Association
APT	Action for Public Transport NSW
ARA	Australasian Railway Association
BART	Bay Area Rapid Transit
BCA	Business Council of Australia
BCR	Benefit-Cost Ratio
BIC	Bus Industry Confederation of Australia
BITRE	Bureau of Infrastructure, Transport and Regional Economics
BRS	Business Rate Supplement
CBD	Central Business District
CEO	Chief Executive Officer
CGT	Capital Gains Tax
CLARA	Consolidated Land and Rail Australia

COAG	Council of Australian Governments
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CUSP	Curtin University Sustainability Policy Institute
DfT	Department for Transport (UK)
DIRD	Department of Infrastructure and Regional Development
EGPM	Economic Growth Partnership Model
FBURA	Fishermans Bend Urban Renewal Area
GAIC	Growth Area Infrastructure Contribution
GDP	Gross Domestic Product
GFA	Gross Floor Area
GIF	Growth Infrastructure Fund
GST	Goods and Services Tax
GVA	Gross Value Added
HSR	High Speed Rail
IT	Information Technology
IWG	Infrastructure Working Group
JR	Japan Rail
LGA	Local Government Area
LGAQ	Local Government Association of Queensland
MOVE	Marginal Optimisation and Value Enhancement Model
MTR	Mass Transit Railway (Hong Kong)

NBN	National Broadband Network
NSW	New South Wales
PIA	Planning Institute of Australia
PPP	Public-Private Partnership
RMIT	Royal Melbourne Institute of Technology
SEQ	South East Queensland
SIG	Strategic Intelligence Group
<i>SMH</i>	<i>Sydney Morning Herald</i>
TGV	Train á Grand Vitesse (High Speed Rail, France)
TIC	Transport and Infrastructure Council
TIF	Tax Increment Financing
TIFIA	Transportation Infrastructure Finance and Innovation Act (US)
TISOC	Transport and Infrastructure Senior Officials Committee
TOD	Transit Oriented Development
UK	United Kingdom
USA	United States of America
VPA	Voluntary Planning Agreement
VTA	Valley Transportation Authority

Terms of Reference

The Committee is to inquire into and report upon the role of transport connectivity in stimulating development and economic activity both in major urban areas, and in regional Australia, in particular:

- a) Identifying the likely impact on property values and property-related tax revenues as a result of transport connectivity;
- b) Examining options for the application of value-capture mechanisms to sustainably fund transport infrastructure;
- c) Considering means, including legislative and administrative actions, by which government and the private sector can best utilise value-capture funding mechanisms;
- d) Considering the appropriate roles of each of the three levels of government in establishing sustainable value-capture funding mechanisms for planning and infrastructure construction;
- e) Examining any international experiences of the delivery of high speed rail projects by value-capture methods and the impact of high speed rail on city and regional development;
- f) Examining methods of implementing value-capture in both greenfield and brownfield developments; and
- g) Examining ways to capture future value opportunity when reserving transport corridors.

Members

45th Parliament

Chair

Mr John Alexander OAM, MP

Deputy Chair

Hon Sharon Bird MP

Members

Hon Warren Entsch MP

Mr Llew O'Brien MP

Mr Andrew Giles MP

Mr Ted O'Brien MP

Ms Emma McBride MP

Mr Andrew Wallace MP

Ms Cathy McGowan AO, MP

Mr Trent Zimmerman MP

44th Parliament

Chair

Mr John Alexander OAM, MP

Deputy Chair

Hon Matt Thistlethwaite MP

Members

Hon Julie Collins MP

Mr Bert van Manen MP

Mr Andrew Giles MP

Mr Matt Williams MP

Mr Andrew Hastie MP

Mr Trent Zimmerman MP

Ms Joanne Ryan MP

Committee Secretariat

Ms Lynley Ducker, Committee Secretary

Dr William Pender, Inquiry Secretary

Mr James Bunce, Senior Researcher

Ms Belynda Zolotto, Researcher

Ms Cathy Rouland, Office Manager

List of Recommendations

Recommendation 1

2.193 The Committee recommends that the Australian Government examines ways to promote a better balance of settlement through decentralisation to the regions linked by faster transport connectivity and particularly through high speed rail.

Recommendation 2

2.194 The Committee recommends that the Australian Government, in conjunction with state and territory governments, develop a framework for the specification and evaluation of proposals for the development of a high speed rail network in eastern Australia, with an emphasis on strategic decentralisation, regional economic development, value creation and value capture to determine the viability of private sector proposals, routes, schedule for development and funding for the project. The Committee further recommends that it is time to progress the planning work that must be done by all levels of government to facilitate high speed rail. The Committee recommends that state and federal governments consider appropriate coordination arrangements, including if and when a planning authority is required to progress high speed rail.

Recommendation 3

2.195 The Committee recommends that the Australian Government investigates options for private funding of high speed rail through value capture.

Recommendation 4

2.196 The Committee recommends that the Australian Government, in conjunction with state and territory governments, monitor and, when appropriate, assess the feasibility of Hyperloop in Australia as a high-speed mass transit system.

Recommendation 5

2.197 The Committee recommends that the Australian Government, in conjunction with state and territory governments, explore the potential of novel and alternative technology to provide an innovative and flexible transport system to urban Australia.

Recommendation 6

2.198 The Committee recommends that the Australian Government continue to recognise the importance of road transport in Australia and investigate new technologies which can make road use safer, cheaper and more efficient, including development of autonomous vehicles, low-emission vehicles, and smart road infrastructure.

Recommendation 7

3.75 The Committee recommends that the Australian Government recognise the potential contribution towards the costs of new transport infrastructure of the capture of increased property values and associated taxes that directly result from the new connectivity.

Recommendation 8

4.124 The Committee recommends that the Australian Government, in conjunction with state and territory governments, develop a system for coordinating the planning and funding of major infrastructure projects across all levels of government, including the quarantining and hypothecation of funds to projects, the allocation of funds to projects being contingent upon compliance with prescribed planning and funding requirements.

Recommendation 9

4.125 The Committee recommends that the Australian Government, in conjunction with state and territory governments, examine whether efficiencies can be achieved through the coordinated procurement of vehicles and rolling stock for transport infrastructure, particularly in relation to new bus fleets. This coordinated procurement should ensure, when practicable, that Australian materials and products, skills and services are maximised in project delivery.

Recommendation 10

5.125 The Committee recommends that the Australian Government seek a memorandum of understanding to establish value capture mechanisms for individual transport infrastructure projects as a condition of federal funding which applies to property value uplift that results from a combination of rezoning and new transport infrastructure. In doing so, the Government should:

- define specific geographic areas nearby to new transport infrastructure where this mechanism will apply to properties;
- set a threshold of value uplift for property which will incur the new value capture mechanism;
- establish an offset mechanism, whereby commercial properties whose value uplift is partially captured by this mechanism can be offset against their capital gains tax liability; and
- hypothecate any revenue that results from this mechanism into a dedicated infrastructure fund.

Recommendation 11

5.130 The Committee recommends that the Department of Infrastructure and Regional Development, in conjunction with state and territory governments, develop a toolkit of value capture mechanisms that can be applied by all levels of government, taking into account the different conditions in the various states, territories and local council areas. The use of the mechanisms

in the toolkit should be a requirement in cases where the federal government is to contribute funding towards major infrastructure projects that will generate an uplift in property values or increased economic activity.

Recommendation 12

5.179 The Committee supports the roll-out by the Australian Government of City Deal-type agreements with the various state, territory and local governments. These agreements should:

- involve federal, state and territory, local governments, local communities, landholders and developers and other community stakeholders in the prioritisation and negotiation processes;
- consider the building of new infrastructure from a state-wide or regional master plan perspective, rather than on a project-by-project basis;
- establish priorities for infrastructure projects based, in part, on the uplift in value that will result;
- drawing on the proposed value capture toolkit, define the value capture mechanisms that will be applied, and determine the amount of this uplift that can be captured by the three tiers of government involved in the agreement;
- in the negotiation process, the different levels of government should be prepared to consider forgoing certain types of revenue in order for the greatest possible level of value capture to be achieved overall;
- clearly define the amount of funding that will be provided by the governments and councils that are party to the deal, as well as the funding that is expected to come from the application of value capture mechanisms;
- establish metrics for performance, using gross value added as the lead metric; and

- culminate in a written agreement that clearly defines the roles of each tier of government involved in the agreement.

Recommendation 13

5.181 The Committee recommends that the Australian Government develop value capture models that can be applied to major infrastructure projects (such as high speed rail) and seek to negotiate with the states and territories a consistent and coordinated approach to the application of value capture for such projects. In so doing, the Australian Government should be prepared to act as the single point for the collection of value capture revenues.

Executive Summary

The Committee has examined the role of transport connectivity in stimulating development and economic activity in major urban areas, and in regional Australia, with a particular focus on:

- the benefits of transport connectivity—especially in relation to transformative technologies such as high speed rail;
- the economic benefits of improved transport connectivity, particularly through value creation and uplift;
- the role of government in coordinating improved transport connectivity; and
- the role of value capture and other economic instruments in delivering transport infrastructure.

Transport connectivity

The evidence presented to the Committee highlighted the importance of improved transport connectivity to the economic and social wellbeing of Australia. Improved transport connectivity allows greater accessibility to employment and markets, and cost savings in terms of reduced transit times, less traffic congestion and reduced transport costs. The key benefit of improved transport connectivity is its transformational effects—making cities and regions more accessible, more liveable and creating opportunities for economic development that could not otherwise exist.

Carefully planned, multi-modal, transport systems promise to make cities more efficient and liveable. The creation of new transport corridors and nodes has the

dual advantage of creating more efficient use of constrained urban space while offering opportunities for wealth creation. Rapid transit public transport creates the opportunity to create value and use that value to pay for the development of public transport—value capture.

Improved transport connectivity is also critical to regional development. It provides opportunities for decentralisation and the creation of new centres—rebalancing patterns of settlement. Greater regional connectivity will promote the development of regional areas, make relocation to these areas more attractive and reduce growth pressures in major cities.

A key to greater transport connectivity, especially in regional areas, is the development of high speed rail. This has the potential not only to improve connectivity between existing major cities, but allow the creation of new centres closely connected to those cities and each other—thereby achieving economic transformation by rebalancing the pattern of settlement. The Committee believes the time has come for the Australian Government to seek expressions of interest for the development of high speed rail in eastern Australia. It also believes that the potential of other technological innovations, such as Hyperloop and Austrans, should be explored.

The Committee was also presented with evidence highlighting the ongoing importance of road transport to both urban and regional Australia. It supports the ongoing investigation of new technologies which can make road use safer, cheaper and more efficient, including development of autonomous vehicles, low-emission vehicles, and smart road infrastructure.

Property development—creation of value

Value creation is one of the key purposes and outcomes of improved transport connectivity. The creation of value, and its capture, has the potential to provide the means to pay for enhanced connectivity. The evidence presented to the Committee indicated that there was a strong, though not consistent, correlation between improved transport connectivity and uplift in property values. One key to consistency is effective planning; another is the successful modelling of transport benefits. Planning for value creation is the basis for improved transport connectivity. The Committee believes that value capture has the potential to make a considerable contribution to the cost of new transport infrastructure through the

capture of increased property values that directly result from improved connectivity.

Role of Government

The evidence presented to the Committee highlighted the importance of integrated transport and land-use planning to the successful development of transport connectivity. Integrated planning has significant benefits, not least of which is matching transport to land use in a manner which optimises both. The need for long-term planning horizons was also stressed.

Corridor preservation, especially for major projects such as high speed rail is also very important. There needs to be consistency in the management of corridor preservation between jurisdictions to ensure consistent outcomes. Overlay zoning, which protects transport corridors in the longer term, while allowing compatible land uses in the short term, is a potential solution to corridor management.

A high level of coordination between different jurisdictions, between different levels of government, and between government and industry is a prerequisite to successful outcomes, both in planning and funding. The role of the Australian Government in providing leadership is particularly important, as is its ability to leverage outcomes through control of funding. Coordinating planning and procurement by linking funding to planning and outcomes is potentially an effective tool for coordination of transport infrastructure development. The Committee supports the concept of master funding—the creation of a single bucket of money drawn from a range of sources—hypothecated to the development of transport infrastructure. The allocation of funds to projects would be contingent upon compliance with prescribed planning and funding requirements. The Committee also supports developing a system for coordinating procurement of materials, vehicles and rolling stock for transport infrastructure.

Value Capture

The evidence presented to the Committee indicates that value capture potentially provides a mechanism by which planning and funding can be intimately linked, ensuring effective and efficient transport connectivity outcomes. A broad range of potential value capture mechanisms could be applied in an Australian context, although different mechanisms are best applied by different levels of government, and a high degree of coordination is required.

Capital gains tax is the primary means through which the Australian Government currently captures value uplift, but owner-occupied dwellings are exempt from capital gains tax. The Committee notes that there is scope for the Australian Government to design a new value capture mechanism, to apply in cases where the value of privately owned property in defined geographical areas increases as a result of a combination of new transport infrastructure and rezoning of land. This new mechanism could be offset against the capital gains tax liability incurred by the owners of commercial property.

There is also potential for the Australian Government to develop a toolkit of potential value capture mechanisms that could be applied at the federal, state and local levels. Application of appropriate value capture mechanisms could be a condition of federal funding for infrastructure projects. The Committee supports the negotiation of City Deal-type agreements with the various state, territory and local governments. The Committee also supports developing value capture models that can be applied to major infrastructure projects (such as high speed rail) and with a consistent and coordinated approach to the application of value capture for such projects. In so doing, the Australian Government should be prepared to act as the single point for the collection of value capture revenue.

1. Introduction

- 1.1 Transport connectivity is one of the pressing issues of the 21st Century. Australia is facing challenges of growing populations, urban congestion, changing patterns of settlement and the need for enhanced accessibility to employment and markets. These challenges need new and innovative solutions to the development of transport infrastructure. Solutions must also be found for integrating transport and land-use planning, financing transport infrastructure, and putting in place effective governance structures.
- 1.2 In considering these issues, this inquiry has used a range of evidence from expert witnesses and stakeholder organisations. The Committee received evidence from all levels of government, and industry.
- 1.3 This inquiry has looked at the need for improved transport connectivity in urban and regional settings, including the potential for high speed rail to act as a catalyst for economic and social transformation.
- 1.4 It has also examined the economic benefits—the wealth creation—that comes from improved transport connectivity. The inquiry considered how value capture might be used to harness this newly created wealth and generate transport connectivity.

Conduct of the inquiry

- 1.5 This inquiry commenced towards the end of the 44th Parliament and lapsed with the dissolution of Parliament on 9 May 2016. It was re-referred at the beginning of the 45th Parliament.

- 1.6 Immediately after referral in the 44th Parliament, the Committee called for submissions through the Parliament of Australia's website. The Inquiry was also promoted through a mail out to interested parties.
- 1.7 Over the course of the Inquiry, the Committee received 76 submissions. A list of submissions is at Appendix A. Other publications, documents and supplementary material were received during the Inquiry as exhibits. A list of exhibits is at Appendix B.
- 1.8 In addition, the Committee undertook a program of public hearings. Between February and April 2016 the Inquiry held eight public hearings, including four interstate. In October 2016, the two further hearings were held in Canberra and Sydney. Details of the public hearings, including a list of witnesses, are at Appendix C.

Structure of the Report

- 1.9 Chapter 2 examines the broad benefits of improved transport connectivity, its implications for urban and regional development, and the potential role of high speed rail not only in improving transport connectivity but also its potential to achieve economic and social transformation by rebalancing the pattern of settlement in south-eastern Australia.
- 1.10 Chapter 3 looks at one of the purposes and outcomes of improved transport connectivity—the creation of value. Transport nodes and corridors affect the utility and value of the property around them, and provide an opportunity to use this increase in value to fund the development of the infrastructure—value capture.
- 1.11 Chapter 4 examines planning, funding and governance. It canvasses the need for integrated transport and land-use planning; the need to protect infrastructure corridors; the need for greater coordination between levels of government in the areas of planning and funding; the possibility for hypothecation of revenue towards transport infrastructure development; and the potential coordination of procurement of vehicles and rolling stock for different transport infrastructure projects.

- 1.12 Chapter 5 focusses on value capture—what it is, the benefits that may flow from it, and different forms of value capture that may be applied in infrastructure procurement.

2. Transport Connectivity

Aims and benefits of transport connectivity

2.1 Transport connectivity is essential to the economic development of the nation. In its 2015 Australian Infrastructure Audit, Infrastructure Australia observed that ‘when our transport and logistics networks work effectively, they raise productivity levels and strengthen the economy’.¹ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, stated:

A large body of research in economics, geography and sociology has shown that transport accessibility is fundamental to the labour catchment for firms, the retail catchments of stores, the health and well-being of the labour force and community, the education opportunities provided to our children and young people, and many of the social opportunities for many Australians.²

2.2 The Government of South Australia noted that ‘areas rich in transport connectivity, accessibility and mode choice correlate strongly with areas rich in jobs, services and community infrastructure’, and that improved transport connectivity provided:

- access to jobs and services for individuals
- access to markets, suppliers and workers for business

¹ Infrastructure Australia, *Australian Infrastructure Audit: Our Infrastructure Challenges—Executive Summary*, April 2015, p. 2.

² Associate Professor Matthew Burke, *Submission 26*, p. 1.

- reducing the costs to do business—through travel time savings and reduced vehicle operating costs; and
- influencing the development of land toward higher value uses, due to improved access to local, intrastate, interstate and international customers and suppliers.³

2.3 The Government of South Australia believed that transport connectivity was also essential to international competitiveness, stating:

Modern and emerging smart industries favour being located in cities and regions which are highly liveable and connected. Australian cities are competing with each other and other cities, particularly from North America and Europe, to attract these industries and the highly skilled workforce associated with them.⁴

2.4 The need to invest in greater transport connectivity was highlighted in the evidence presented to the Committee. In its submission, Engineers Australia referred to research by the Grattan Institute which concluded that:

...in significant parts of Australia's four biggest cities, shallow labour markets and increasingly congested transport systems are holding back productivity by making it harder to get the best match between the skills of a worker and the demands of a job.⁵

2.5 The Planning Institute of Australia (PIA), citing the projected cost of congestion in Australia's major cities, argued that:

Without significant reform, the compounded cost of every extra person on Australia's often at-capacity transport networks will impact on the employment opportunities, productivity and social wellbeing of the next generation.⁶

³ Government of South Australia, *Submission 67*, p. 2.

⁴ Government of South Australia, *Submission 67*, p. 2.

⁵ Engineers Australia, *Submission 53*, p. 7, quoting the Grattan Institute.

⁶ Planning Institute of Australia, *Submission 8*, p. 3.

- 2.6 The PIA believed that transport connectivity—the joining together of places—was vital, ‘so as to create communities with a human dimension whilst ensuring the efficient operation of regional and national economies’.⁷
- 2.7 Transport expert, Mr Peter Knight, believed that the lack of transport infrastructure was ‘hampering domestic competition and holding back Australian international competitiveness’, with the combined threats of ‘the very high cost of transport in Australia, the threat to liveability of Australian cities from congestion and the means of financing the large amounts required for infrastructure’ affecting outcomes.⁸
- 2.8 However, transport connectivity is not simply about reducing travel times or traffic congestion—it is about shaping the environment we live in. According to Dr James McIntosh of LUTI Consulting, ‘transportation infrastructure investments need to be seen as city-shaping projects’ and that ‘what they actually do is unlock development capacity in areas’. Well-targeted investments unlock opportunities for urban regeneration allowing us to ‘change the land uses to their highest and best use and get the most out of our urban fabric’. Dr McIntosh believed that while infrastructure investments ‘often solve a transport task...they should really be focused around how we want to change our cities’.⁹
- 2.9 This view was echoed by Transportation Associates, who noted that ‘transport is not an end in itself but means to an end’:

In this regard Government must have a view about the spatial form of economic development it is seeking to support and make efficient. Put simply, there must be a view and plan about how we are to live in this nation.¹⁰

⁷ Planning Institute of Australia, *Submission 8*, p. 3.

⁸ Mr Peter Knight, *Submission 48*, p. 1.

⁹ Dr James McIntosh, Principal, LUTI Consulting, *Committee Hansard*, 7 March 2016, p. 58.

¹⁰ Transportation Associates, *Submission 38*, p. 3.

2.10 Transportation Associates believed that ‘we need to have an overall plan for development, connectivity and mobility and then determine those transport systems that deliver the degree of those attributes we require’.¹¹

2.11 Engineers Australia emphasised the fact that the ‘meaning of connectivity is highly dependent on the situation’, the common link being accessibility:

In urban areas it is often associated with the density of connections and the directness of links in local road systems. It also refers to the connections between local road systems and the CBD. In regional areas connectivity is mainly concerned with access to transport services between regional centres and between these centres and domestic markets located in large cities or ports for export to international markets.¹²

2.12 Professor Burke stated that ‘mobility for mobility’s sake is one thing; it is accessibility that matters’:

It is people’s time based accessibility to get to the goods and services and opportunities, including employment, they need in daily life. That is, really, most important.¹³

2.13 This view was echoed by infrastructure builder and operator, Transurban, which envisaged ‘the transport sector operating as a co-operative, interconnected eco-system, with services reflecting the needs of customers’. Transurban proposed a ‘multi-modal approach to pricing’, that would ‘give users the option to make their choice of transport for each trip based on time, cost and environmental considerations’. This approach would also ensure ‘the most efficient investment in and use of all modes of transport and associated infrastructure’.¹⁴

¹¹ Transportation Associates, *Submission 38*, p. 3.

¹² Engineers Australia, *Submission 53*, p. 6.

¹³ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 5.

¹⁴ Transurban, *Submission 73*, p. 5.

Urban Connectivity

2.14 International consultancy firm, Arup, urged a holistic approach to planning transport infrastructure, noting that ‘well-connected corridors encourage seamless movement to both city, urban and suburban locations through providing customers with an alternate method of travel’. Arup stated that:

If cities and towns are well connected, they allow people to leave cars at home and use public transport to go to and between destinations. This in turn encourages walking and therefore can stimulate activity in urban areas, along corridors and around major nodes. There is a whole range of opportunities that well connected transport has on developments, from making cities more vibrant and bustling to encouraging exercise and community interaction.¹⁵

2.15 Construction firm Goodman urged city planners ‘to embrace a less homogenous and prescriptive planning framework which create “activity silos” which in turn creates reliance on cars to move between regions for work, play or leisure’. It noted that ‘by creating well planned, mixed-use precincts and intensifying the use of existing infrastructure and new infrastructure a more effective and ambitious planning outcome can be achieved’. Goodman identified a range of ‘smart growth principles’ for cities, including:

- Stemming the spread of urban areas by concentrating growth in existing urban environments. This reduces commuting times and congestion, while promoting the numerous associated environmental benefits of preserving open spaces.
- Concentrating growth in already urbanised areas augment and utilise the existing infrastructure provided in these neighbourhoods, providing a stronger tax base for these communities, increasing the number of jobs and services in the area while catering for a shifting demographic that desires urban living.
- Making better use of existing infrastructure will reduce the associated infrastructure costs of development and growth, while improving the existing services in urban areas.

¹⁵ Arup, *Submission 42*, p. 2.

- Encouraging transit facilities through higher density land use. Increasing the densities of mixed land use zoning surrounding transit stations provides the ridership capacity to support mass transit systems.
- Mixed use planning precincts, creating affordable, walkable and bike-able neighbourhoods by providing a mix of housing, commercial and retail options and public services. This produces communities that have lower transportation costs, greater social integration, improved personal and environmental health and expanded consumer choice.¹⁶

2.16 Mr Ian Bell, Director of Financial-Architects.Asia Pty Ltd, emphasised Australia's 'need for speed', stating that 'transport connectivity is important, but fast transport connectivity is most important':

Transport should be efficiently run, enable easy intermodal connections—car to rail, rail to light rail, rail to airports et cetera—plus be rationally priced and funded and, overall, be time economical. But I say our current main challenge is: Australia has a need for speed.¹⁷

2.17 Mr Bell highlighted the importance of fast rail in improving travel time across modes, stating:

... speeding up rail has a beneficial effect, ultimately, on road travel speeds where they compete for origin-destination transit intervals. Speeding up rail, even more so than other forms of transport, also impacts property values because time is value for most people and permanency of embarkation-disembarkation points helps value uplift.¹⁸

2.18 Mr Bell noted that 'increased transport speeds, especially with arterial rail, help level the land price curve between inner and outer city, making housing more affordable'. Similar outcomes were potentially achievable 'with the regions via intercity rail lines, and this improves land equity and keeps pressure off city prices'.¹⁹

¹⁶ Goodman, *Submission 65*, p. 12.

¹⁷ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 22.

¹⁸ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 22.

¹⁹ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 22.

- 2.19 Engineers Australia highlighted the concept of the “Marchetti constant” — that the average city travel time budget should be no more than about one hour per person per day’. This principle underpinned the concept of Transit Oriented Development (TOD), ‘an alternative approach that planners can use to develop “Transit Cities”, incorporating various ways of getting about from walking, cycling, local buses and light rail, as antidotes to “Auto Cities”’.²⁰
- 2.20 Professor John Stanley, representing the Bus Industry Confederation of Australia, introduced the concept of 20-minutes cities, ‘where most of the things that you need to do on a daily basis are accessible within 20 minutes by walking, cycling or public transport’. He noted that the notion of ‘getting densities up a bit in the outer suburbs, focusing growth more into transit corridors and concentrating on building our cities as polycentric cities is the way we can generate the most value from our cities’. He suggested that the ‘transport initiatives that sit behind that are the sorts of things that are going to generate the value that you are seeking to capture and that you have been looking at in the inquiry’.²¹
- 2.21 In its submission, Consult Australia emphasised that:

... increased infrastructure investment that improves economic capacity and productivity must be the first policy response to the challenges arising from increasing congestion and declining quality of life in Australian cities.²²

Importance of public transport

- 2.22 The importance of public transport to improved transport connectivity, particularly in urban areas, was highlighted in the evidence presented to the Committee. Associate Professor Matthew Burke told the Committee:

Australia is going through a transition, and the old Australian road based model of urban development is really no longer suited to our post-industrial

²⁰ Engineers Australia, *Submission 53*, p. 4.

²¹ Professor John Stanley, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, pp. 49–50.

²² Consult Australia, *Submission 13*, p. 1.

economy. The rise of knowledge work in the cities is seeing shifts in the geography of labour and demand growing for non-car transportation options, including public transport.²³

- 2.23 Professor Burke noted that Australia had ‘moved to a primarily road-based transport planning model, both for intra- and inter-urban travel, in the 1960s’, and that there had been ‘over fifty years of under-investment in public transport systems as compared to road networks’. He argued that:

Australia’s suburbia was founded on relatively cheap land on the outskirts of the cities being plugged in to transport networks, with factories and residential subdivisions lining key routes. But this came at a cost of increasing car-dependence, growth in travel times and in congestion.²⁴

- 2.24 Professor Burke observed that ‘the need for increased public transport supply in the inner and middle city areas is becoming acute’, and argued that:

Servicing additional residential and commercial development in these locations, which are at the heart of the knowledge economy, only appears possible through increased investment in public transport and, to a lesser degree, cycling.²⁵

- 2.25 Mr Brendan Nelson, President of PIA, believed that ‘public transport needs to be a viable option, and it certainly needs to underpin any decisions in relation to land use planning’. He observed that ‘changes in globalisation, the globalised economy, and the way people work should be considered’, stating:

²³ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 1.

²⁴ Associate Professor Matthew Burke, *Submission 26*, p. 1.

²⁵ Associate Professor Matthew Burke, *Submission 26*, p. 2.

We will see a change in the way people work: their patterns of working in offices will change; people will work from home more often. We will see that particularly where our technology supports that existing capacity.²⁶

- 2.26 The Australasian Railway Association (ARA) argued that ‘continued investment and expansion of public transport is crucial to the success and productivity of the nation’. It noted that ‘investment in and use of public transport ensures less vehicles and therefore congestion on roads, decreased transport-related emissions, fewer road accident costs and healthier and more active lifestyles for Australians’.²⁷The ARA believed that ‘our cities and regions will only continue to prosper with continued improvements to existing public transport systems and expansion into alternative modes of public transport’.²⁸
- 2.27 The Government of South Australia drew an explicit link between public transport, active transport modes and urban development when considering improved transport connectivity. It stated:

Moving large numbers of people across cities on a daily basis means that Australia needs the public transport system to provide reliable, fast, safe and affordable travel choices—and to deliver these choices with a minimum impact on the environment, in a way that is sustainable into the future and makes the best use of assets already available.

Active transport modes (including walking, cycling, and/or in combination with mass transit) have a well-documented net public health benefit when compared to passive travel modes in the prevention of obesity and other health problems associated with sedentary lifestyles.

It is therefore prudent from a strategic land use planning perspective to actively encourage the development of communities dense enough to support

²⁶ Mr Brendan Nelson, President, Planning Institute of Australia, *Committee Hansard*, 8 April 2016, p. 10.

²⁷ Australasian Railway Association, *Submission 49*, p. 2.

²⁸ Australasian Railway Association, *Submission 49*, p. 3.

a diversity of transport options and a high level of connectivity both spatially and between modes.²⁹

- 2.28 Mr Richard Smithers, Transport Coordinator for the City of Melbourne, observed that ‘the demand for public transport continues to increase significantly in Melbourne, driven by strong growth in the centre of the city’, and that, ‘as a result, many of the public transport services we have today are over capacity’. This meant that Melbourne had ‘a combination of an undersupply of public transport to meet the current demand and continued growth of the city’. The City’s policy and strategy was to seek ‘a significant expansion of services. We need new lines, we need new stock, and we need great stations and the other supporting infrastructure.’ He noted that ‘the changing nature of work and the growth of the knowledge economy are driving the demand for space-efficient public transport linked to walking’. Mr Smithers stated that:

The City of Melbourne strongly supports the investigation into funding methods that will help us address the shortfall in public transport that we have today and to create the cities that we want to work and live in tomorrow.³⁰

- 2.29 The ACT Government described its planned light rail as ‘city building infrastructure’. It observed that ‘improved public transport and arterial connections will increase capacity in the transport network, encouraging further growth in the region’. Light rail would be ‘a catalyst for urban intensification and economic investment’. The intensification around light rail would ‘not only provide much needed public transport continuity but also stimulate urban renewal of under-utilised sites, further increasing economic productivity in the city’.³¹The ACT Government expected ‘land values surrounding light rail will increase, with related changes to revenues from stamp duty, rates and land tax’. It noted that:

²⁹ Government of South Australia, *Submission 67*, p. 2.

³⁰ Mr Richard Smithers, Transport Coordinator, City of Melbourne, *Committee Hansard*, 11 March 2016, p. 31.

³¹ ACT Government, *Submission 59*, p. 2.

These higher values will reflect the relative attractiveness of businesses locating to, and residents choosing to live in, locations with access to high capacity public transport. International studies have shown increases in land values as a result of proximity to durable public transport.³²

- 2.30 Further benefits were 'expected to flow from agglomeration that occurs as businesses begin to cluster together at key nodes along transport links'.³³ The ACT Governments Urban Renewal Strategy discussion paper highlighted the 'urban village' concept of urban renewal and densification around public transport nodes:

Urban villages are medium to high density hubs of activity located at transport stations where mixed-use development, people-friendly streets and inviting public places combine. They are places where the needs of everyday living are within a convenient walking distance, with homes, shops, cafes, parks, jobs, facilities and meeting places close by. The urban renewal strategy proposes a series of urban villages around light rail stations along the corridor. The villages will be connected to existing communities by enhanced east-west connections to and from Northbourne Avenue.³⁴

- 2.31 In Melbourne, the City of Port Phillip was looking at light rail as a means of catalysing urban renewal, noting that to 'unlock investment and prevent congestion Fishermans Bend Urban Renewal Area must have a world class public transport network to meet the needs of residents, employees and visitors'.³⁵ Trams were expected to provide a 'catalyst for development', with the direct tram option having a positive impact on land values. Tram capacity was expected to 'impact the density of development'. On the other hand:

Lack of public transport is likely to have a detrimental impact on the experience of people living and working in the precincts (particularly with the

³² ACT Government, *Submission 59*, pp. 2–3.

³³ ACT Government, *Submission 59*, pp. 2–3.

³⁴ ACT Government, *Submission 59*, Attachment 2, *City and Gateway: Urban Renewal Strategy – Discussion Paper*, January 2016, p. 9.

³⁵ City of Port Phillip, *Submission 29*, Attachment 1, AECOM, *Fishermans Bend Collins Street Tram Extension*, December 2014, p. i.

challenges around the amount of car parking and existing congestion on surrounding arterial roads and the tram network).³⁶

2.32 The City of Port Phillip emphasised that without investment in public transport it would not be ‘physically possible for the existing road network to accommodate the additional trips that will be generated through the existing mode share of 50% of trips by car’.³⁷

2.33 Light rail was also being employed as the catalyst for urban renewal in Parramatta, where the options analysis resulted in the outcome with the ‘greatest urban regeneration benefit’.³⁸ Dr McIntosh believed that ‘urban renewal must be a primary driver for most large scale investments in transit, as they create significant development capacity increases’ and that ‘these are best exploited through an integrated urban regeneration program’. This had been the focus of his work on the Parramatta light rail project.³⁹

2.34 In its issues paper, *Are we there yet? Value capture and the future of public transport in Sydney*, the Committee for Sydney gave a detailed account of where it believed improvements in public transport needed to be made in order to improve transport connectivity in Sydney. The issues paper stated that:

... our public transport network, while improving after decades of under investment, is a long way behind the global competition and far from being able to serve the economic and social needs of the city as it is.⁴⁰

2.35 The Committee for Sydney argued that ‘we must recognise the massively upgraded and extended public transport network required to not just meet current demand but to plan for that “next Sydney”, the Sydney of 8 million not 4’. It urged a modal shift, for ‘a liveable and productive city in the 21st

³⁶ City of Port Phillip, *Submission 29*, Attachment 1, AECOM, *Fishermans Bend Collins Street Tram Extension*, December 2014, pp. 5–6.

³⁷ City of Port Phillip, *Submission 29*, p. 5.

³⁸ Dr James McIntosh, Principal, LUTI Consulting, *Committee Hansard*, 7 March 2016, p. 61.

³⁹ LUTI Consulting, *Submission 7*, p. 1.

⁴⁰ Committee for Sydney, *Submission 25*, Attachment 1, *Are we there yet? Value capture and the future of public transport in Sydney*, p. 1.

century with heavy and light rail usage targeted to take more and more patronage from road use'.⁴¹ The issues paper identified the trend towards agglomeration and the problem of increasing congestion on roads—especially those linking the city with the western suburbs. It stated:

The global evidence is in. The increasing flow of knowledge workers driving from suburbia towards the favoured city-centric locations simply cannot be managed by roads alone—and their cars simply cannot be parked in those locations on arrival. We have to have modal shift—as part of an integrated package—if Sydney is to work properly.⁴²

- 2.36 The Committee for Sydney sought, for example, heavy rail links which reduce 'the travel time between Parramatta and Sydney CBD from more than 30 minutes to under 15 or between Liverpool and Central Sydney from almost an hour to less than 30 minutes'. Only by such means could we 'extend the benefits of "compact Sydney" to more Sydneysiders and reduce the problems of "sprawl Sydney"'.⁴³

Road v. Rail

- 2.37 However, the Committee for Sydney also identified the problems around public transport funding and its inability to compete with roads for funding investment. It noted that 'public transport in Sydney is a long term operational burden with no adequate funding stream in place—the fare box only supplies about 25% of total operating costs'. This meant that 'every new public transport link is a perpetual cost to the NSW Government's budget'. According to the Committee for Sydney, this had 'the potential to distort

⁴¹ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 1.

⁴² Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 2.

⁴³ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 2.

funding decisions—from the project that’s right to the project that has a business case’.⁴⁴ The Committee for Sydney proposed two solutions:

One is to have a mature conversation in our cities about the true costs and benefits of transport and how the gap needs to be filled between what we as a community currently pay for public transport and what we need to pay to get the best outcomes. The second is we need to be innovative to find new solutions if we are to fill the funding gap and have the public transport network we need.⁴⁵

- 2.38 The Committee for Sydney believed that if the community wanted ‘liveable, productive and equitable city’, it was going to have to pay for it. The Committee for Sydney saw value capture as ‘an increasingly important item in the funding toolbox along with other “beneficiaries pay” approaches’. On this score, the Committee for Sydney believed that ‘we simply have no choice’.⁴⁶ It also noted, however, that public transport fares had not kept up with costs, stating that ‘if we are going to see any meaningful expansion in our transport network, the fare box will have to work harder’.⁴⁷
- 2.39 The Committee for Sydney highlighted the success of Hong Kong in being ‘able to build and finance the most comprehensive public transport system in the world’, noting that ‘a staggering 90% of all trips in the city are by public transport. It is also operating at a profit’. The Committee for Sydney saw ‘no reason Sydney can’t do the same’.⁴⁸
- 2.40 Action for Public Transport (NSW) (APT) believed that:

⁴⁴ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 3.

⁴⁵ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 3.

⁴⁶ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 3.

⁴⁷ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 16.

⁴⁸ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 16.

... a quantum leap in the availability, frequency and speed of public transport services is the key to accommodating increased population without damaging the quality of life of Australians, reducing social and economic inclusion, and degrading our environment.⁴⁹

2.41 APT noted that ‘there is strong empirical evidence that public transport connectivity, especially rail connectivity’, stimulates ‘development and economic activity, both in urban areas and regional areas’. It further noted that ‘fast, frequent public transport services reduce the effective distance between locations’ and could ‘shape land use patterns to make better use of valuable urban space’.⁵⁰

2.42 APT was concerned that ‘current methods of appraisal fail to account properly for the benefits of public transport, including its positive effect on development and economic activity’. This created ‘a systematic bias against public transport investment’. APT argued that ‘correcting this inbuilt bias is essential to getting better transport selection and funding decisions’.⁵¹

2.43 APT strongly criticised approaches to urban transport connectivity based on roads, stating:

Urban motorways produce an urban environment that is hostile to walking, cycling and public transport. They consequently undermine public transport usage, which depends on (and fosters) good pedestrian connectivity. They promote sprawl, not the co-location of high-order knowledge jobs in highly accessible centres (agglomeration).⁵²

2.44 According to APT ‘investment in public transport can help take traffic off the roads—but dramatic increases in road capacity induce more traffic and

⁴⁹ Action for Public Transport (NSW), *Submission 60*, p. 1.

⁵⁰ Action for Public Transport (NSW), *Submission 60*, p. 3.

⁵¹ Action for Public Transport (NSW), *Submission 60*, p. 2.

⁵² Action for Public Transport (NSW), *Submission 60*, pp. 12–13.

sabotage the potential gains'. It called for a reordering of priorities, 'to make our cities fit for the future'.⁵³

- 2.45 Engineers Australia observed that 'engineering construction on roads has increased substantially over the last twenty five years, both absolutely and as shares of overall infrastructure development'. Nonetheless, road congestion had worsened rather than eased, suggesting that 'the provision of road infrastructure is leading to less than efficient outcomes for the overall economy – particularly where roads are complementary or a substitute for another type of infrastructure'.⁵⁴ Engineers Australia was concerned that when it came to transport connectivity:

... decision makers still focus on the narrow objective of how to contain government expenditure on transport rather than the broader objective of containing the transport costs for government and users combined, including costs of the land occupied by roads and parking facilities.⁵⁵

- 2.46 Engineers Australia strongly supported the view 'that a new paradigm for transport planning in cities is necessary to substantially reduce dependence on cars for transport in favour of a mix of time table free, rapid and frequent public transport options'.⁵⁶
- 2.47 Dr David Adams attributed the dominance of road over rail to 'the invisible worm', the provision in the 'national guidelines used for evaluating transport projects [which] instruct the person doing the evaluation to ignore land value impacts'. The guidelines assume that 'increases in land value that may result from urban public transport initiatives are generally a capitalisation of other benefits'. Such increases are, therefore, excluded from 'economic appraisal of initiatives because this would double-count benefits'.⁵⁷ Dr Adams noted that 'a road project tends not to change the equilibrium in the land market, and that makes the guidelines perfectly fine

⁵³ Action for Public Transport (NSW), *Submission 60*, pp. 12–13.

⁵⁴ Engineers Australia, *Submission 53*, pp. 3–4.

⁵⁵ Engineers Australia, *Submission 53*, p. 4.

⁵⁶ Engineers Australia, *Submission 53*, p. 4.

⁵⁷ Dr David Adams, Director, Strategex Pty Ltd, *Committee Hansard*, 7 March 2016, p. 10.

for assessing road projects’, but that ‘a large urban rail project changes the equilibrium in the land market. It changes where people live.’ He concluded, therefore, that ‘if you are assessing a large urban rail project, you need to look at the land value impacts; it is not just enough to look at the travel-time savings’. His suggestion was that any ‘appraisal give equal weight to both land value impacts and travel-time savings and that you check, empirically, whether the two are equal’.⁵⁸

- 2.48 This apparent bias towards road funding over public transport was also identified by Financial-Architects.Asia, which identified road pricing schemes as a ‘serious hurdle to making fast rail transport work in Australia’. This was because Australia had found itself ‘having subsidised road provision and having created a bias in capital project evaluation in favour of roads as against heavy rail in particular’.⁵⁹
- 2.49 Dr Tim Williams, Chief Executive Officer of the Committee for Sydney, agreed, noting that ‘we do not really explain to people the true costs of roads and we do not really pay for them in our road tax’. He saw a need for transparent discussion of the ‘true costs of transport options—and not just public transport’.⁶⁰
- 2.50 On the other hand, road infrastructure specialists, Transurban, highlighted the importance of roads to the national economy, stating:

An efficient transport network is critical to sustaining economic success in Australia. Roads in particular are critical to the movement of people and goods, carrying almost 70 per cent of all passenger trips and one-third of all intra and inter state freight.⁶¹

- 2.51 Transurban saw limited value in value capture as a mechanism for financing road infrastructure, preferring instead ‘a broad-based users pays model (also

⁵⁸ Dr David Adams, Director, Strategex Pty Ltd, *Committee Hansard*, 7 March 2016, p. 11.

⁵⁹ Financial-Architects.Asia, *Submission 27*, p. 10.

⁶⁰ Dr Tim Williams, Chief Executive Officer, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 7.

⁶¹ Transurban, *Submission 73*, p. 2.

called road pricing)', which it believed was 'the most appropriate, sustainable and fair mechanism to fund transport infrastructure'.⁶²

- 2.52 Likewise, the Hennik Group, which is investigating the development of low carbon emission technology in road vehicles, highlighted the ongoing importance of road transport to Australia and the need to develop new technologies to make road transport more efficient. Hennik noted that 'road transport remains the most critical transportation infrastructure requirement, and a complete national road transportation infrastructure, including access to fuel and power, has the potential to benefit the largest population'.⁶³

Regional Connectivity

- 2.53 Transport connectivity was also crucial to the development of regional centres. In its submission, the Department of Infrastructure and Regional Development (DIRD) stated:

Transport infrastructure in regional cities and towns also plays a key role for regional centres as service access hubs and nodes in the national transport network. Transport connectivity raises competition in markets to both stimulate and shift economic activity. In the past, improving transport allows regional communities to access new markets providing them with both an opportunity and the challenge of operating in a more competitive environment.⁶⁴

- 2.54 Ms Kirsten Kilpatrick, representing the Committee for Geelong, observed that transport connectivity was vital to the development of regional cities, such as Geelong, allowing them to accommodate growth in the major cities and surrounding regions. She noted that 'investment in transport infrastructure in particular is imperative not just from an economic perspective but also in terms of moving people between the capital cities

⁶² Transurban, *Submission 73*, p. 3.

⁶³ Hennik Group, *Submission 75*, p. 11.

⁶⁴ Department of Infrastructure and Regional Development, *Submission 57*, p. 8.

and around Victoria'.⁶⁵ She also emphasised the need to maintain housing affordability in these areas, stating:

One of our key things, though, is to make sure, particularly from a domestic perspective, that affordability is maintained within the market. If costs are offset to developers in particular to fund some of this economic and transport infrastructure, it must be done in a balanced way and not passed on to consumers. That would erode affordability within the market—and that is what makes it appealing for people to relocate out of the capital cities to Geelong, the Barwon region and the G21 region.⁶⁶

Decentralisation

2.55 The potential for decentralisation to benefit both cities and regions was highlighted in the evidence of Professor Burke. Discussing the development of cities, he stated that:

By just moving certain growth in jobs, not current jobs, out of the central business district over the next 20 years to key suburban employment nodes on public transport in the middle and outer suburbs—but definitely at key nodes; not just dispersed willy-nilly—we can obtain as much congestion relief on our road network as what we would in building \$12 billion of road tunnels.⁶⁷

2.56 Such relocation, while disruptive in the short term, eventually resulted in a new equilibrium, 'with a much more efficient urban structure'.⁶⁸ Citing the example of the relocation of public sector workers away from Brisbane CBD, he stated:

For the first time in decades, we moved workers to the northern suburbs and especially to the Ipswich CBD. We have been tracking some of these workers

⁶⁵ Ms Kirsten Kilpatrick, Board Member, Committee for Geelong, *Committee Hansard*, 11 March 2016, p. 19.

⁶⁶ Ms Kirsten Kilpatrick, Board Member, Committee for Geelong, *Committee Hansard*, 11 March 2016, pp. 19–20.

⁶⁷ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 6.

⁶⁸ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 6.

and what happened to their travel behaviour. We are starting to see some people—particularly younger, more mobile people—moving their home and we are seeing turnover in those offices so that a new equilibrium emerges where people are travelling much shorter distances.⁶⁹

- 2.57 There were also important social benefits to the relocation—access to employment and services for parents:

Because there are some good-quality knowledge jobs in places like Ipswich, we are also seeing that women, who are getting back into the workforce, now do not have to necessarily do a low-level service job in the suburbs to be near child care and schooling; they have got access to a high-quality knowledge job two or three days per week in some of those offices. There are all sorts of social benefits that emerge.⁷⁰

- 2.58 Professor Burke observed that such outcomes had been observed in other parts of Australia and the world. He stated:

We are already seeing this in Australian cities. The upgrades to moderately fast rail out of Melbourne to Ballarat and Bendigo has already seen a commuter class emerge. They travel to work on that train most days, but not necessarily every day. So we are seeing dispersion effects. There are studies getting underway in China to look at the dispersing effects of high speed rail. I spent a lot of time in Nagoya, and I have seen the commuter class on the high speed rail in Honshu. And you do see these dispersing effects because land rents in the centre of Tokyo are unbelievable. People can live in a regional city and be true citizens there. They can enjoy all the amenities of a nice urban metropolis in a small city and afford a pleasant house in a pleasant suburb rather than a shoebox in the sky somewhere.⁷¹

- 2.59 The down side of decentralisation was that the transport options to make it viable often involved substantial subsidies for travel:

⁶⁹ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 6.

⁷⁰ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 6.

⁷¹ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 4.

There is an issue here, though, in that you need to get significant economic return in land development, and capture a lot of that, because you are probably subsidising people enormously for that commute. In south-east Queensland the most subsidised commuters are those coming from the Gold Coast and from Nambour into Brisbane every day by rail, at \$20 plus per trip. There is quite a significant subsidy for that, so you need to be making sure you are getting significant development uplift and opportunity to make that back.

72

- 2.60 Dr Philip Laird argued that ‘to make the decentralised cities work well, you do need good transport links, preferably faster than cars and not dependent entirely on aircraft, to link your regional centres to your main hubs’. He noted that it seemed ‘to have worked with Victorian Regional Fast Rail’.⁷³
- 2.61 For a regional centre such as Geelong, fast rail was seen as the principal driver of growth. The Committee for Geelong noted that rail journeys between European centres similar in distance to that between Melbourne and Geelong took a fraction of the time, opening up new opportunities for employment and investment. It urged the development of the connection between Melbourne and Geelong with the ‘ultimate aim of achieving a 45 minute service to and from Geelong/Southern Cross before the end of 2017, or at least a commitment for this’.⁷⁴ The Committee for Geelong stated that ‘reliable and improved transport connections are fundamental to facilitate the future growth of Geelong’.⁷⁵
- 2.62 Smaller regional centres also had a role to play in decentralisation. In its submission, the Peri Urban Group of Rural Councils, a group representing local councils on the peri-urban fringe of Melbourne, stated that:

There is a great opportunity to support the sustainable growth of the regions and to stop the spread of unliveable, overcrowded cities by simply investing

⁷² Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 4.

⁷³ Dr Philip Laird, *Committee Hansard*, 7 March 2016, p. 57.

⁷⁴ Committee for Geelong, *Submission 32*, p. 4; Ms Rebecca Casson, Chief Executive Office, Committee for Geelong, *Committee Hansard*, 11 March 2016, p. 20.

⁷⁵ Committee for Geelong, *Submission 32*, p. 1.

into areas adjacent to the major cities and providing a viable alternative to major city living.⁷⁶

2.63 The Peri Urban Group of Rural Councils urged ‘greater recognition of the challenges and opportunities of rural and regional areas to accommodate population growth, new industries and smart growth into the future’. It argued that ‘these areas hold great untapped potential and should be supported’. It stated that ‘a myopic view towards funnelling infrastructure and growth into the major cities and centres will result in poor liveability outcomes for all’.⁷⁷

2.64 For smaller regional centres improved transport connectivity was focused upon roads. Ms Paula Lawrence, representing the Peri Urban Group of Rural Councils, explained:

The region is battling for access to a road network that was built, in Victoria, during the time of the gold rush and on bridges that were designed for horse and cart.⁷⁸

2.65 The Group’s submission highlights the car dependency of the region and the limited value of investment in public transport for relatively dispersed populations that will remain dependent on private road transport.⁷⁹ It noted that:

The challenge in the Peri Urban region is that the low population densities make it virtually impossible to utilise a value capture model for funding roads and bridges, particularly those required for point to point transport of primary produce and livestock. These roads are often adjacent to very small numbers of properties resulting in a miniscule pool of beneficiaries to part fund the project.

⁷⁶ Peri Urban Group of Rural Councils, *Submission 58*, p. 2.

⁷⁷ Peri Urban Group of Rural Councils, *Submission 58*, p. 2.

⁷⁸ Ms Paula Lawrence, Executive Officer, Peri Urban Group of Rural Councils, *Committee Hansard*, 11 March 2016, p. 15.

⁷⁹ Peri Urban Group of Rural Councils, *Submission 58*, pp. 6–8.

What must be considered in these areas is that an upgrade may result in increased employment in the region and reduction in commuting numbers, higher production of primary produce or livestock for Australian tables or export and a local economic stimulus that would inject more funds into government coffers over time.⁸⁰

2.66 Addressing the approach to funding transport infrastructure, Ms Lawrence stated:

In the dialogue on funding necessary and basic infrastructure and maintenance in the future, there needs to be acknowledgement of the important role of the rural and regional areas in agriculture, tourism, health, recreation, environment and water supply. Furthermore, there needs to be an acknowledgement that rural and regional areas still require significant infrastructure investment but that infrastructure investment will deliver returns over much longer time frames and through demographic change—reduction of disadvantage, greater employment et cetera.⁸¹

Rebalancing patterns of settlement

2.67 The potential for improved transport connectivity to allow for the strategic rebalancing of patterns of settlement was highlighted in the evidence presented to the Committee. Financial-Architects.Asia observed:

Over-prioritisation of inner city densification via apartment building, relative to alternatives which exist for lower land costs and enhanced land supply by following a policy of intelligently growing existing regional cities and towns, with adequate transport connectivity—**better balance between major cities and the regions is needed in this respect.**⁸²

2.68 Mr Torkel Patterson explored the potential for HSR to influence patterns of settlement, noting that the ‘rebalance’ of settlement was necessary to drive the ‘economic integration’ of south-eastern Australia, and reduce the strains

⁸⁰ Peri Urban Group of Rural Councils, *Submission 58*, p. 8.

⁸¹ Ms Paula Lawrence, Executive Officer, Peri Urban Group of Rural Councils, *Committee Hansard*, 11 March 2016, p. 15.

⁸² Financial-Architects.Asia, *Submission 27*, p. 1.

on the infrastructure of Sydney and Melbourne ‘which are going to be increasingly difficult to overcome’. He noted that both cities have:

... enormous tasks to make the existing infrastructure work, and then to burden that existing infrastructure with an additional 40 per cent population growth is going to be a very difficult task.⁸³

- 2.69 Mrs Emma Woods, representing the Australasian Railway Association, also noted that ‘one of the key benefits to high-speed rail is helping decentralise Australia’s population’:

The whole concept is that you commute up to an hour—and obviously with high-speed rail you can commute much longer distances—and it would mean that a lot of people could relocate to outside of Sydney. It would help Sydney or Melbourne or the other cities, and it would help boost the population growth in regional centres—which would definitely have a value-capture opportunity.⁸⁴

- 2.70 Mr Ian Bell believed that the effect of HSR would be to transform the relationship between major cities and regions, stating:

If we could redraw a map—take the example of Sydney—under the conditions of high-speed rail from Newcastle down to Canberra and show how shortened travel times would bring everything so much closer and, effectively, change the whole nature of how Sydney and its surrounding regions works, it would be an unbelievable transformation.⁸⁵

- 2.71 Mr Bell noted that:

... the Central Coast could come as close in time as Cronulla. Newcastle is a standout case—under a 30- to 40-minute transit, rather than currently close to three hours, or two hours by road ... Melbourne decentralisation into northern

⁸³ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, pp. 10–11.

⁸⁴ Mrs Emma Woods, General Manager, Passenger and Member Services, Australasian Railway Association, *Committee Hansard*, 4 March 2016, p. 20.

⁸⁵ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 22.

Victoria could be completed ... The 200-kilometre linear city of South- East Queensland could be integrated and its transport challenges remedied.⁸⁶

- 2.72 The ACT Government saw potential benefits in linking Canberra to Sydney by HSR, especially in coordination with the development of Badgerys Creek and international air travel:

With that whole corridor and its interactions there is a lot of pressure on Sydney airport at the moment, and it is clogging up. We see that we could have more international flights coming out of Canberra as we do not have a curfew. Only a very small proportion of Sydney is located right on the eastern seaboard. A very significant part of Sydney is located to the west, so accessing fast rail could get you to Canberra airport—or to Canberra, if that is your destination—quickly. We see that connection to that south-western part of Sydney as being very important.⁸⁷

- 2.73 Professor Sue Holliday indicated that HSR was essential to the process of decentralisation and regional development, stating:

If we wish to grow those peripheral cities, it needs to be managed in a conscious, planned way. But that initiative is unlikely to succeed without a dramatic shift in accessibility.

High Speed Rail (HSR) provides such a dramatic shift. Evidence in Europe, China and Japan has demonstrated that High Speed Rail is really an economic game changer. More than highways, and more than conventional rail, the fast travel times between centres make the difference in decisions to relocate land uses—both business and residential. If we wish to grow the peripheral cities around our major ones, then linking them together through a network of HSR is the most efficient way to achieve that shift.⁸⁸

- 2.74 Dr James McIntosh, of LUTI Consulting, highlighted both the agglomeration benefits of HSR and its potential for decentralisation— people being able to

⁸⁶ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 22.

⁸⁷ Ms Dorte Ekelund, Director-General, Environment and Planning Directorate, ACT Government, *Committee Hansard*, 4 March 2016, p. 24.

⁸⁸ Professor Sue Holliday, *Submission 74*, p. 2.

travel to central locations for work while living in regional centres that would themselves develop with increased population. He noted:

For instance, a high-speed rail to Newcastle and to Wollongong creates this amazing ability for Sydney to grow, without all the current land-use constraints, and it could be done in a very nodal area. Wollongong is a lovely place. It is a wonderful place to live. But with high-speed rail—the current rail system, whilst commendable, is quite slow. If you cut the trip to Wollongong down by, say, half, and you go from a rail speed of, say, 35 to 40 kilometres per hour, up to 80, then you bring in time Wollongong within the city limits.⁸⁹

2.75 Goulburn would have the same commuting times as suburbs in western Sydney, giving people access to affordable housing and lifestyle benefits:

If you then say, ‘Oh, well, we can save ourselves half or even two-thirds of our housing cost by moving from somewhere in Sydney to a similar sort of residence in Goulburn, the kids can go to a really nice country school and, actually, it is quicker to get to work from Goulburn than it was from Fairfield.’ So then you have these really quite bizarre scenarios where the Sydney that we all thought was within the metropolitan bounds is actually much, much bigger.⁹⁰

2.76 The benefits for regional centres was potentially just as profound:

... whilst one member of the family may commute into the city, what you will see are other aspects of these areas being able to be served more locally. You may see demand for other local employment and other services being attracted there, so you will need, obviously, increases in health, human services and education. As these cities grow, they attract more services and businesses will then go out there ... the reduction in travel time will reinforce why people moved there and the service economy can come with it, and it will build its own momentum.⁹¹

⁸⁹ Dr James McIntosh, Principal, LUTI Consulting, *Committee Hansard*, 7 March 2016, pp. 61–2.

⁹⁰ Dr James McIntosh, Principal, LUTI Consulting, *Committee Hansard*, 7 March 2016, pp. 61–3.

⁹¹ Dr James McIntosh, Principal, LUTI Consulting, *Committee Hansard*, 7 March 2016, pp. 61–3.

2.77 While the potential benefits of HSR for decentralisation are obvious, it was emphasised by some submissions, that these benefits were not inevitable. AECOM stated that:

International examples show that the introduction of HSR contributes to regional development, but this is not a guaranteed outcome. One key success factor [is] the nature of the economic activity in the region. Cities with knowledge economies that support high-end services were more likely to benefit than those with a mining, manufacturing or agricultural base. Intermediate locations equivalent to the larger regional centres along the east coast of Australia tended to attract population from surrounding communities, resulting in some cases in declining populations and economic activity in cities that did not have a HSR station.⁹²

2.78 Another critical factor identified by AECOM in the success of decentralisation was the commitment by governments for supporting regional communities to take advantage of the opportunities afforded by HSR:

Another key success factor of HSR in regional areas overseas is the presence of supporting land use and economic development policies and programs. HSR represents a step change in transport accessibility and investment. Local communities frequently don't have the resources or knowledge to be able take full advantage of the opportunities created by HSR. Proactive support by the HSR delivery agency and state/provincial government are important factors in leveraging HSR's contribution to regional development.⁹³

2.79 A similar point was made by DIRD:

HSR has the potential to positively impact regions through tourism, housing attractiveness, and business location—but this would be dependent on complimentary regional development policies.

As the [Australian Government's High Speed Rail Study] Phase 2 report notes, regional development from HSR is not guaranteed, although international experience demonstrates that HSR can contribute to regional development in combination with:

⁹² AECOM, *Submission 63*, p. 36.

⁹³ AECOM, *Submission 63*, p. 36.

- supportive and aligned regional development policies by governments
- metropolitan and regional planning policies for regional centres with HSR stations
- local business investment and tourism market patterns.⁹⁴

2.80 In evidence before the Committee, DIRD issued cautions about the impact of HSR in terms of agglomeration or decentralisation. The Department noted that:

... transport alone is not the only reason there is an agglomeration of industry or business in the centre of cities, and it is entirely possible that that will continue to occur whether we have high-speed rail or not.⁹⁵

2.81 The Department cautioned seeing HSR as ‘the sole solution. Certainly it will have an effect, but there are other drivers that might counter that effect.’⁹⁶

2.82 The Bureau of Infrastructure, Transport and Regional Economics (BITRE) noted that the trend in settlement patterns was towards greater centralisation and concentration, stating:

We have also done research over a number of years that has looked at that question and there are very few examples where government-driven decentralisation has worked. Albury-Wodonga has very much underachieved the population levels that were anticipated. You are essentially pushing against global forces that are leading to greater and greater centralisation in cities and also larger rural centres. Around the world there are greater concentrations in cities. It would be very difficult to get a city let alone eight cities between Sydney and Melbourne. You would need very great densities of people to make it all work. The only places where it has worked are Canberra

⁹⁴ Department of Infrastructure and Regional Development, *Submission 57*, p. 8.

⁹⁵ Ms Philippa Power, Executive Director, Policy and Research Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 8.

⁹⁶ Ms Philippa Power, Executive Director, Policy and Research Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 8.

and Townsville—Canberra for obvious reasons; Townsville largely because of defence concentrations.⁹⁷

- 2.83 BITRE observed that ‘there are different agglomerations and within the larger cities like Sydney there are different agglomerations for different types of work as well’:

The CBD attracts high-level service—banking, insurance and those sorts of services—but there are other parts of the city which attract different types of industry. Sometimes, they need to be connected and other times they do not. For instance, there are transport hubs in the western suburbs of Sydney and probably they do not need to talk very much to people in CBDs, but they do need to connect to ports and airports, for instance. It is about connecting the right levels of people.⁹⁸

- 2.84 Nonetheless, the momentum was towards greater concentration, not less:

There is a range of jobs that follow population density—retail typically but also a whole range of service sectors that follow low density. So you see those jobs distributed throughout suburbs and towns et cetera. There are certain jobs that concentrate in CBD areas that need very large densities and, increasingly, there are returns on scale that lead to a drive to have cities more and more dense.⁹⁹

High Speed Rail

- 2.85 Investigation of the introduction of High Speed Rail (HSR) to Australia has been going on sporadically since the late 1970s. The most recent government initiative culminated with the *High Speed Rail Study Phase 2 Report in April 2013*. The principal findings of the Report were that:

⁹⁷ Dr Gary Dolman, Head of Bureau, Bureau of Infrastructure, Transport and Regional Economics, Policy and Research Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 8.

⁹⁸ Dr Gary Dolman, Head of Bureau, Bureau of Infrastructure, Transport and Regional Economics, Policy and Research Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 8.

⁹⁹ Dr Gary Dolman, Head of Bureau, Bureau of Infrastructure, Transport and Regional Economics, Policy and Research Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 8.

- The HSR network would comprise approximately 1,748 kilometres of dedicated route between Brisbane-Sydney-Canberra-Melbourne.
- The preferred alignment includes four capital city stations, four city-peripheral stations, and stations at the Gold Coast, Casino, Grafton, Coffs Harbour, Port Macquarie, Taree, Newcastle, the Central Coast, Southern Highlands, Wagga Wagga, Albury-Wodonga and Shepparton.
- Once fully operational (from 2065), HSR could carry approximately 84 million passengers each year, with express journey times of less than three hours between Melbourne-Sydney and Sydney-Brisbane.
- The optimal staging for the HSR program would involve building the Sydney-Melbourne line first, starting with the Sydney-Canberra sector. Subsequent stages would be Canberra-Melbourne, Newcastle-Sydney, Brisbane-Gold Coast and Gold Coast-Newcastle.
- The estimated cost of constructing the preferred HSR alignment in its entirety would be around \$114 billion (in 2012 dollars).
- The HSR program and the majority of its individual stages are expected to produce only a small positive financial return on investment. Governments would be required to fund the majority of the upfront capital costs.
- If HSR passenger projections were met at the fare levels proposed, the HSR system, once operational, could generate sufficient fare revenue and other revenue to meet operating costs without ongoing public subsidy.
- HSR would substantially improve accessibility for the regional centres it served, and provide opportunity for – although not the automatic realisation of – regional development.¹⁰⁰

2.86 The purpose of HSR, as defined by the Phase 2 Report, is to provide an alternative form of travel capable of competing with air travel along the main east coast transport corridor. The Report investigated 'how HSR can play an effective role in meeting future travel demand by providing an

¹⁰⁰ *High Speed Rail Study Phase 2 Report*, April 2013, key findings.

alternative mode of transport that would be attractive for people to use'.¹⁰¹ The Phase 2 Report noted that 'most of the economic benefits (90 per cent) would accrue to the users of the HSR system'. Two-thirds of user benefits were attributed to 'business users travelling long distances, which reflects in part the relatively higher value of time attributed to business travellers compared to leisure travellers'. Externalities—indirect benefits—were expected to be 'relatively minor, accounting for only about three per cent of the benefits'.¹⁰²

2.87 The preferred alignment of the route followed a 'coastal alignment between Brisbane and Sydney followed by an inland alignment from Sydney to Melbourne, with spur lines to the Gold Coast and Canberra'.¹⁰³

2.88 The Phase 2 Report argued that 'the potential to attract private finance is limited':

An expected return of at least 15 per cent would be required at this stage of project development to be attractive to commercial providers of debt and equity to major infrastructure projects. HSR would fall short of this.¹⁰⁴

2.89 Value capture was seen as having limited value within the context of the development of HSR, making 'a small contribution at best'.¹⁰⁵

2.90 Regional development was seen as a possible, though not inevitable, outcome of HSR. The Phase 2 Report noted that international experience 'demonstrates that HSR can contribute to, but is not always a cause of, regional development'. It observed that 'HSR would significantly improve accessibility between capital cities and regional centres and would provide the potential for significant regional economic development'. It noted, however, that 'the extent to which regional towns and cities served by HSR take advantage of that potential would depend on':

¹⁰¹ *High Speed Rail Study Phase 2 Report*, April 2013, Executive Summary, p. 3.

¹⁰² *High Speed Rail Study Phase 2 Report*, April 2013, key findings.

¹⁰³ *High Speed Rail Study Phase 2 Report*, April 2013, Executive Summary, p. 4.

¹⁰⁴ *High Speed Rail Study Phase 2 Report*, April 2013, key findings.

¹⁰⁵ *High Speed Rail Study Phase 2 Report*, April 2013, Executive Summary, p. 28.

- Supportive and aligned regional development policies at the Commonwealth, state and local levels.
- The availability and appropriate application of investment.
- Metropolitan and regional planning policies that encourage and support new development in regional centres with HSR stations.
- The timing of HSR opening in relation to broad economic trends.¹⁰⁶

2.91 The Phase 2 Report also identified the possibility of ‘unintended consequences and impacts’ for regional areas, ‘such as causing small regional cities to lose jobs and residents to nearby regional centres with HSR stations’. Potential benefits included ‘improvements in regional productivity, changes to tourist spending patterns and, for regions closer to the capital cities, changes to commuting patterns’.¹⁰⁷

2.92 The Phase 2 Report identified agglomeration benefits as the principal outcome for urban areas, noting that such benefits might arise in a number of ways, including:

- It is easier to match workers to specific vacancies and to find employees with appropriate skills.
- It enables greater specialisation of supply, leading to more efficient production of goods and provision of services.
- It leads to knowledge spill-over (i.e. greater opportunities for formal and informal contact through increased accessibility).
- Employees have a greater choice of jobs.
- There is more competition between companies and between individuals.¹⁰⁸

2.93 The Phase 2 Report has come in for criticism from people with alternative visions for high speed rail in Australia. For one, Dr Adams cited HSR as a victim of the ‘invisible worm’ (see p. 20):

The High Speed Rail Study that should have been done was, ‘What is the case for taking out a call option over the corridor?’ But it got distorted by this

¹⁰⁶ *High Speed Rail Study Phase 2 Report*, April 2013, Executive Summary, p. 36.

¹⁰⁷ *High Speed Rail Study Phase 2 Report*, April 2013, Executive Summary, p. 37.

¹⁰⁸ *High Speed Rail Study Phase 2 Report*, April 2013, Executive Summary, p. 37.

invisible worm called ‘the guidelines’ and ended up as, ‘What is the value of building high-speed rail?’ because the guidelines do not allow assessment of call options. They only allow assessments of base case—‘Don’t build the project and people live in this way’—and project case—‘Build the project and they live in exactly the same way as the base case.’ They do not allow an assessment of the call option, and the terms of reference went the traditional route, because the worm got to them.¹⁰⁹

Central Japan Railway

2.94 Contradicting the Phase 2 Report’s assumptions about the purpose of HSR, Mr Torkel Patterson emphasised that HSR was not just about faster travel times; it was first and foremost about economic transformation—about strategic decentralisation and creating cities in the corridor between Sydney and Melbourne.¹¹⁰ He told the Committee:

If you just want to do transportation, do not build high-speed rail. Do not do it because you already have good intercity transportation. But if you want a transformation, if you want to connect and improve the region, connect them and make this economy of Sydney and Melbourne more competitive globally internationally, then high-speed rail is what can let you do that.¹¹¹

2.95 Mr Patterson highlighted the development of HSR in Japan as an example of strategic decentralisation and regional development:

In the experience of Japan, firstly, it will increase land values—putting forward shinkansen. It will increase regional development. How you capture the value of that—I cannot speak to that in particular. I do not have data on Japanese increase in tax, other than some of the local examples that were mentioned here, but I can say that in the publicly available record there are many instances of increase in land values surrounding stations that have occurred.

¹⁰⁹ Dr David Adams, Director, Strategex Pty Ltd, *Committee Hansard*, 7 March 2016, p. 12.

¹¹⁰ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 4.

¹¹¹ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 3.

Secondly, getting back on the regional development point, areas have shifted the population densities away from Tokyo into other areas. There are several instances of businesses that are also in here that show how businesses are also moving out along the new Hokuriku shinkansen, which just opened last year. They started moving once the line was announced and committed to by the government. The thirst for high-speed rail and the fact that Japan is continuing to build—and another new line will be open this year to Hakodate up in Hokkaido.¹¹²

2.96 Mr Shoshei Yoshida, General Manager of the Central Japan Railway Company, highlighted both the connectivity and agglomeration benefits of HSR and how these might apply in Australia:

Basically, big cities like Tokyo, Osaka, Sydney and Melbourne tend to attract more people. But the Tokaido Shinkansen expanded the Tokyo area by unifying the regions. Also, in the newer case, in Hokuriku Shinkansen, the population of most big cities is around 400,000. That is much less than around Sydney and Melbourne, and even less than for Newcastle, I think. So we are extending the Shinkansen network around Japan, but now the population is not so big—those cities do not have as much population as Sydney, Canberra, Melbourne or Newcastle, but they are attracting more people than other cities.¹¹³

2.97 The highlighted benefits of HSR for Japan included:

- Redistribution of population from Tokyo to regional centres;¹¹⁴
- Development of new population centres around HSR stations in previously undeveloped areas;¹¹⁵

¹¹² Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 3.

¹¹³ Mr Shoshei Yoshida, General Manager, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 4.

¹¹⁴ Mr Shoshei Yoshida, General Manager, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, pp. 2–3.

¹¹⁵ Mr Shoshei Yoshida, General Manager, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, pp. 2–3.

- Significant property value uplift in regional centres;¹¹⁶
- Greater connectivity between Tokyo and regions;¹¹⁷
- Providing an effective alternative to aviation on major travel routes;¹¹⁸ and
- Increased demand for buildings, services and employment—‘hotels, restaurants, apartments, shopping centres and office buildings’ in HSR connected regional cities.¹¹⁹

2.98 Mr Patterson saw HSR as a solution to the expected population growth in Australia’s major cities, stating:

If you do nothing, the cost of supporting that infrastructure is going to be much more expensive than this opportunity you have to spread this population out. Yes, it sounds like these cities are small, but as you build them—I hate to sound like the baseball game—they will come. That is the case of Japan’s example.¹²⁰

2.99 Mr Patterson also emphasised the need for and viability of private sector investment in HSR:

There is ample room in this project, from our experience in the United States in developing high-speed rail, for the private sector to be involved. To what extent the private sector would be involved is a matter of negotiation, but that study [the Phase 2 Report] was based on the government paying everything at

¹¹⁶ Mr Shoshei Yoshida, General Manager, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, pp. 2–3.

¹¹⁷ Mr Shoshei Yoshida, General Manager, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 4.

¹¹⁸ Mr Yasuhito Takahashi, First Secretary, Embassy of Japan, *Committee Hansard*, 1 March 2016, p. 1; Mr Shoshei Yoshida, General Manager, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 8.

¹¹⁹ Mr Yasuhito Takahashi, First Secretary, Embassy of Japan, *Committee Hansard*, 1 March 2016, p. 2.

¹²⁰ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 4.

an amount per year that the government could swallow—about \$500 million a year. That resulted in a very long time line.¹²¹

2.100 Citing recent HSR developments in Texas, Mr Patterson advised the Committee:

In the case of Texas, which is a completely private project with no US government investment or equity, no grant funding—there would be lower-cost federal loans and Japanese loans applied to the project, but no payout of government money—that project works because of the up-lift in property values that is expected along the route. So the developers are going to capture that property up-lift for themselves and pay for the entire railroad. It is really an extension of their property development plans.¹²²

2.101 Regarding the route for the proposed HSR in Australia Mr Patterson suggested that ‘Newcastle to Melbourne is a coherent, good quarter, and the ridership between Newcastle and Sydney would do a lot to drive the success of the project significantly,’ but took the view that extending the line to Brisbane, ‘while a nice idea politically, is not where Australia is in its development at this juncture’.¹²³ He supported the idea of routing the line through western Sydney rather than the CBD, stating:

If you are going to go to Newcastle it might make more sense to go through Western Sydney. It would be cheaper. You could have either a train service originate in the CBD in Sydney and then come out to the west, and then proceed in either direction, or you could have a different link with a connection across the platform. So people could have one shuttle train every 10 minutes to Parramatta and then they would get off and go either north or south. That is another alternative. You would not necessarily need to have a high-speed rail, because of the short distances, and the people would not be that inconvenienced by it. Although, people who work in the CBD might say that they do not want to do that. But if you think about the overall traffic flow

¹²¹ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 5.

¹²² Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 5.

¹²³ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 5.

and what kind of ridership you are going to get, it might make more sense to put it in the Western Suburbs. You would create the value-uplift on the property. Where you put this major No. 1 station you will have another Sydney centre—it will be Nagoya. It will be like Shin-Yokohama. It will be your Shin-Yokohama. You will have another large city centre that will be built there.¹²⁴

The Hon Tim Fischer AC

2.102 High speed rail advocate and former Deputy Prime Minister, the Hon Tim Fischer, was also critical of aspects of the Phase 2 Report. Noting the successful implementation of HSR in other countries, he highlighted the ‘poison pills’ of the two dead-end spurs in the route proposed in the Phase 2 Report. He stated:

No system in the world builds dead-end spurs along high-speed rail corridors ... I recommend that you need to challenge the concept of dead-end spurs in a through high-speed rail corridor with whatever system you go with. For maglev it would be almost impossible ...¹²⁵

2.103 Mr Fischer proposed the use of tunnels through the Brindabellas to eliminate the ‘Yass kink’ and allow the HSR line to pass directly through Canberra. Aside from eliminating the spur line, the tunnels would shorten the direct journey between Sydney and Melbourne by five minutes.¹²⁶ Mr Fischer noted that ‘tunnelling for the Italians or the Japanese ... is not the high-cost showstopper that it was last century; tunnelling in the 21st century is something that can happen’.¹²⁷ He also argued forcefully for rail connections to Melbourne Airport at Tullamarine, ‘the only fair dinkum

¹²⁴ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 5.

¹²⁵ The Hon Tim Fischer AC, *Committee Hansard*, 11 March 2016, p. 26.

¹²⁶ The Hon Tim Fischer AC, *Submission 52*, p. 4.

¹²⁷ The Hon Tim Fischer AC, *Committee Hansard*, 11 March 2016, p. 28.

non-curfew capital city mainland airport in this country', on standard gauge:

128

The more powerful case for standard gauge rests on the concept of HSR being (as in the rest of the world) in standard gauge (except to date one link in Russia) and so Southern Cross would help anchor the HSR project by allowing a shuttle to operate city to airport but some trains to go on from Tullamarine to the northbound Mickleham exit corridor of Greater Melbourne and head to Canberra and Sydney. Obviously the reverse direction train traffic would also apply. The actual hub might best be located at North Melbourne.

In other words some HSR trains would go non stop to Canberra from Melbourne and some would loop through the elevated station that space has been allowed for in the curve in front of the main Tullamarine terminal building, others would be short shuttle...

Ultimately in a dream world, Tullamarine as Australia's only genuine and sustainable NO curfew airport will need: A) Light rail extension in standard gauge of the Airport Tram route B) Standard gauge HSR and shuttle C) Broad gauge new line to Sunbury and thence to Bendigo for regional and shuttle.¹²⁹

2.104 With regard to the development of the Sydney end of the HSR line, Mr Fischer suggested that:

The Homebush concept for HSR terminal hubs, especially Melbourne Brisbane services has some merit but needs to be investigated further, at this stage a high speed entry to Sydney Central from Glenfield could handle the first 25 years of Melbourne Sydney and also with a high speed triangle at Glenfield, could also handle Sydney Newcastle and onto Brisbane with a less than ten minute add on versus direct via tunnel Sydney Central due north to Mona Vale Parkway Hub and thence straight to Gosford.¹³⁰

2.105 Mr Fischer emphasised the regional development opportunities presented by HSR, observing that:

¹²⁸ The Hon Tim Fischer AC, Committee Hansard, 11 March 2016, p. 27.

¹²⁹ The Hon Tim Fischer AC, *Submission 52*, p. 3.

¹³⁰ The Hon Tim Fischer AC, *Submission 52*, p. 4.

It would be in one masterstroke a massive boost to decentralisation without doing anything else at a place called Cosgrove near Shepparton at the Wodonga Logic hub just west of Albury at the East Wagga airport where there is already a reservation in anticipation made and so forth, especially if there was a station at Tumut. In saying that, not every train—in fact one in 10 trains—will stop there. That is not an issue; that is not a problem. Suddenly they would drop from no train service and a seven- or eight-hour car drive from Wagga to Sydney or Melbourne to one hour 20 minutes and one hour 40 minutes, respectively—one hour 20 minutes to Melbourne, Southern Cross or thereabouts; and one hour 40 minutes through Canberra to Sydney.¹³¹

- 2.106 Mr Fischer noted that the key to the viability of HSR was reducing travel time to below three hours—‘the witching time frame for people who do not wish to go through airports but who just go to Gare du Nord and catch the two hour-15-minute service to London—St Pancras—and so forth’. He observed that during his time as Australian Ambassador to the Holy See, ‘the Italians dropped the Rome-Milan service from three hours 40 minutes to two hours 55 minutes and opened a new tunnel between Bologna and Florence as part of that’. He also noted that the Italians had introduced competition on the line, running both a government-owned and privately-owned service, demonstrating that ‘you can even have two different companies operating on high-speed rail infrastructure’. He observed that it ‘became a much more competitive situation and greatly improved service for the passengers using this system’.¹³²
- 2.107 Mr Fischer stated that ‘Australia needs HSR and soon’, and that ‘it is best delivered by a JV [joint venture] involving Governments and Private Enterprise with a direct route concept, involving steel wheel on steel rail of standard gauge’.¹³³ He noted that ‘after fifty years of safe and very profitable operation of Shinkansen HSR in Japan, thirty years plus of TGV in France, HSR is not rocket science, it is doable in Australia’.¹³⁴ He fully supported land value capture.¹³⁵

¹³¹ The Hon Tim Fischer AC, *Committee Hansard*, 11 March 2016, p. 28.

¹³² The Hon Tim Fischer AC, *Committee Hansard*, 11 March 2016, p. 29.

¹³³ The Hon Tim Fischer AC, *Submission 52*, p. 4.

¹³⁴ The Hon Tim Fischer AC, *Submission 52*, p. 1.

Mr Peter Knight

2.108 Transport expert, Mr Peter Knight, also had a radically different vision of HSR to that in the Phase 2 Report. His proposal for ‘a private joint high-speed rail, very fast train’, focussed upon the redistribution of population away from Sydney and Melbourne. He did not believe the doubling of the population of Sydney and Melbourne was acceptable. His plan provided that ‘some 10 million’ of the projected 24 million population increase would ‘live in the regions between these cities; thereby, reducing congestion and pollution and maintaining liveability’.

2.109 Mr Knight envisaged new HSR stations being built ‘in regional areas between Melbourne, Sydney and Brisbane’. Land would be purchased to form the core of ‘six new cities with populations eventually growing to 1 million people’. He envisaged ‘more than 2 million people ... living in two new cities on either side of Melbourne, Sydney and Brisbane, all connected by HSR, thereby reducing major city population growth and congestion’. New cities would be built ‘up to 2-300km from major cities and commuters would be able to travel by HSR to CBDs in less than 60 minutes’. Express HSR trains ‘would connect Melbourne, Sydney and Brisbane passengers in 3 hours’. Mr Knight noted that ‘road and air cannot provide this redistribution of population, reduction of congestion and maintenance of liveability value added’. He also noted that if done correctly, HSR could potentially meet much of its own costs through value capture:

Many new regional cities would substantially increase the capital value capture of the private HSR company. It would mean that the beneficiaries of the value added would pay for a large part of HSR construction.¹³⁶

2.110 Mr Knight proposed routing the HSR line through Gippsland, to the north-east of Melbourne, rather than directly to the north. He explained:

The reason for going through Gippsland rather than going north through Albury, essentially, relates to: what is the purpose of high-speed rail at all? To me, it is to try to reduce the increase in population in Melbourne and Sydney

¹³⁵ The Hon Tim Fischer AC, *Committee Hansard*, 11 March 2016, p. 28.

¹³⁶ Mr Peter Knight, *Submission 48*, p. 5.

and Brisbane—Melbourne, in particular, in this case. If it goes north, I cannot, in my own mind, see a million people living in Albury, 300 miles inland. I could see a million people, easily, living in Gippsland. That is the starting point, I suppose.

The second point is that if you take the high-speed rail via Melbourne and Dandenong, you have a very rich possibility of increasing value capture.¹³⁷

2.111 Mr Knight proposed placing the HSR line in trenches that would then be built over, possibly housing ‘half a million people above the railway, between Melbourne and Dandenong’.¹³⁸ In this way, HSR ‘would create large value added and value capture on properties located above and adjacent to it ... The property would be relatively low capital cost and could be sold for 100% or more than cost, yielding a large value capture’. Mr Knight envisaged the railway and property businesses as ‘separate markets with different customers, but combined within one private company’.¹³⁹ He believed that ‘a private enterprise HSR has the potential to cost less, be built quicker and be more convenient and valuable to customers than a government project’.¹⁴⁰

2.112 Mr Knight thought that the ‘outstanding benefits of HSR to Australia is the redistribution of population increase and the lessening of exponential growth of congestion of the major cities’. He noted that ‘construction of the railways would increase non-mining investment on the east coast, stimulate economic growth and create many more jobs’, and that ‘higher growth would ease the adjustments necessary for budget repair’. He concluded:

These indirect increases in value added created by the railways are captured in the hands of the people, businesses and government (through taxes on higher income). The benefits lie outside the railway company. Indeed, value capture is not really a railway issue. It is a future of Australian prosperity and

¹³⁷ Mr Peter Knight, *Committee Hansard*, 11 March 2016, p. 35.

¹³⁸ Mr Peter Knight, *Committee Hansard*, 11 March 2016, p. 35; Mr Peter Knight, *Submission 48*, p. 4.

¹³⁹ Mr Peter Knight, *Submission 48*, p. 3.

¹⁴⁰ Mr Peter Knight, *Submission 48*, p. 3.

liveability issue within the context of a doubling of the population. Railways are a means to an end.¹⁴¹

Centurion Group

2.113 The Centurion Group, a consortium proposing the development of HSR in Australia utilising Chinese finance and technology, is advocating the staged development of a HSR network based on private sector funding and value capture. Dr Patrick Yu, CEO of the Centurion Group, emphasised that the project was not just about a rail line—it ‘contemplated urban renewal, urban regeneration and greenfield sites’. Centurion was ‘viewing this from infrastructure, urban planning, economic growth and social connectivity’ perspectives, with the potential to turn ‘Wollongong to Newcastle into a city with a population of 10 million, a megacity, to be competitive on a world scale with high-quality, reliable connectivity’.¹⁴²

2.114 The first stage of the Centurion proposal is a bid for the completion of the Maldon-Dombarton rail link and the Port Kembla container terminal, ‘expanded to include a passenger railway line between Wollongong and Campbelltown to alleviate the congestion on the Appin Way’:

This would take the freight off the Illawarra line and would also assist by increasing the speed from Wollongong to Redfern to 40 minutes by putting in an eight-kilometre tunnel to avoid all the switchbacks which currently exist between Waterfall and Stanwell Park.

Fundamentally, you will have passenger connectivity from Redfern down to as far as Shellharbour at high speed and you will also have medium-speed passenger services from Wollongong to Campbelltown. The Picton to Campbelltown section will be pure high speed.¹⁴³

¹⁴¹ Mr Peter Knight, *Submission 48*, p. 5.

¹⁴² Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, pp. 37–8.

¹⁴³ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 33.

2.115 The improvement in connectivity would mean that travel ‘non-stop from Wollongong to Redfern would be 35 minutes’, bringing Wollongong ‘to about where the Sutherland shire is in terms of transport connectivity’.¹⁴⁴

2.116 Just as importantly, the project would enable the Macarthur plan, the construction of approximately 100,000 homes.¹⁴⁵ The rail link would create the connectivity which enabled the construction of new suburbs, while the new housing generated the funds to construct the rail link. Dr Yu noted:

It is from the generation of those new homes, from our enabling transport, that the plan is to have a value-creation levy – charge, contribution – from those new homes.¹⁴⁶

2.117 Centurion estimated that the revenue derived from property sales, approximately \$3.75 billion, would cover the cost of the project. Dr Yu stated:

We have been quite conservative. We have assumed each house to be only 150 square metres – and that is very small – and we have applied \$250 per square metre. In reality houses are about 250 to 300 square metres, but let us say 200. So we have been fairly conservative and our numbers work at \$250 a square metre assuming each residence is 150. I believe that is a low number.¹⁴⁷

2.118 With this revenue available, Centurion would be able to leave the fare box to the railway’s operators. Ms Annie Chatfield, Chief Operating Officer of the Centurion Group, stated:

We were very fortunate that our funders were able to take a very long-term view on funding this particular route. We do not intend at all to touch the fare

¹⁴⁴ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 33.

¹⁴⁵ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 33.

¹⁴⁶ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 34.

¹⁴⁷ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 34.

box. The fare box would still sit under state government control. We do not see the fare box as necessary to fund this project.¹⁴⁸

2.119 This project would represent the ‘the first stage of the Canberra to Newcastle high-speed train because the Picton to Campbelltown section, which is 12 kilometres, will be built as pure 300-kilometre high-speed track’.¹⁴⁹ The second stage, ‘the most valuable’, was Hornsby-Wyong, ‘which will go a long way to negate the issues and traffic congestion of the F3 because it deals with the Hawkesbury’.¹⁵⁰ This would connect to Central via a tunnel, the proposed alignment being ‘Hornsby, Circular Quay, Central, Badgerys Creek, Campbelltown to the Hume corridor’. While harder and more expensive than other options, tunnelling was considered the best and least disruptive option.¹⁵¹

2.120 Dr Yu emphasised the importance of building HSR in stages. He stated:

It is actually impractical to build the whole thing in one go. There are simply not enough engineers. There are simply not enough human resources in Australia to do that. If we did that we would increase the cost of construction. We would have a big bump in costs for supply materials. We would murder the construction industry. We would because we would suck up steel, concrete, people and engineers. There would be no-one left to do anything else but our project.¹⁵²

2.121 In conclusion, Ms Chatfield emphasised that ‘a piece of infrastructure like this is national and international, and bipartisan’:

It actually brings forward something that I think everyone recognises as necessary. If you have each individual state trying to build various parts of high-speed all by themselves, then you end up with a bit of a mess. Whilst we may be talking in this room about something that is limited to New South

¹⁴⁸ Ms Annie Chatfield, Chief Operating Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 34.

¹⁴⁹ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 36.

¹⁵⁰ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 35.

¹⁵¹ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 36.

¹⁵² Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 36.

Wales, we are also looking—just for information—at a project in Queensland that also involves some high speed. I think this is an opportunity to actually look at how you build such nation-building infrastructure across the board and not just individually, building it state by state, bit by bit. That is where, personally, I would see the federal government having an enormous influence on how this gets rolled out.¹⁵³

Spacecon

2.122 Another detailed proposal for high speed rail development was presented by the Spacecon consortium. With access to Korean technology, experience and finance, Spacecon proposed the development of HSR in the south east of Australia with a view to ultimately linking the mainland capitals between Brisbane and Melbourne over 20 years.¹⁵⁴The advantage of HSR was that it would provide ‘for solutions to urban overcrowding’ and ‘open up the spaces between our cities and make them far more valuable in terms of the building structures around them, and also make them more affordable so people can live within a reasonable time of Sydney, Melbourne, Canberra and, indeed, Brisbane’.¹⁵⁵The advantages of Korean technology was that ‘it is tried and proven’, and that the ongoing development of HSR technology in Korea provided ‘futureproofing’—incremental development of higher speeds and new technologies to ensure that HSR could meet future demands for faster trains and better technology¹⁵⁶.

2.123 The total proposal presented to the Committee provided for a development in three stages:

Our first stage is Sydney to Newcastle tunnel, and that is underground from Central in Sydney, through to Newcastle via tunnel. That is 140 kilometres.

¹⁵³ Ms Annie Chatfield, Chief Operating Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 35.

¹⁵⁴ Ms Kerry Chikarovski, Registered Government Relations Consultant, Spacecon Pty Ltd, *Committee Hansard*, 28 October 2016, p. 46.

¹⁵⁵ Ms Kerry Chikarovski, Registered Government Relations Consultant, Spacecon Pty Ltd, *Committee Hansard*, 28 October 2016, p. 32.

¹⁵⁶ Ms Kerry Chikarovski, Registered Government Relations Consultant, Spacecon Pty Ltd, *Committee Hansard*, 28 October 2016, p. 33.

Stage 2 is Sydney to Canberra via Western Sydney Airport, which would be a partial tunnel. Stage 3 is Newcastle to Brisbane.¹⁵⁷

- 2.124 In stage one, the consortium proposed to ‘engineer, deliver and operate an end-to-end infrastructure solution by using value-capture to fund and develop five smart cities, connected via high-speed rail and car tunnel, between Central Station and Newcastle’. Each smart city would ‘cover 100 hectares and accommodate 40,000 people’. The smart cities were the key to the development, providing both a solution to the problem of urban development and a way of financing the project through value uplift and value capture. Each city would be ‘a totally planned community that is connected, physically and technologically, to facilitate community-based living; collaboration and innovation; integrated; affordable housing; and the celebration of ethnicity’. They would be green cities, utilising ‘zero waste technology; waste burnt at high-temperature to produce electricity; high-speed rail operational costs subsidised through the sale of excess electricity; solar harvesting; green building materials; and other initiatives’.¹⁵⁸ It was noted that as part of its project, Spacecon would be actively implementing green energy:

The impact on existing power infrastructure for this rail line will be minimal, because the aim is to generate their own power. Part of smart cities ... is generating your own power from waste, capturing CO2 emissions and reconvertng them into other products.¹⁵⁹

- 2.125 The Korean city of Songdo was suggested as a model for smart city developments.
- 2.126 Investment in virtual engineering systems, such as building information modelling, would ensure cost-effectiveness and efficiency in the design, construction and operation of the proposed line and related infrastructure. Virtual engineering would ensure ‘a large amount of investment in mistakes

¹⁵⁷ Mr John Moore, CEO, Forrester Cohen International Group Limited, *Committee Hansard*, 28 October 2016, p. 40.

¹⁵⁸ Mr John Moore, CEO, Forrester Cohen International Group Limited, *Committee Hansard*, 28 October 2016, p. 40.

¹⁵⁹ Mr Andrew Mounas, Adviser, Spacecon Pty Ltd, *Committee Hansard*, 28 October 2016, pp. 35, 49.

not made'.¹⁶⁰ Real time collection and analysis of operating data would mean greater accuracy and flexibility in scheduling. IT consultant, Mr Jeremy Harkins explained:

We can put 20,000 people in there, run a simulation and see the little trains running around the tracks here and actually see how it is affecting our stations as we go. So once we have done this, it lets us see to a greater level of detail more quickly. Rather than two schedules in a year or in six months, I can do about 20 in an afternoon, which means iteration leads to better outcomes. What is more, this can be used for project engagement, where I can get down to street level and actually see how my system is being affected both from a macro scale and from a micro scale.

There is also a range of extra things—there are analytics in here, a huge amount of data; there can be live data. We can link this up to the actual system so we can have a simulated mode as well as a virtual mode where we are showing the actual state of the tracks—where our trains are, how many people have scanned in at which Opal points to which stations—and we can actually respond to emergencies much better and quicker because of tools like this.

In terms of the high-speed rail and the smart cities, which we are going to be heading towards, these tools are going to be vital in the next five to 10 years in how all of our population interact with both our infrastructure and our smart cities.¹⁶¹

2.127 The proposed Sydney to Newcastle tunnel was 'a two-layer tunnel that will carry two high-speed rail train tracks; three lanes of road traffic, with tidal flow management; and utilities and accommodation. The tunnel will be up to 150 metres below ground.'¹⁶² The tunnel proposal ensured that the HSR would have little environmental impact and little impact on existing infrastructure, while easing road congestion on the existing route. It was noted that 'the cost of tunnelling has come down' and that tunnelling had become 'quite automated'. In addition, each station would be like an

¹⁶⁰ Mr Andrew Mounas, Adviser, Spacecon Pty Ltd, *Committee Hansard*, 28 October 2016, p. 38.

¹⁶¹ Mr Jeremy Harkins, ineni Realltime, Smart Cities Consultant for Spacecon Pty Ltd, *Committee Hansard*, 28 October 2016, p. 39.

¹⁶² Mr John Moore, CEO, Forrester Cohen International Group Limited, *Committee Hansard*, 28 October 2016, p. 40.

underground city with an underground hinterland over the top of that.¹⁶³ The estimated costs of the project were as follows:

The estimated cost to build five smart cities, at 40,000 people each, is approximately \$25.7 billion. The land purchase and land development—that is, the infrastructure development on that land to make it viable for a smart city—is about \$250 million. The high-speed rail costs, including the train sets, are \$30 billion. The revenue expected to come from those smart cities is around \$97.5 billion. This leaves a net revenue, before tax, of approximately \$41.5 billion.¹⁶⁴

2.128 Mr John Moore, a consultant to Spacecon, thought that ‘our estimates, that we have undertaken quite vigorously, show that there is significant profit in it to establish both infrastructure and cities’. He concluded that:

We have a great opportunity to shape the funding and participation in infrastructure projects in Australia. Value creation, or value capture, enables all parties; the federal, state and local governments; the technology providers; the consortium; and the community to have agreed and predetermined benefits. This proposal is the delivery and operation of high-speed rail and road infrastructure and smart cities.¹⁶⁵

CLARA

2.129 Consolidated Land and Rail Australia (CLARA) presented a plan to ‘build eight new, smart, sustainable greenfield cities in between Sydney and Melbourne’ linked by HSR. CLARA’s Chairman, Mr Nick Cleary stated:

These cities will be home to approximately 250,000 to 400,000 people in each of those cities. They will ultimately accommodate around about 2.8 million to 3.2 million people over 35 to 50 years of buildout. There is a wonderful opportunity here for us to harness the great inland and open up the opportunity that exists in our regional areas—and the potential that exists within those regional areas—but also, more importantly, to create urban

¹⁶³ Mr Andrew Mounas, Adviser, Spacecon Pty Ltd, *Committee Hansard*, 28 October 2016, p. 34.

¹⁶⁴ Mr John Moore, CEO, Forrester Cohen International Group Limited, *Committee Hansard*, 28 October 2016, p. 40.

¹⁶⁵ Mr John Moore, CEO, Forrester Cohen International Group Limited, *Committee Hansard*, 28 October 2016, p. 40.

environments that enhance the liveability, accessibility and affordability for our citizens and our growing population.¹⁶⁶

2.130 Mr Cleary noted that CLARA was often referred to as a high-speed rail plan. He preferred to see it as a 'cities plan and as a population strategy, or part of a population strategy, for our nation':

We are looking to rebalance the Australian settlement. We are keen to do that because the congestion, overcrowding and unaffordability are affecting liveability within our major capital cities—Sydney and Melbourne.¹⁶⁷

2.131 HSR was, in effect, the means to an end:

Building a high-speed rail, depending on the technology we use and ultimately decide to roll out, will place our cities—by that I mean our first two cities out of Sydney and our first two cities out of Melbourne—within a short commute of 22 to 35 minutes out of the CBDs of both Melbourne and Sydney. Ultimately, even our farthest away city, being in the Henty area in New South Wales, in between Albury and Wagga, would still be no further than one hour from Sydney or Melbourne. If we were to use the Japanese technology of magnetic levitation and the world's fastest train, with a commercial speed of 504 kilometres per hour, it would place Sydney to Melbourne no further than 1 hr 59 m apart. We think that is a game-changer and it is a definite conversation-changer as to where people will choose to live.¹⁶⁸

2.132 Mr Theo Scherman of Hitachi Consulting Australia, a partner organisation, noted that 'high-speed rail basically makes the entire network or corridor accessible...you are not building eight individual cities; you are building them as one city with different, specialised components'.¹⁶⁹

¹⁶⁶ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 1.

¹⁶⁷ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 1.

¹⁶⁸ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 1.

¹⁶⁹ Mr Theo Scherman, Director, Solutions Architect, Hitachi Consulting Australia, *Committee Hansard*, 28 October 2016, p. 3.

2.133 The key to the CLARA proposal was the funding model. CLARA was ‘seeking no capital from state or federal governments, or from our cities, to build the high-speed rail’:

Our value-uplift model is about vacant farmland and turning it into residential allotments, getting a significant up-lift from those residential allotments, which...is adequate enough to provide for the civil infrastructure, the major infrastructure and the high-speed rail infrastructure, as well as giving a commercial return back to CLARA and its investors.¹⁷⁰

2.134 The proposed route features smart cities in the Southern Highlands, Goulburn and Yass, with a direct line to Canberra that would see some services operate direct to Canberra and others by-pass the city. The route continues to Gundagai, and southern NSW, with spur lines servicing Albury and Wagga Wagga (the rationale being that these are already substantial centres). The route continues to Tocumwal and Shepparton in Victoria. The Melbourne to Shepparton leg has been identified as the first stage for development.¹⁷¹ The route would be anchored at each end in the CBDs of Sydney and Melbourne.¹⁷²

2.135 The concept behind the development of each city is that an ‘anchor tenant’ would bring employment to the city, creating a critical mass from which each city would grow. Mr Cleary explained:

We have been in discussion with some global technology companies, as well as some other companies. To start with, as our cities come on line, we need a significant anchor tenant, which we agree with. That anchor tenant has to provide 5,000 to 10,000 jobs. Once we have 10,000 jobs in the heart of our city, that means a population of around 25,000 people. That population of 25,000 people will be enough for a Coles; a Woolies; an Aldi; a 50-bed hospital; a school, both primary and secondary; and the potential for a university. Given the smart city technology, there is the capacity for the research opportunity.

¹⁷⁰ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 2.

¹⁷¹ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, pp. 4–5.

¹⁷² Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 6.

We think the educational institutions will absolutely go there—and straightaway we have got that heart. But it does come down to those first 10,000 jobs. We have no doubt about that. All the studies with the players we have been talking to across the world show that the key is to have that job driver at the heart.¹⁷³

- 2.136 CLARA has already begun the process of land procurement which lies at the basis of its proposal, having secured some 40 per cent of the land needed for its cities (around 30 000 acres) with another 16 000 acres under negotiation.¹⁷⁴ This procurement does not include the corridor for the railway, which would be acquired in conjunction with state governments, but with CLARA paying for it.¹⁷⁵
- 2.137 CLARA envisaged the principal role of government within this process as setting the policy foundation for the plan through a population strategy and coordinating the environmental assessment process across jurisdictions to prevent duplication of effort.¹⁷⁶

RMIT/CSIRO

- 2.138 A similar conception of the future has been presented by RMIT and CSIRO. The focus of their studies has been the creation of new regional cities, funded by land value capture, connected to each other and the capitals by HSR. The purpose is to find a way to better distribute the expected population growth in Sydney and Melbourne in the next 50 years.¹⁷⁷ At the core of these new developments would be a new paradigm in sustainable development—new ways to design and create cities rather than continually

¹⁷³ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 6.

¹⁷⁴ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 3.

¹⁷⁵ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 5.

¹⁷⁶ Mr Nick Cleary, Chairman, Consolidated Land and Rail Australia, *Committee Hansard*, 28 October 2016, p. 9.

¹⁷⁷ Professor Martyn Hook, Dean, School of Media and Communication, RMIT University, *Committee Hansard*, 18 October 2016, p. 1.

trying to retrofit new concepts and technologies to old cities. In turn, these new cities would take pressure off existing cities, giving them greater scope for renewed development.¹⁷⁸

2.139 Professor Martyn Hook, of RMIT, noted that:

One of the things we are really interested in is how the creation of these new cities from scratch would allow us to build from scratch using new technologies, allowing them to be immediately connected into the NBN, allowing them to immediately be operating off a new base understanding around environmental controls and thermal capacity.¹⁷⁹

2.140 He also highlighted ‘the opportunity here in these new settlements for increased housing choice’:

The reality is that that there is a core paradigm of the quarter acre block and the single dwelling, which remains despite evidence that that is not in fact the case. We are in a situation whereby if we could provide new different densities in new places which are provisioned correctly with adequate parks, social spaces and environments that draw on what a regional lifestyle could look like, but do so through a different housing model, then we see this as being beneficial to increasing the opportunities for choice.¹⁸⁰

2.141 The researchers were also interested in ‘the manner in which these new cities are going to reduce the number of vehicle kilometres travelled’:

The benefits that then sit alongside that—the externalities of that, whether they be emissions, accidents or the various constraints that might sit around

¹⁷⁸ Professor Martyn Hook, Dean, School of Media and Communication, RMIT University, *Committee Hansard*, 18 October 2016, pp. 2–3; Dr Simon Toze, Senior Principal Research Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 3.

¹⁷⁹ Professor Martyn Hook, Dean, School of Media and Communication, RMIT University, *Committee Hansard*, 18 October 2016, p. 2.

¹⁸⁰ Professor Martyn Hook, Dean, School of Media and Communication, RMIT University, *Committee Hansard*, 18 October 2016, p. 2.

insurances—also begin to indicate a real benefit to the manner in which you might look at a different way of spending money.¹⁸¹

2.142 The research work done on ‘New Shepparton’ was presented as a model of what could be achieved.¹⁸²

2.143 The key to success from the perspective of resettlement is creating connectivity between centres combined with critical mass within them. Professor Hook emphasised the importance of connectivity, noting that getting people to live outside the capital cities was about ‘making a definitive choice to begin to live somewhere else with the assumption that you are able to return to the city at your convenience, when you would like to’.¹⁸³ Dr Simon Toze, of CSIRO, agreed, observing that ‘you need to have these connections, between these different towns, for them to succeed’.¹⁸⁴ He stated:

What is it that is going to attract a person to move from Melbourne or Sydney to one of these areas? It is the good living, but we still need to have the jobs, we still need to have the connectivity and, to a certain extent, a lot of people like the vibrancy that the big cities provide.¹⁸⁵

2.144 Dr Steve Hatfield-Dodds of CSIRO argued that with effective planning, the new cities would attain the critical mass that would advance their development. He explained:

You will need either to plan and attract a couple of key businesses or to create an enabling environment where they want to come. There are lots of examples

¹⁸¹ Professor Martyn Hook, Dean, School of Media and Communication, RMIT University, *Committee Hansard*, 18 October 2016, pp. 2–3.

¹⁸² Professor Martyn Hook, Dean, School of Media and Communication, RMIT University, *Committee Hansard*, 18 October 2016, p. 1.

¹⁸³ Professor Martyn Hook, Dean, School of Media and Communication, RMIT University, *Committee Hansard*, 18 October 2016, p. 5.

¹⁸⁴ Dr Simon Toze, Senior Principal Research Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 5.

¹⁸⁵ Dr Simon Toze, Senior Principal Research Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 5.

of doing that in the US, and it works. In the US it has tended to be manufacturing, which is something Australia has a mixed record in, to be polite. But Australia is very good at digital services, which are extremely exportable as well as transferable.

One of the interesting things in the literature about creating a competitive advantage, which is a key aspect of attracting places, is that it is more effective to create a desirable place to live and compete, essentially, on lifestyle—so have jazz bars and cafes and nice parks and mountain bike trails; that is a more cost-effective strategy than competing on wages. Effectively, it is cheaper per employee to create a nice environment and attract the people. This is particularly for what they call the creative service industries—so software design, marketing, a whole bunch of stuff, where you need high-skilled professionals, but they need to be bringing something creative to it.

So I think it is perfectly plausible that Australia could do this. We already have a reputation for creating the most liveable cities in the world. They are, unfortunately, at the moment, more expensive than they should be, but the notion of Australia being the lifestyle capital of the world is not silly.¹⁸⁶

2.145 Dr Hatfield-Dodds emphasised that ‘the cities themselves have critical mass. They are a magnet.’¹⁸⁷ He observed that:

Once something has started, it creates its own momentum. Most of the jobs in the city are actually serving other people in the city. This notion of ‘what are they going to do’—you only need a fairly small share of the employment to be, in a sense, externally oriented or export from the city, and most of it hangs together. I think that is quite feasible.¹⁸⁸

2.146 Dr Hatfield-Dodds stated:

We imagine the new cities much denser and much more diverse than existing cities—just like the difference between Europe and the US. There are lots of

¹⁸⁶ Dr Steve Hatfield-Dodds, Coordinating Chief Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 8.

¹⁸⁷ Dr Steve Hatfield-Dodds, Coordinating Chief Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 6.

¹⁸⁸ Dr Steve Hatfield-Dodds, Coordinating Chief Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 10.

advantages to highly walkable compact ones with good green space and parks. We are not talking about a vision in Australia of lots of big country towns, we are talking about a vision in Australia which is much more diverse and flexible, so people can move to one of these new cities, live on a quarter acre block for a period, move into town and it is not like moving into the Sydney CBD—because it is much more affordable.¹⁸⁹

2.147 Dr Hatfield-Dodds emphasised that HSR is a ‘development strategy; it is not a transport solution’.¹⁹⁰

2.148 Dr Toze indicated that ‘government can be involved as little or as much as it wants to, but effectively there would be a need for assistance with the rail corridors, whether that is down existing rail corridors or the provision of new through Crown-land type parts’. He noted that industry rather than government ‘could have a higher proportion of the work in building these parts’, but that there ‘is also a whole part to play through state and local governments through regulation, because they hold the key to regulation in development’. The role of the Australian Government would be ‘an enabler role to encourage, if this was seen as the sort of thing to do’. Dr Toze emphasised, however, the importance of policy continuity in such a long-term project:

It would be a bipartisan role. The other part of it is that it is one of those things that you cannot get partly through, have a change of government—I am trying to be very careful not to talk policy—and then suddenly it stops. It has got to have a bipartisan commitment across every layer of government to see it succeed. The government input comes through regulation and policy, and as an enabler.¹⁹¹

¹⁸⁹ Dr Steve Hatfield-Dodds, Coordinating Chief Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 6.

¹⁹⁰ Dr Steve Hatfield-Dodds, Coordinating Chief Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 11.

¹⁹¹ Dr Simon Toze, Senior Principal Research Scientist, CSIRO, *Committee Hansard*, 18 October 2016, p. 9.

Other evidence

- 2.149 Mr Peter Thornton, Managing Director of Transportation Associates Pty Ltd, supported the idea of commencing HSR with ‘a realistic piece: a realistic-scale project’, proposing ‘Sydney-Newcastle, or possibly Sydney-Canberra’:

With Sydney-Newcastle, though, what I can tell you from other work that I have done recently is that in the sector between Hornsby and Wyong the passenger-minutes saved by building a much better alignment in that corridor exceeds 50% of the sum total of all the passenger-minutes saved by every rail corridor improvement project leading in and out of Sydney. That is in that one sector alone.¹⁹²

- 2.150 The view that HSR was principally about nation building and regional development rather than just another means of transport was strongly supported by other evidence presented to the Committee. In its submission, the Australasian Railway Association (ARA) stated that:

High Speed Rail (HSR) is not just another rail project, and it should not compete with or detract from funding for other rail or public transport investments. HSR is about the future of Australia. It is a transformative project which will benefit a large part of Australia’s population living in capital cities and regional centres along the East Coast.¹⁹³

- 2.151 The ARA noted that ‘the success of HSR along Australia’s East Coast relies on its ability to travel between capital cities in under 3 hours’, and that the ‘key with HSR is that the travel is CBD to CBD, not airport to airport, further reducing travel time’. The ARA stated that ‘modelling shows at 350km/hr, the required travel times are achievable, thus confirming HSR’s suitability along Australia’s East Coast’.¹⁹⁴ The ARA observed that:

Overseas travel trends show that HSR creates new living circles as people use HSR to commute one hour for work and three hours for recreation. It effectively shrinks the country. Individuals can commute much farther than is

¹⁹² Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 32.

¹⁹³ Australasian Railway Association, *Submission 49*, p. 14.

¹⁹⁴ Australasian Railway Association, *Submission 49*, pp. 14–15.

achievable with traditional modes of transport, allowing people to relocate outside cities and commute with HSR.¹⁹⁵

- 2.152 Financial-Architects.Asia argued that there had been ‘a systematic and prolonged failure for Australia to adapt to the new era of very fast rail technologies’, and that HSR, ‘intelligently designed and implemented, can bring transformational change to a land burdened by the tyranny of distance’. It noted that ‘Australia can “piggy back” on Japan & the USA to move into new technology, very fast, rail systems’.¹⁹⁶ Financial-Architects.Asia concluded that ‘the best way forward is for Australia to have an overall plan for HSR, but just to proceed with it in “mini stages”’, and that the decision to build a second airport for Sydney at Badgerys Creek presented ‘a manageable mini stage of fast rail’:

The Western Sydney Airport location, being some 55 kms from the City of Sydney CBD, does actually need a fast rail link to make it work efficiently, on a world’s “best of breed” basis, and we think that this can be provided by Australia tapping into the latest global advances in fast rail technology.¹⁹⁷

- 2.153 KPMG observed that the experience of other countries with HSR pointed to ‘economic development and environmental objectives’ being the principal aims of HSR. In France, HSR was ‘about spreading economic development to areas outside of Paris’. In Germany, ‘transport investment was about connecting major industrial centres in the West before reunification, and then regeneration and boosting activity in the East afterwards’. In the United Kingdom, the proposed High Speed 2 network ‘is about economic growth and a whole realignment of the Victorian-era national rail network’.¹⁹⁸
- 2.154 The experiences of Japan and China in particular were highlighted as evidence of the value of HSR. In its submission, AECOM noted that:

Regions serviced by the HSR in Japan generally have higher rates of population and economic growth (22 per cent) than regions that do not have a

¹⁹⁵ Australasian Railway Association, *Submission 49*, p. 15.

¹⁹⁶ Financial-Architects.Asia, *Submission 27*, p. 1.

¹⁹⁷ Financial-Architects.Asia, *Submission 27.1*, p. 3.

¹⁹⁸ KPMG, *Submission 41*, pp. 8–9.

direct service (7 per cent). The Chinese HSR network has shown similar results in the areas of economic and real estate value growth. Research shows a direct correlation between connecting cities with HSR and property price rises.¹⁹⁹

- 2.155 AECOM observed that in Japan, 'regions served by the Shinkansen generally have higher economic and population growth rates than regions that are not directly serviced by the Shinkansen'. The differences in growth were 'largest in the areas of knowledge economies, with employment growth rates at 22% in cities with Shinkansen and expressway service compared to 7% in cities with only expressway service'. AECOM stated that 'land values around Shinkansen stations have increased as a function of the travel times they offered to Tokyo and other large city areas', resulting from and providing an incentive for the commercial and residential development of areas around HSR stations. AECOM noted that 'the tax uplift created through the rise in land prices and business activity as a result of the Shinkansen stations enabled the Japanese Government to secure loans for the construction of the HSR lines'. Moreover, 'the ongoing revenue created through station area developments is also captured to assist in the ongoing operation and maintenance of the Shinkansen'.²⁰⁰
- 2.156 AECOM observed that 'China has experienced significant gains in labour productivity, jobs, industrial growth and regional development due to investment in HSR', and that China's 'HSR network is generating substantial new passenger flows and increasing land and property prices'. Studies of China's HSR network had established 'a direct correlation between connecting cities with HSR and a rise in property prices. It was also noted that 'China is also realising agglomeration-induced productivity effects as a result of the HSR, with second and third-tier cities seeing substantial increase in GDP'. AECOM concluded that:

While China's unique political and market structures are not replicable or directly transferable to Australia, the benefits of its HSR network are clearly evident. Rising property prices, new passenger flows, increased productivity,

¹⁹⁹ AECOM, *Submission 63*, p. 11.

²⁰⁰ AECOM, *Submission 63*, p. 32.

job growth and the broader effects of agglomeration are being realised from China's investment in high speed rail.²⁰¹

2.157 AECOM noted that in both China and Japan there was evidence that HSR had had a significant positive impact on tourism. In Japan, Kyoto had 'experienced significant gains in regional businesses, local services and educational institutions within 5km of the station, making it one of Japan's most popular cultural and leisure destinations'. This growth had been assisted by the provision of high-speed services between Kyoto and Tokyo. In China, tourism had 'increased rapidly to major attractions along the HSR, such as Qufu, an attractive city in the Shandong province'. AECOM observed that 'provinces with HSR services have approximately 20% higher foreign arrivals and 25% higher tourism revenues than provinces without HSR service'.²⁰²

2.158 Financial-Architects.Asia urged the Committee to look at 'how the privatisation of Japanese railway companies has fostered better connectivity', observing that 'JR East and JR Central, for instance, make considerable sums from non-rail revenues and benefit significantly from real estate development, office and retail centre ownership, etc. in connection with their HSR stations'; but also that the Japanese companies were now investing in the next generation of HSR technology – Maglev (magnetic levitation).²⁰³ AECOM highlighted current developments in the United States, where private consortia were involved in projects in Texas and Florida. With regards to the Texas project, AECOM stated:

Texas Central Railway, a private company, is progressing with plans to construct a 320km/h 386km high speed rail between Dallas and Houston. One of the company's backers is JR Central, and the line will be based on Japanese HSR technology. The estimated US\$10 billion will be entirely funded through

²⁰¹ AECOM, *Submission 63*, p. 34.

²⁰² AECOM, *Submission 63*, p. 36.

²⁰³ Financial-Architects.Asia, *Submission 27*, p. 11.

private investment, with Texas Central Railway expecting to return a health profit.²⁰⁴

2.159 With regards to the Florida, AECOM stated:

All Aboard Florida (AAF) will link Miami, Fort Lauderdale, West Palm Beach and Orlando by 380km of high speed rail track. The privately funded project is expecting to turn a profit though high passenger numbers generated from Orlando, the most visited city in the US, and revenue created from developing over 390,000 square metres of real estate on the land AAF owns around the station sites. The feasibility of this project is essentially being made through the private application re principles.²⁰⁵

2.160 Mr Thornton took the Committee through examples of projects in Taiwan, Sweden and California, highlighting the mixture of approaches and outcomes in the development of HSR. With regards to Taiwan, Mr Thornton stated:

You need to look at Taiwan because it was, for a start, predicated on the private sector being able to build the project, which it has manifestly not been able to do. It has been able to build it but it has not made money. It was also based on a sort of a form of land value capture in the sense of looking at development that was going to take place around stations that were somewhat remote from the existing populations, and this has not occurred to the same level as had been expected. That is a project that has had to be bailed out.²⁰⁶

2.161 Mr Thornton noted that Sweden had 'gone its own way and done its own thing in its own kind of way', with a system 'that runs both freight and higher speed passenger rail'. He stated:

There is a project called the Bothnia-Bahn, the Bothnia railway, which runs up the coast of Sweden. That has been built both to reduce travel times and to allow freight to transit it. The issue with freight is the problem of the axle loadings and the poor state of repair that freight operators keep their wagons

²⁰⁴ AECOM, *Submission 63*, p. 34.

²⁰⁵ AECOM, *Submission 63*, p. 34.

²⁰⁶ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 30.

in, pounding the track to pieces, derailments and those sorts of things. There is a compatibility question. The Swedes are looking at that because they do not have the population densities to justify building totally stand-alone railways. They, like us, need to squeeze as much as they can out of what they build. I think they are an interesting model.²⁰⁷

2.162 With regard to California, Mr Thornton stated:

California has a project that is happening right now. What is interesting about California is ... they have a rationale for building the project, and that rationale is that they have 35 million people in a state which is about the same size as Melbourne to Grafton. They are building a project only in the bottom half of that state. The reason they are building it is that they have a problem about where people are going to live. Cities such as Los Angeles and San Francisco are becoming crowded, but they do have opportunities in the central valley to accommodate growing populations. So there is a rationale for that project that is related to their plan about how they are going to live.²⁰⁸

2.163 Mr Thornton described the Californian project as an interesting project 'because of the way it is being funded. It is really being funded wholly by government'. He compared it with the development of aviation in Australia, where the government had provided the infrastructure, then, having established the businesses, sold them to the private sector and moved on. He observed that:

In California, they are looking at creating the opportunity and then saying, 'Okay, we're going to create these opportunities, and then we're going to see whether or not the private sector will come and buy us out of those opportunities.'²⁰⁹

2.164 Mr Thornton also cited the example of the Madrid-Seville HSR in Spain, one of 'very few projects in the world where anybody has done an ex post

²⁰⁷ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 30.

²⁰⁸ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 30.

²⁰⁹ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 31.

economic assessment of the project'. He thought it had 'some important lessons'. One lesson was that 'regional development or social benefits ... do not cut it in terms of the overall economics of the project'. Nonetheless, Mr Thornton explained, 'that in itself is not a reason for government not to build the project'. He stated:

Government has the right to say, 'We have this long-term view for our country. We think that in the very long term it will reshape the country, and we as the government have the responsibility to do those things.' You stand or fall on the calibre of that judgement. We in the private sector stand or fall as to whether or not we made a dollar today, but you do not. You have a different job to do. And you can make those decisions, because there is no doubt that transport reshapes cities and it reshapes countries, but you have to stick around long enough for it to do it, because it can take quite a while. You have got to be prepared to take that risk.²¹⁰

2.165 Mr Thornton identified a further consideration for governments—that many private sector players were more interested in building than operating HSR. He stated:

What is remarkably scarce on the ground is anybody who actually wants to operate these as long-term businesses. If you think about it another way around ... there are very few people who say: 'We're in the transport business. We're in the high-speed rail operating business. We want to operate this transport system.' If you do that ... then everything is driven by creating and operating the project. It is not being driven by construction companies. To date PPPs in Australia have been largely driven by civil engineering contractors who want another project to build. They certainly do not want to stick around and operate them.²¹¹

²¹⁰ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 30.

²¹¹ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 33.

2.166 Mr Thornton believed governments should ‘be looking for an organisation to partner with for the long term to run a transport business. I would then plan that project.’²¹²

Other technologies

2.167 Several other innovative transport technologies have been presented to the Committee as potential solutions to transport problems.

Hyperloop

2.168 Hyperloop is a potential competitor and successor to HSR for inter-city travel. It consists of a vehicle—a pod—which travels at high speed through a tube. Its principal features are:

It creates a totally controlled environment, which enables us to do fully autonomous control. We do not get the external factors that we would in, for example, autonomous driving on public roads. We do not get fog; we do not get snow or rain; we do not get people trying to cross, and we do not have cross traffic of any sort. The second major advantage of the tube is that it enables us to vastly reduce the air pressure. This overcomes aerodynamic drag, which is the single greatest factor prohibiting ground transport travelling at aviation-like speeds. The third principle is that we levitate the vehicle rather than using wheels, and that practically eliminates friction. A major difference between our system and previously existing maglev systems is that we use a passive maglev, that requires no power to create levitation. The fourth major element is a linear motor, which we use to accelerate the vehicle.²¹³

2.169 The combination of design features allows Hyperloop to accelerate ‘the vehicle from zero to our design speed of 300 metres per second, which is 1080 kilometres per hour’. For passenger use, the pod accelerates at a similar rate to a jet plane taking off. Having attained cruising speed, the pod coasts for tens of kilometres before more power is applied:

²¹² Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 33.

²¹³ Dr Alan James, Vice-President, Worldwide Business Development, Hyperloop One, *Committee Hansard*, 28 October 2016, p. 10.

Typically, in a passenger application, it coasts for about 60 kilometres before we need to give it any more power. That means we are using power, on the typical route, for only 10 percent of the total journey. This is significantly different to conventional high-speed rail.²¹⁴

- 2.170 This potentially allows a journey between Sydney and Melbourne of less than one hour.²¹⁵ Shepparton to Melbourne was estimated at five minutes ‘including start and stop’; Newcastle into Sydney ‘would be 10 minutes’.²¹⁶ Stage one of the project would be the corridor between Sydney and Melbourne, ‘or Geelong and Newcastle’. This would ‘bring the most direct benefits to the economy very quickly with the removal of freight congestion on the Hume Highway and the connectivity of Geelong to Melbourne, and Newcastle to Sydney’. There was also the opportunity to develop a second stage between Brisbane and Sydney, following an inland route ‘via Orange, Dubbo, Armidale, Tamworth and down to Toowoomba that way’. According to Mr Steve Artis, of Ultraspeed Australia, which represents Hyperloop One in Australia, ‘the ongoing opportunities for income from the industry are self-generating and the revenue from the system that we expect could carry between seven and 10 million passengers per annum is quite significant’.²¹⁷ Another key feature of Hyperloop is its ability to carry freight, reducing the freight task on roads.²¹⁸
- 2.171 Mr Sean Duggan, of Ultraspeed Australia, believed that Hyperloop could deliver ‘social and economic transformation’. It would not create just one 30-minute city, but 30-minute cities, connected to each other by high-speed transport. Dr Alan James, of Hyperloop One, stated:

²¹⁴ Dr Alan James, Vice-President, Worldwide Business Development, Hyperloop One, *Committee Hansard*, 28 October 2016, p. 10.

²¹⁵ Dr Alan James, Vice-President, Worldwide Business Development, Hyperloop One, *Committee Hansard*, 28 October 2016, p. 10.

²¹⁶ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 17.

²¹⁷ Mr Steve Artis, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 12.

²¹⁸ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 11; Mr Steve Artis, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 16.

Somebody put it quite well the other day: if you connect A and B with a railway, you get A plus B. If you connect A and B with a Hyperloop, you get 'AB-ville'; effectively, a single economy where it does not really matter where you live or work.²¹⁹

2.172 Mr Duggan believed that 'Hyperloop One technology brings connectivity in an Australian context that is simply faster, better, cheaper and greener than any other high-speed alternative'.²²⁰ Hyperloop was cheaper and more flexible than HSR, with an estimated capital cost 20 per cent lower than HSR and operating costs 60 per cent lower than HSR.²²¹ Lower costs meant greater frequency and flexibility of operation. Dr James stated:

One of the fundamental problems with a high-speed rail system is that you have to wait for 1,000 people to show up before your TGV or Shinkansen is viable. Then you have to propel that vehicle through some dreadfully resistant stuff called air—and that takes a load of energy. We get rid of those problems. Pods are much smaller: they take 24 people in a superluxe configuration; 50 in a rough equivalent to business class; and around about 90 in an all-economy configuration. And because they are levitating in effectively zero friction—because they are in a pressure-reduced environment with effectively zero drag—it costs us next to nothing to move them. We can move a pod with, say, five, 10, 15 per cent occupancy—which would bankrupt a high-speed rail system if you tried to move trains at that level. So we can offer greater frequency from smaller and better dispersed terminals—on the branch network that Sean described earlier—connecting more places, more origins, to more destinations, enabling more people to connect more places of work and more places of residence and, ditto, freight to get from more points of entry at ports and airports to more destinations and distribution hubs. All of that gives us an economic order of magnitude that is a next generation on from what you can do with high-speed rail—and I know: I have banged my head against the

²¹⁹ Dr Alan James, Vice-President, Worldwide Business Development, Hyperloop One, *Committee Hansard*, 28 October 2016, p. 12.

²²⁰ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 11.

²²¹ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, pp. 13–14.

economics of high-speed rail, in my professional capacity, for the last 15 years.
222

2.173 These efficiencies would ensure affordability, with average fares ‘in the tens of dollars rather than hundreds of dollars’.²²³

2.174 Hyperloop’s focus was on the development of existing regional centres rather than new ones. Mr Duggan stated:

We think that linking existing regional centres in that way with capitals means that we can ease capital city growth pressure and, at the same time, stimulate existing regional centres to grow in the way that they were originally thought of. We are not thinking about new centres. In fact, evidence internationally says if you are going to integrate high-speed rail into an existing system, you make sure that it happens. You actually build into existing infrastructure; you do not build new infrastructure.²²⁴

2.175 This would increase opportunities for value capture:

The intention with the Hyperloop system is to ensure that any stops are fully integrated into existing centres, not to build new ones. All the evidence internationally says that if you want to maximise the use and value of the existing infrastructure and land—to maximise the land-value uplift in terms of property values—that is what you do. That is the intention of our proposition in the first instance. There is the opportunity for land uplift. We believe that transit times of minutes, not hours, between the places where people want to live and want to work, and where businesses want to put their investment, will allow that land up-lift to occur.²²⁵

2.176 The next stage for Hyperloop is to undertake ‘a very detailed project scoping study to see whether a Hyperloop system can be used in Australia and whether it would generate the benefits that we are anticipating at a lower

²²² Dr Alan James, Vice-President, Worldwide Business Development, Hyperloop One, *Committee Hansard*, 28 October 2016, p. 15.

²²³ Dr Alan James, Vice-President, Worldwide Business Development, Hyperloop One, *Committee Hansard*, 28 October 2016, p. 15.

²²⁴ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 11.

²²⁵ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 15.

cost'. Proof of operations is also required, to test Hyperloop in a real world environment. Both require the interest and support of government. Mr Duggan explained:

That proof-of-operations facility cannot just be plonked down at a location. There needs to be some serious conversation about whether it is a viable thing to put in place; about whether state, federal and local authorities can corral themselves together to speak with one voice; about whether there is land available for that operations facility and whether rights of way can be procured; and about whether the most appropriate location is next to existing research universities which can be integrated into a Hyperloop academy, which is part of the proposal.²²⁶

2.177 In this context, Hyperloop One and Ultraspeed Australia sought a letter of intent from government, 'to say that the government would want to continue this conversation about the proof-of-operations facility, with a view to discussing whether it is possible to ensure that Hyperloop One could invest in that facility'.²²⁷

Austrans

2.178 Sydney company Bishop Austrans presented their vision for greater connectivity within the city environment. Austrans is an 'electrically-driven, fully-automated, computer-controlled, high-speed driverless system that utilises the airspace above existing roadways'.²²⁸ It consists of cars that run on track carrying small numbers of people at high frequency, depending on demand. At peak times, the network could carry 8000 to 10 000 people per hour. When no-one is travelling the cars do not operate—saving costs and maintenance. At such times, the cars operate on demand:

²²⁶ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 16.

²²⁷ Mr Sean Duggan, Director, Ultraspeed Australia, *Committee Hansard*, 28 October 2016, p. 16.

²²⁸ Mr Rob McAuley, Associate, Bishop Austrans, *Committee Hansard*, 28 October 2016, p. 18.

If a nurse comes out of a hospital at midnight and has to get home, she can go to the station, strike her card and within two to three minutes a car will turn up, and she has got personal transport home.²²⁹

2.179 The system is compact enough to operate beside or above existing roadways, and can be integrated into the design of buildings.²³⁰ Being lightweight and driverless, it has low capital and operating costs compared to other modes of public transport, and requires little power. The cars could be solar and battery powered—‘absolutely green’. The network is designed to be run by two controllers in a centralised control room. Cars can travel up to 120km/h, giving fast non-stop travel between destinations. Estimates included:

Brookvale to Wynyard station, it is 16 minutes; Balgowlah to North Sydney, 8½ minutes; Spit Junction to Martin Place, six minutes. This is pick-up to destination nonstop. I have some other figures here: Parramatta to Epping, 12 minutes; Epping to Rouse Hill, 24 minutes; Parramatta to CBD, 16 minutes; and Rouse Hill to CBD, 38 minutes.²³¹

2.180 Austrans was touted as an ideal solution to transport between heavy rail and metro destinations, being superior to buses and light rail. Mr Rob McAuley, representing Austrans, stated:

We see it as the perfect feeder to the main metro lines that billions of dollars have now been spent developing et cetera. The population is away from them but that population still has to get to the main hubs, and there are great gaps in the links between where the metro and light rail connect that need servicing.²³²

2.181 Austrans recommended ‘that a pilot area be chosen and that an Austrans system re-engineered and designed specifically for that be tested’, suggesting routes along Victoria Road, Gladesville, or between Parramatta and Macquarie Park ‘which currently is being redesigned with a future plan

²²⁹ Mr Michael York, General Manager, Bishop Austrans, *Committee Hansard*, 28 October 2016, p. 19.

²³⁰ Mr Rob McAuley, Associate, Bishop Austrans, *Committee Hansard*, 28 October 2016, p. 18.

²³¹ Mr Michael York, General Manager, Bishop Austrans, *Committee Hansard*, 28 October 2016, p. 19.

²³² Mr Rob McAuley, Associate, Bishop Austrans, *Committee Hansard*, 28 October 2016, p. 20.

for it to be interlinked with buses—the things that you want to get off the road. This can take over from buses and provide an unparalleled service.’²³³

Uber

2.182 In its submission, technology company Uber highlighted ways of improving connectivity in road transport. Uber provides a technology that ‘facilitates ridesharing, connecting registered riders to registered driver-partners in over 400 cities worldwide’. Ridesharing deploys underutilised personal vehicles to provide rides. According to Uber, ‘the emergence of ridesharing demonstrates that transport models driven by smart technology can help to make cities safe, vibrant and better connected’.²³⁴

2.183 Uber noted that ridesharing was not a substitute for public transport, but ‘complements public transport where reliable service is unavailable’. Uber stated that:

By improving connectivity across the city, ridesharing supports local economic activity. Over 60 per cent of Sydney ridesharing trips are new to the point-to-point market, suggesting that many of those riders may be travelling to destinations that they would not have visited otherwise²³⁵

2.184 Uber concluded:

Ridesharing demonstrates that smart technology with a smart supply model can help to improve city transport. It offers cities a no-cost, scalable transport alternative to supplement existing transport systems. It supports local economic activity across the day and across the year. It offers partners a safe, flexible source of income and offers riders a safe, reliable and affordable alternative to car ownership. Policymakers must acknowledge these opportunities and ensure that regulatory settings encourage the development of these systems.²³⁶

²³³ Mr Rob McAuley, Associate, Bishop Austrans, *Committee Hansard*, 28 October 2016, p. 20.

²³⁴ Uber, *Submission 78*, p. 1.

²³⁵ Uber, *Submission 78*, p. 2.

²³⁶ Uber, *Submission 78*, p. 6.

Committee conclusions

- 2.185 The evidence presented to the Committee has highlighted the importance of improved transport connectivity to the economic and social wellbeing of Australia. Improved transport connectivity allows greater accessibility to employment and markets, and cost savings from reduced transit times, less traffic congestion and reduced transport costs. The key benefit of improved transport connectivity, however, is its transformational effects—making cities and regions more accessible and more liveable. Better connectivity creates opportunities for economic development that could not otherwise exist.
- 2.186 Carefully planned, multi-modal, transport systems make cities more efficient and liveable. The evidence presented to the Committee proposed a focus on rapid transport—the 20 minute city. Intensive development of transport corridors between urban centres combines the benefits of agglomeration with ease of access. The creation of new transport corridors and nodes has the dual advantage of allowing more efficient use of constrained urban space (densification and urban regeneration) while offering opportunities for wealth creation. In short, rapid transit public transport creates the opportunity to create value and use that value to pay for the development of public transport—value capture.
- 2.187 Improved transport connectivity is also critical to regional development. It provides opportunities for decentralisation and the creation of new centres—rebalancing patterns of settlement. Greater regional connectivity will promote the development of regional areas, make relocation to these areas more attractive and reduce growth pressures on major cities. Indeed, the better the connectivity, the greater the attraction to relocate to regions.
- 2.188 A key to regional connectivity is the development of high speed rail. HSR has the potential not only to improve connectivity between existing major cities, but allow the creation of new centres closely connected to those cities and each other—thereby achieving economic transformation by rebalancing the pattern of settlement. The Committee is conscious of the success of HSR in achieving economic transformation in other countries—particularly Japan, China and Korea with their extensive and growing HSR networks.

-
- 2.189 The Committee was presented with a number of proposals for the development of HSR in Australia. Each was different in its details, but all emphasised the viability of HSR in the east-coast corridor; its potential for transforming our cities and regions; and its potential for wealth creation and, therefore, value capture. HSR can contribute significantly to the costs of its own development while providing meaningful opportunities for new developments in other sectors of the economy. This will create opportunities for private sector leadership in the development of HSR—a leadership that is already maturing into well-developed proposals. The Committee believes the time has come for the Australian Government, in conjunction with the relevant State and Territory Governments, to seek expressions of interest for the development of HSR in eastern Australia with a view to rebalancing the pattern of settlement.
- 2.190 In addition, the Committee was presented with proposals for other technologies promoting transport. Hyperloop is a potential competitor and/or successor for HSR. Its theoretical capacity to transform intercity transport is undoubted. It is the Committee’s view that this potential should be monitored by governments with a view to exploring the adoption of this technology if it proves feasible. The Australian Government should pursue the matter with its State and Territory counterparts.
- 2.191 The Austrans system has the potential to significantly increase connectivity within the urban environment, providing a lighter, more cost efficient and flexible alternative to light rail and buses. The Committee recommends that governments should explore the potential of novel and alternative technology to provide an innovative and flexible transport system to urban Australia.
- 2.192 Finally, the Committee notes that the evidence presented to it indicates the ongoing importance of road transport to both urban and regional Australia. Without promoting any particular technology or system, the Committee believes governments should continue to investigate new technologies which can make road use safer, cheaper and more efficient, including development of autonomous vehicles, low-emission vehicles, and smart road infrastructure.

Recommendation 1

2.193 The Committee recommends that the Australian Government examines ways to promote a better balance of settlement through decentralisation to the regions linked by faster transport connectivity and particularly through high speed rail.

Recommendation 2

2.194 The Committee recommends that the Australian Government, in conjunction with state and territory governments, develop a framework for the specification and evaluation of proposals for the development of a high speed rail network in eastern Australia, with an emphasis on strategic decentralisation, regional economic development, value creation and value capture to determine the viability of private sector proposals, routes, schedule for development and funding for the project. The Committee further recommends that it is time to progress the planning work that must be done by all levels of government to facilitate high speed rail. The Committee recommends that state and federal governments consider appropriate coordination arrangements, including if and when a planning authority is required to progress high speed rail.

Recommendation 3

2.195 The Committee recommends that the Australian Government investigates options for private funding of high speed rail through value capture.

Recommendation 4

2.196 The Committee recommends that the Australian Government, in conjunction with state and territory governments, monitor and, when appropriate, assess the feasibility of Hyperloop in Australia as a high-speed mass transit system.

Recommendation 5

2.197 The Committee recommends that the Australian Government, in conjunction with state and territory governments, explore the potential of novel and alternative technology to provide an innovative and flexible transport system to urban Australia.

Recommendation 6

2.198 The Committee recommends that the Australian Government continue to recognise the importance of road transport in Australia and investigate new technologies which can make road use safer, cheaper and more efficient, including development of autonomous vehicles, low-emission vehicles, and smart road infrastructure.

3. Property development — creation of value

- 3.1 A large amount of evidence received during this inquiry has highlighted the impact that new infrastructure, particularly public transport infrastructure, can have on land values. For instance, the Department of Infrastructure and Regional Development (DIRD) outlined the findings of a meta-study conducted by the Bureau of Infrastructure, Transport and Regional Economics (BITRE) which summarised value uplift due to different types of public transport infrastructure, which is reproduced in Table 3.1.

Table 3.1 BITRE summary of average rates of value uplift

Mode	Average value uplift (percentage)	Range (percentage)	Number of observations
Heavy rail	6.9	-42 to +40	18
Light rail	9.5	-19 to +30	32
Bus rapid transit	9.7	-5 to +32	14

Source: DIRD, Submission 57, p. 3.

- 3.2 AECOM noted that the extent of uplift can vary according not only to the type of infrastructure, but also to the type of property and the distance from the new transport infrastructure. Some examples of this are reproduced in Table 3.2.

Table 3.2 Transit investment impact on property values

Land use	Range of value uplift	Type of transport
Single family residential	<30 m from station: +32%	San Diego Trolley, 1992
	<60 m from station: +2%	St Louis MetroLink Light Rail, 2004
Condominium	<800 m from station: +2 to +18%	San Diego Trolley, 2001
Apartment	<400 m from station: +45%	San Diego Trolley, 2001
	<800 m from station: +0 to 4%	VTA Light Rail, 2004
Office	<90 m from station: +9%	Washington Metrorail, 1981
	<400 m from station: +120%	VTA Light Rail, 2004
Retail	<150 m from station: +1%	BART, 1978
	<60 m from station: +167%	San Diego Trolley, 2004

Source: AECOM, Submission 63, p. 20.

3.3 KPMG noted that an important benefit of transport connectivity is the creation of property value through investment in transport infrastructure enhancing the utility, and therefore the value, of surrounding property. It observed that:

The evidence linking enhanced transport connectivity to property values and property-related tax revenues is well established. The links between transport and land use go back a long way and are fundamental in explaining how settlement patterns evolved in the Western World in the 18th and 19th Century Industrial Revolutions and how urban sprawl became prevalent in say American and Australian cities. Integrated transport and land use planning has also been central to urban centres looking to reinvent themselves, redevelop declining inner city areas and reverse urban sprawl.¹

3.4 KPMG highlighted a US study by the American Public Transportation Association and the National Association of Realtors that 'looked at how

¹ KPMG, Submission 41, p. 2.

well residential properties within one-half mile of a fixed-rail transit station held their value between 2006 and 2011':

The finding showed that across the five study regions, transit-adjacent homes outperformed the regions as a whole by 41.6 per cent, proving to be far more resilient to the impacts of the recession. It also found that, in Phoenix, US\$1.7 billion in transit investment has resulted in US\$7 billion in economic development investment in the transit corridor. The transit corridor now boasts 88,000 jobs per square mile, double the concentration outside the corridor.²

- 3.5 KPMG provided another example from the UK, a study by Steer Davies Gleave commissioned by Network Rail in the UK, looking into the impact of rail station investment on regeneration and the local economy:

The work provides strong evidence that station investment can have a major impact in terms of urban regeneration and transformation. The scale of any impact will clearly depend on the size and location of the station and its passenger profile, the legacy of investment and associated economic activity in the surrounding area and the overall economic climate. The analysis indicated that substantial station improvements can support increases in property values in the immediate vicinity of a station of 30 per cent or more. The study also looked at the investments in Manchester Piccadilly and Sheffield Midland, where observed changes in property values suggest an economic impact equivalent to inward investment of two or three times the cost of the station investment itself.³

- 3.6 In its issues paper, *Are we there yet? Value capture and the future of public transport in Sydney*, the Committee for Sydney noted that 'when it comes to land use in cities, there are two main ways government can create "value"'. One was 'through the land zoning system, which can increase the density, productivity and "yield" of certain parcels of land, making them more "valuable"':

This is often done at the stroke of a Planning Minister's pen but can also then require some enabling infrastructure to accommodate the higher land use. For

² KPMG, *Submission 41*, p. 3.

³ KPMG, *Submission 41*, p. 3.

example, expanding the sewerage network can allow farmland on the urban periphery to become suitable for a higher and better land use, like housing. Similarly new public transport can make low density residential areas suitable for a higher density zoning. In each of these, the value of the raw land, and individual properties, can be increased dramatically.⁴

- 3.7 The other way to create value was 'to improve the connectivity and amenity of certain parcels of land, making them more liveable or desirable places, and improving their value'. It was noted that:

A new rail service can significantly increase the value of land along its route, reducing commute times to a job, or increasing the catchment area for your business. Prices of residential land along the new Sydney Metro North-East line have increased significantly faster than the Sydney average on anticipation of the line opening. When it does open, hundreds of thousands of people will suddenly have access to transport choice, and land prices will rise again. Yet while the public is outlaying billions of dollars building the line (and millions of dollars in annual subsidies), local residents are seeing their private wealth skyrocket.⁵

- 3.8 In its *Value Capture Roadmap*, Consult Australia identified the 'indirect benefits', or 'positive externalities', of infrastructure projects, including 'increased tax revenues received by public agencies and financial windfalls received by property owners and businesses located near a transport project'.⁶ It noted that:

International experience demonstrates that well planned public transport can increase land market values by up to 50%. The extent of value uplift varies depending upon the nature of the infrastructure, the distance of property from

⁴ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 8.

⁵ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 8.

⁶ Consult Australia, *Submission 13, Attachment 1, Value Capture Roadmap*, p. 5.

the infrastructure, accessibility and urban design amenities, and numerous other factors.⁷

- 3.9 The *Value Capture Roadmap* found that ‘recent improvements in Sydney’s suburban rail network around Epping station nearly tripled the value of nearby single dwelling properties from an average of \$1.2 million to over \$3 million each’. A study of Perth’s Mandurah Line ‘found that increased property values and tax revenues from similar commuter rail projects there were also substantial’. Increased tax revenues ‘over 30 years resulting from the Mandurah Line amounted to 42% of the project’s capital costs’. It was also found, however, that ‘if land use planning had been fully integrated with the expansion, tax revenues would have exceeded 60% of the capital costs of the project’. The *Value Capture Roadmap* observed that:

While the financial windfalls from these examples were the direct result of the public’s investment in transport infrastructure, no equitable mechanism exists in NSW, Western Australia or any Australian state or territory to capture indirect benefits to help pay for the infrastructure or related costs associated with the improvements. Rather than obtaining a financial benefit from its infrastructure investments, the Australian public is in effect paying an inflated price for land around transport infrastructure as a result of its investment, and the uplift in value solely benefits nearby property owners. This inflated cost is then passed on in the form of higher taxes, higher housing costs and higher public transport fares. This is occurring throughout Australia despite an increasing gap in infrastructure funding.⁸

- 3.10 The University of Wollongong’s Smart Infrastructure Facility observed two outcomes from transport infrastructure investments—‘they change the cost of various kinds of trips, and they change the rents of various parcels of land’:

An improvement in transport infrastructure lowers the cost of trips for nearby residents. This gain means people who don’t own land are willing to pay more in rent to live in the area. Thus, the transport improvement resulting from the additional infrastructure will attract people to the area and population and rents will increase. Competition will cause rents to be bid up by the amount of

⁷ Consult Australia, *Submission 13*, Attachment 1, *Value Capture Roadmap*, p. 7.

⁸ Consult Australia, *Submission 13*, Attachment 1, *Value Capture Roadmap*, p. 5.

benefits from the infrastructure improvement, so that tenants are no better or worse off. Thus, what the better transportation gives, higher rents take away.⁹

- 3.11 The Smart Infrastructure Facility noted that ‘in the open-city model all of the benefits of a transportation enhancement accrue to landowners’. Thus, ‘landowners receive higher rents, and these rents are capitalized in the form of higher land values’. The Smart Infrastructure Facility stated:

If you can figure out how much a transportation enhancement raises land values, you know what its benefits are. A transportation enhancement that raises land values by more than it costs is an efficient project, one that does not, is not.¹⁰

- 3.12 The Smart Infrastructure Facility observed that ‘infrastructure projects almost always bring about a large increase in the value of adjoining land’, but that ‘when these infrastructure projects are funded by government they almost always involve a substantial transfer of wealth from a large number of taxpayers to a small number of property owners’:

For example, London’s Jubilee Underground extension in 1999 cost £3.5 billion, raising land values by £2 billion in Canary Wharf and £800 million in Southwark. Indeed, the entire net benefit from many public works is to be found in the rent they create.¹¹

- 3.13 This distribution of costs and benefits—public cost and private benefit—was seen as problematic:

Taxpayer funded infrastructure projects raise an old problem: concentrated benefits, dispersed costs and rent-seeking behaviour (using the political process to seek a private gain). As a result, the political process can favour infrastructure projects whereby the costs exceed the benefits.¹²

- 3.14 The distribution of costs and benefits was seen as one justification for the implementation of value capture:

⁹ Smart Infrastructure Facility, University of Wollongong, *Submission 16*, p. 9.

¹⁰ Smart Infrastructure Facility, University of Wollongong, *Submission 16*, p. 9.

¹¹ Smart Infrastructure Facility, University of Wollongong, *Submission 16*, p. 9.

¹² Smart Infrastructure Facility, University of Wollongong, *Submission 16*, p. 10.

Value capture is justified from an economic theory perspective because it ‘fixes’ an unfair and inefficient distortion whereby private owners of land benefit (via an unearned increase in land values) from public expenditure on infrastructure. If left unaddressed, not only would taxpayers lose in the short-term, the provision of public infrastructure would be vulnerable to rent-seeking behaviour by private landowners.¹³

- 3.15 The Smart Infrastructure Facility believed that ‘capturing increases in land value has the potential to be a fairer and more efficient means to fund infrastructure projects’. It argued that it was ‘fairer that landowners who receive the benefits from infrastructure improvements also pay the costs of those improvements, rather than receiving a windfall gain’. Furthermore, ‘ensuring that those who receive the benefits of infrastructure projects meet the associated costs reduces rent seeking pressures’:

If landowners bear both the costs and benefits, they are less likely to lobby for projects for which the costs exceed the benefits. In other words, the financing mechanisms forces them to weigh up estimated costs and benefits.¹⁴

- 3.16 The distribution of costs and benefits was also a focus for KPMG. It noted that:

Both the historic evidence of the emergence of settlement patterns and the more recent evidence linking transport investment and property markets all point to one thing which is that transport investment creates real value.¹⁵

- 3.17 The issue was ‘that in many cases the cost of the investment is borne by the national taxpayer equally regardless of whether they equally benefit’. KPMG stated that ‘while this is effective, it is not efficient’. It also impacted ‘on how schemes are prioritised in that investment decisions are driven by a narrow focus on conventional user benefits’. That missed ‘the more important value

¹³ Smart Infrastructure Facility, University of Wollongong, *Submission 16*, p. 8.

¹⁴ Smart Infrastructure Facility, University of Wollongong, *Submission 16*, p. 11.

¹⁵ KPMG, *Submission 41*, p. 3.

that is created by the investment, and hence the opportunity to capture some of that value to help pay for it'.¹⁶

- 3.18 Mr Andre Kaspura, representing Engineers Australia, noted that in Hong Kong, this matter had largely been resolved. There, 'the local transit system is totally paid for through property development, and the property development there is not by private investors; it is actually by the train company itself'. He noted that while such practices were 'not consistent with the way Australian governments do things', governments could 'learn from that experience and put in place their own legislation and planning arrangements in order to get an equivalent outcome'.¹⁷
- 3.19 In its submission, the Strategic Intelligence Group (SIG) observed that value capture was 'being used effectively around the world to bring forward new transport and infrastructure projects, using a variety of models and mechanisms', and that such models could be applied in Australia. SIG noted that:

Critical to this is being able to accurately estimate upfront the 'direct value' of proposed new infrastructure investment to optimise investment planning, decision-making and funding, which in turn relies on the accuracy of the modelling and its data. Previously in Australia, a key challenge has been access to reliable and accurate modelling for value capture purposes.¹⁸

- 3.20 SIG stated that 'the impact on property values as a result of new or improved transport connectivity can be accurately modelled',¹⁹ and that its own modelling was 'able to isolate and differentiate the change in value arising from infrastructure investment from other factors affecting value'.²⁰ It observed that:

¹⁶ KPMG, *Submission 41*, p. 3.

¹⁷ Mr Andre Kaspura, Policy Analyst, Engineers Australia, *Committee Hansard*, 4 March 2016, p. 4.

¹⁸ Strategic Intelligence Group, *Submission 30*, p. 3.

¹⁹ Strategic Intelligence Group, *Submission 30*, p. 6.

²⁰ Strategic Intelligence Group, *Submission 30*, p. 4.

Once the 'value created' of a proposed new infrastructure project has been accurately quantified upfront, there are a range of funding and financing options available to Government, ensuring it has the confidence and flexibility to adopt multiple mechanisms for each project, rather than relying on one potentially blunt solution. These models can be refined for the purposes of securitisation.²¹

- 3.21 Professor Burke drew the Committee's attention to work the Urban Research Program at Griffith University was doing with regard to defining and modelling uplift. He stated:

Our starting point is analysis of existing public transport systems to help clarify when uplift occurs, what shape it takes and how that differs across the various modes of public transportation. Most research in this field has used rather clumsy and, I should say, less helpful techniques such as basic spatial regression to see effects on land sales. We are using an improved technique known as geographic weighted regression. We will be seeking to actually make further improvements to that technique. This has major advantages both theoretically and in practice. In particular, one can actually map the residuals and see visually where uplift is occurring in cities and, therefore, see the shape of uplift.²²

- 3.22 Professor Burke highlighted the differences in definition and modelling required imposed by different modes of transport, stating:

I think even our early research here on, say, the busways versus the ferries, which is a good example, show that, really, a quite different technique is probably applicable. You might have the same broad mechanism, but you would definitely be using a defined benefit area for something like the ferries because they really do have such a short, concentrated, walk-up catchment effect. Our busways operate on a single-seat journey model where they run down the south-east busways 10 kilometres on a superhighway for buses. They do not have to stop at a traffic light for anything other than another bus, and there is only two of them all the way down to Garden City. They then peel off and get into the suburbs. We are seeing it in those near suburbs near the busway where these uplift effects are happening, particularly around the 130,

²¹ Strategic Intelligence Group, *Submission 30*, p. 4.

²² Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 1.

the 150 bus routes where buses run every two minutes in peak hour. They are super quick into the city. You would need a model that can work with that dispersed catchment, and a defined benefit area is quite difficult to define in that circumstance. It is not just us; from BITRE to other agencies will tell you it is quite difficult to define value uplift from that kind of infrastructure.²³

3.23 Addressing the effects of HSR, he stated:

High-speed rail is a good example where you are going to have very concentrated local area effects around a station, particularly for commercial landholders but also residential, but you will have city building effects that would happen over a much broader area, and you might actually have two mechanisms that work in that circumstance. You might need to bifurcate; one that applies to a broader area and one that applies to very localised effects. Treating commercial properties will need to happen quite differently to treating residential properties. I do not think dealing with them in the same way is necessarily appropriate.²⁴

Mode and uplift

3.24 Different modes of transport had different impacts on value creation and uplift. In its submission, the Smart Infrastructure Facility stated:

The difference between transportation enhancements that are reasonably permanent, like roads and light rail, and those that might only be temporary, like bus routes, is very relevant. A permanent enhancement increases (in the open-city model) the annual rent of land when the land market adjusts, but it raises the value of land—what you can get for selling your land—almost immediately (even before construction is complete). This is because the value of land is the expected present value of future rents. So land values go up before rents rise.²⁵

3.25 Professor John Stanley, representing the Bus Industry Confederation of Australia, highlighted the relative benefits of rail and bus:

²³ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, pp. 7–8.

²⁴ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, pp. 7–8.

²⁵ Smart Infrastructure Facility, University of Wollongong, *Submission 16*, p. 10.

If you look at rail projects as a source of value uplift, the research suggests that the median value is about eight per cent. ... I certainly agree that about a kilometre away is where that drops off. Interestingly, very close to the line you often get value drops because of the noise effects. For bus rapid transit it is slightly lower, but about three to seven per cent along the corridor seems to be the value uplift opportunity there.²⁶

- 3.26 Mr Michael Apps, Executive Director of the Bus Industry Confederation of Australia, stated that in Brisbane, the bus system had seen ‘significant uplift along its operations’:

That is a gold-plated bus rapid transit system, I would have to say. It has involved tunnelling and a whole range of factors which are not necessarily required to deliver a bus rapid transit system. In simple terms, a bus rapid transit system effectively has the same characteristics as light rail except that it is rubber wheeled and it can go on and off the dedicated corridor.²⁷

- 3.27 He noted that Brisbane busways had daily patronage figures ‘better than a lot of heavy rail and light rail around the world, based on the way that they can manage their time frames and leeways between vehicles’. He also noted that the ‘other benefit of bus rapid transit is that once that corridor is retained, bus rapid transit can easily be morphed into light rail if there is a view that it can increase capacity’.²⁸

- 3.28 Associate Professor Matthew Burke identified examples of value uplift around the Mandurah rail line in Perth and the CityCat ferry system in Brisbane.²⁹ He noted ‘quite significant effects at those locations where we would expect—in other words, terminals where the land development opportunities have been significant and where land use planning and

²⁶ Professor John Stanley, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, p. 50.

²⁷ Mr Michael Apps, Executive Director, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, p. 51.

²⁸ Mr Michael Apps, Executive Director, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, p. 51.

²⁹ Associate Professor Matthew Burke, *Submission 26*, pp. 3–4.

transport planning have worked in concert'.³⁰ He observed, however, that success in creating uplift was not inevitable—much was determined by planning. He stated:

We have also looked at the Brisbane busways. Unlike the ferries which have a very concentrated walk-up catchment that seems to be affected, the busways have a quite disbursed catchment that seems to be affected. Where we have seen land use planning not work in concert with the transport investments—in particular where rezoning was not changed at Greenslopes and Holland Park West—we have not seen any real value uplift or benefit. We are not recouping the gains that we should be seeing through a billion-dollar transport investment.³¹

3.29 Perhaps highlighting the difficulty in defining uplift, the Brisbane City Council took a different view of the success of the busways in creating value:

- An indicator of the economic development benefits from improved transport connectivity is change in land values of properties that directly benefit.
- The South Eastern Busway, a significant piece of public infrastructure built by the Queensland Government, is a Brisbane case study that demonstrates the positive relationship between transport connectivity and improved land values.
- Evidence suggests that since it was completed in 2001, the busway has had a positive impact on property values in the suburbs of Mt Gravatt, Eight Mile Plains and Holland Park West.³²

3.30 In its submission, the Government of South Australia observed that 'it has long been recognised that it is the fixed transit infrastructure that creates urban value in the property and land markets', with the 'permanence of the transit infrastructure of these systems' producing the impact on the land and property markets. This constrained 'the range of transport connectivity options most appropriate for application of value-capture mechanisms to

³⁰ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, pp. 1–2.

³¹ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 2.

³² Brisbane City Council, *Submission 6*, p. 2.

fixed rail (train, tram) and/or other fixed transit investments (e.g. terminals, possibly dedicated transit lanes).³³

3.31 The Curtin University Sustainability Policy Institute (CUSP) cited studies in Perth which show that ‘a new rail line raised land values in station precincts by 42% in 5 years, above the general value uplift, and for commercial land even higher values’. This demonstrated that ‘there is significant valuable redevelopment potential that is unlocked by new rail lines’.³⁴

3.32 Discussing the development of the Fishermans Bend Urban Renewal Area (FBURA), the City of Port Phillip stated that the ‘early delivery of the Collins Street Tram Extension project is vital in realising the envisioned boost to accessibility, land values and in the longer-term an improved urban renewal outcome’. Council believed the extension ‘could be financed through accessing the potential value capture opportunities that will be generated’.³⁵ Identified benefits included:

- “land value capture” of \$1,106M would be realised with delivery of the Collins Street tram extension
- potential additional revenue streams to State and Local Governments in the order of \$200M could be realised (Council rates, Stamp duty, Development contributions, Land tax) with early delivery of this project.³⁶

3.33 In addition, ‘over the 40 year development horizon’, the Collins Street tram extension was ‘estimated to potentially support’:

- 82 percent higher land values
- 34 percent increase in yield of stamp duty revenue
- 229 per cent increase in yield of land tax receipts
- 35 percent increase in yield of development contributions

³³ Government of South Australia, *Submission 67*, p. 3.

³⁴ Curtin University Sustainability Policy Institute, *Submission 40*, p. 2.

³⁵ City of Port Phillip, *Submission 29*, p. 2.

³⁶ City of Port Phillip, *Submission 29*, p. 7.

- 42 percent more yield of council rates revenue (albeit a very low total revenue).³⁷

3.34 The City of Port Phillip emphasised the importance of planning for uplift:

The selection and reservation of land for transport (and other) infrastructure is a key step in planning for urban renewal and growth in our cities. It is important that the selection of land for new infrastructure is undertaken as part of an integrated planning process, in order to maximise economic, social and environmental outcomes, including uplift in the value of land.³⁸

3.35 Strategex cited research from New Zealand of value creation for both rail and road in Auckland. Regarding Auckland's western rail line, the study found a 'statistically significant rise in values of houses located near stations upon announcement', and that 'houses near stations that are more distant from the Auckland CBD may benefit more than houses closer to the city'. The rise in prices 'was 3.5% prior to actual construction'.³⁹ With regard to the estimated benefits from extensions to Auckland's Northern Motorway, another study found that:

Population and employment rose substantially in locations near the new exits and to the north of the motorway extension, relative to developments elsewhere on the North Shore and in the broader Auckland Region. Land values also rose strongly near the new exits.⁴⁰

3.36 KPMG cited studies into value creation around rail developments in the United Kingdom. A study on the property impact of the London Crossrail 'found that the scheme that is due to start operation in 2018 has already started having an impact on the property market and that it will lead to a £5.5 billion uplift in values along the route':

³⁷ City of Port Phillip, *Submission 29*, p. 7.

³⁸ City of Port Phillip, *Submission 29*, p. 6.

³⁹ Strategex, *Submission 5*, p. 1, citing Grimes A. & Young C. 2010 *Anticipatory Effects of Rail Upgrades: Auckland's Western Line*.

⁴⁰ Strategex, *Submission 5*, p. 2, citing Grimes A. and Liang Y. 2008 *Bridge to Somewhere: The Value of Auckland's Northern Motorway Extensions*.

Within 1 kilometre of stations along the route, Crossrail will support the delivery of more than 57,000 new homes and 3.25 million square metres of commercial office space that have been identified for development. The study estimated that commercial office values around Crossrail stations in central London will increase due to Crossrail over the next decade, with an uplift of 10 per cent in capital value above a rising baseline projection. Meanwhile, residential capital values immediately around stations are expected to increase in central London by some 25 per cent and in the suburbs by 20 per cent (again above the rising baseline projection in the period).⁴¹

3.37 Another study examined ‘the impact of rail station investment on regeneration and the local economy’:

The work provides strong evidence that station investment can have a major impact in terms of urban regeneration and transformation. The scale of any impact will clearly depend on the size and location of the station and its passenger profile, the legacy of investment and associated economic activity in the surrounding area and the overall economic climate. The analysis indicated that substantial station improvements can support increases in property values in the immediate vicinity of a station of 30% or more. The study also looked at the investments in Manchester Piccadilly and Sheffield Midland, where observed changes in property values suggest an economic impact equivalent to inward investment of two or three times the cost of the station investment itself.⁴²

3.38 Mr Torkel Patterson, a Director of the Central Japan Railway Company, highlighted the experience of Japan. He advised that ‘JR East, which operate the high-speed rail north-east of Tokyo but also operate the surface trains in the vicinity of Tokyo’, got the majority of its revenue ‘from non-high-speed rail operations. It is from the shopping centres.’ He noted that JR East ‘own the station buildings and they manage the property – the hotels and other

⁴¹ KPMG, *Submission 41*, p. 3.

⁴² KPMG, *Submission 41*, p. 3.

aspects of that'. Its revenue came from 'the businesses associated with those station locations'.⁴³

- 3.39 Mr Joe Langley, Technical Director with AECOM, focussed on the value creation associated with HSR, stating that 'the quantum of value that comes out of something like a high-speed rail station is enormous'. He noted that AECOM had 'looked at studies on the increase in value around transport interchanges', including 'various types of heavy rail, commuter rail, metro, light rail and bus-rapid transit, BRT'. They found that:

The average increase in land values around transit is 12 per cent, from these studies, but the range is plus-150 per cent to minus-21 per cent. Why does that happen? It goes back to what you said earlier, Chair: it is land-use planning. If you do effective integrated land-use planning around these points of connection you can get closer to the 150 end—and even greater—if the conditions are right and the planning is done properly.⁴⁴

- 3.40 Mr Langley noted that 'we have seen from our friends from Japan and China that the value uplift around stations, if it is done well, can make a major contribution to the capital cost'.⁴⁵ He cautioned, however, that 'if you do not do it properly you can end up losing money'.⁴⁶

- 3.41 Along similar lines, Arup stated:

High speed rail could allow Governments to acquire land through compulsory acquisition of low value land on the basis of an existing low commercial price along a potential rail corridor. At a point in time the strategic locations of stations could be designated into these locations, land would be rezoned to higher use/higher value and then released to the market for sale and development at a much higher price than the original acquisition price. The value uplift of these new development sites or value uplift of the property prices in nearby towns or cities within the vicinity to these stations could

⁴³ Mr Torkel Patterson, Director, Central Japan Railway Company, *Committee Hansard*, 1 March 2016, p. 12.

⁴⁴ Mr Joe Langley, Technical Director, AECOM, *Committee Hansard*, 7 March 2016, p. 46.

⁴⁵ Mr Joe Langley, Technical Director, AECOM, *Committee Hansard*, 7 March 2016, p. 47.

⁴⁶ Mr Joe Langley, Technical Director, AECOM, *Committee Hansard*, 7 March 2016, p. 46.

provide a potential value capture revenue stream for Government and infrastructure funding partners.⁴⁷

Zoning

3.42 The evidence presented to the Committee identified a critical link between value creation and land use zoning. The Department of Infrastructure and Regional Development (DIRD) emphasised that ‘the greatest opportunities for value capture are likely to occur where the provision of new transport infrastructure is coordinated with changes to land use and zoning’. DIRD noted that ‘in most cases investment in an individual project alone is insufficient to create the additional value’:

Co-investment—such as in other infrastructure projects or in private sector businesses—and re-zoning decisions—such as opening up newly serviced areas to commercial or residential activities—will be required to unlock this potential additional value.⁴⁸

3.43 DIRD observed that a new railway station, for example, ‘has the potential to create additional residential and business activity around the upgraded site’; but that ‘to fully unlock this potential activity, the state or local government may need to re-zone the area around the station to allow for new commercial activities or increased density of housing’. DIRD concluded that ‘while infrastructure projects can create additional value, the extent to which they are able to do so will often depend on how well they have been integrated into wider network and land use planning activities’.⁴⁹

3.44 The Strategic Intelligence Group identified rezoning as ‘a powerful tool controlled by the state or territory that creates an immediate value uplift to land’, and stated that ‘integrating a proposed transport infrastructure project with land rezoning optimises the value capture opportunities’.⁵⁰

⁴⁷ Arup, *Submission 42*, p. 12.

⁴⁸ Department of Infrastructure and Regional Development, *Submission 57*, p. 2.

⁴⁹ Department of Infrastructure and Regional Development, *Submission 57*, p. 2.

⁵⁰ Strategic Intelligence Group, *Submission 30*, p. 16.

- 3.45 AECOM also stressed the link between uplift and zoning, noting that ‘proactive management of integrated land use – transport planning alongside transport investment is proven to have a positive impact on property values in funding and property-related tax revenues’.⁵¹ AECOM stated:

Evidence from international and Australian examples point to the need for proactive economic development programs and supportive land use plans to leverage the transport investment and corresponding property values and public revenues.⁵²

- 3.46 AECOM believed that ‘a change in zoning from single dwelling to multiple dwellings, or from industrial to commercial use, will significantly increase property values’, but that ‘appropriate measures need to be in place well in advance of project delivery’.⁵³

- 3.47 The importance and timing of rezoning was emphasised by Associate Professor Matthew Burke, Deputy Director of Griffith University’s Urban Research Program. Citing the building of the busway to Holland Park West, he related:

We then went to the community after we built the facility and said, ‘We’d now like to rezone your community.’ I went to a town hall meeting with 500 people with pitchforks. To paraphrase one of the participants, an older lady, who basically said, ‘How dare you bring apartment scum into my neighbourhood!’ – a classic save our suburbs, nimby, antidevelopment response – and 500 people with pitchforks went, ‘Yay!’ That was the end of the rezoning.⁵⁴

- 3.48 He noted that ‘the land use planning never occurred with the transport planning, and we ended up with a suboptimal outcome’. He stated:

⁵¹ AECOM, *Submission 63*, p. 8.

⁵² AECOM, *Submission 63*, p. 20.

⁵³ AECOM, *Submission 63*, p. 19.

⁵⁴ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 8.

Had we gone to that community and said listen, 'We can get rezoning and we can get some of this value capture back and you can get a station, or you can have no station,' that is really what is called good planning. But a rushed planning process for that facility, and a rushed implementation phase, meant we could not do good planning.⁵⁵

3.49 On the other hand, Mr Will Dwyer, Head of Strategic Planning with Goodman Ltd, highlighted how zoning could be used to promote optimal outcomes by linking rezoning to value capture. To those seeking windfall profits from the rezoning of land, he suggested stating:

... your rezoning of your land does not go through unless you sign up to the infrastructure levy process. If you remain an island, unzoned, and that is your choice as a landowner, well, that is your choice. But if you want the benefit of the upzone, a benefit that comes to you only because you are 400 metres away from the station, then you should contribute to the cost of that infrastructure.⁵⁶

3.50 Mr Dwyer argued that:

... if you did it at the rezoning level, if you had a provision that said, 'Here's the plan; everyone agrees with the plan; it's going to go through, but you have to sign up to providing some infrastructure levy on a square metreage basis,' then that is the way everyone gets caught.⁵⁷

3.51 Mr Dwyer also highlighted differences between jurisdictions over rezoning. He observed that:

In Victoria and South Australia, for instance, the planning, the rezoning process, is done well ahead of the likely demand for any type of development. So all of the agencies put their input into that rezoning process and the whole world knows, from pretty much the date of exhibition, or at least the gazettal, that is the shape of the land. We know where the infrastructure is going to go; we know all about it; we know how much it will cost et cetera. And there is

⁵⁵ Associate Professor Matthew Burke, Deputy Director, Urban Research Program, Griffith University, *Committee Hansard*, 8 April 2016, p. 8.

⁵⁶ Mr Will Dwyer, Head of Strategic Planning, Goodman Ltd, *Committee Hansard*, 7 April 2016, p. 18.

⁵⁷ Mr Will Dwyer, Head of Strategic Planning, Goodman Ltd, *Committee Hansard*, 7 April 2016, p. 18.

also commitment from the agencies in those states to start funding the delivery of that infrastructure so that it is not coming after the development, it is actually leading the development.⁵⁸

- 3.52 He noted that ‘Queensland has a different system again. It is more of a self-assessment system, but it kind of works for them’. In New South Wales, doing business was much harder:

In New South Wales, if you put an application in for a development on land that has been zoned and has been through that three-year rigmarole, you start again, and every single issue is up for grabs in terms of whether or not they are even going to let you have consent to build. That creates a competitive advantage for those people who have development applications in the bottom drawer that have gone through that process. It adds value to those development applications, but it also increases the price of land.⁵⁹

The limits of uplift

- 3.53 There were a range of limits to value creation identified in the evidence presented to the Committee.
- 3.54 The Government of South Australia noted that there were challenges in determining outcomes, including the fact that the ‘quantum of increases varies from city to city’, and that ‘it can also be difficult to differentiate the property value increase resulting from transport investment from other factors’.⁶⁰
- 3.55 In its submission, DIRD also highlighted the difficulties in establishing the link between improved transport connectivity and value creation. It noted that:

In areas where land use and zoning changes offer little opportunity to increase density or foster development (such as areas of existing high density) it is

⁵⁸ Mr Will Dwyer, Head of Strategic Planning, Goodman Ltd, *Committee Hansard*, 7 April 2016, p. 18.

⁵⁹ Mr Will Dwyer, Head of Strategic Planning, Goodman Ltd, *Committee Hansard*, 7 April 2016, p. 18.

⁶⁰ Government of South Australia, *Submission 67*, p. 3.

often difficult to separate the value increases resulting from greater transport connectivity from other causes of uplift.⁶¹

- 3.56 DIRD also noted that while international experience demonstrated ‘a clear link between access to land transport links and the value of surrounding properties’, this relationship was ‘not always positive’.⁶²It observed that:

Many projects appear to have little or no effect on the value for surrounding properties and in a number of cases have actually fallen. This indicates the challenges of determining the level of uplift. Amongst them are sampling errors in land prices, separating out the effects of transport infrastructure from other factors and determining the shape of the catchment of beneficiaries of the transport investment. However, the biggest challenge is that the transport system is a network and localising the benefit from new links in the network is often very difficult.⁶³

- 3.57 In its submission, the Local Government Association of Queensland (LGAQ) questioned the link between transport connectivity and value creation. Citing studies of the Gold Coast Light Rail, LGAQ noted that ‘there has been no observable differences in price movements in the areas surrounding the project compared to other parts of the Gold Coast’. It observed that:

While there may be some localised examples of value increases potentially driven in part by accessibility to the light rail, other factors may be more significant in driving land value increases on the Gold Coast.⁶⁴

- 3.58 LGAQ noted two key points:

First, externalities associated with infrastructure can be positive or negative, or a combination of both, and pricing externalities presents many challenges (e.g. emissions). Second, it is difficult to value the contribution made by a

⁶¹ Department of Infrastructure and Regional Development, *Submission 57*, p. 2.

⁶² Department of Infrastructure and Regional Development, *Submission 57*, p. 2.

⁶³ Department of Infrastructure and Regional Development, *Submission 57*, p. 3.

⁶⁴ Local Government Association of Queensland, *Submission 24*, p. 5.

component part of a transport network in isolation of the system-wide benefits (and any disbenefits).⁶⁵

- 3.59 Variables affecting land value changes included ‘amenity, local economic activity, demand resulting from population growth, and other social factors as well as transport connectivity’. Prices were determined ‘in the market through matching a multitude of demand and supply side elements and market conditions unique to each transaction’.⁶⁶ Moreover, LGAQ noted, ‘while a benefit may be enjoyed at sites where there is actual connectivity, it is not clear that the same benefit will be enjoyed along the entire length of the corridor’. In fact, there were ‘likely to be negative externalities associated with properties adjoining a corridor in terms of noise, pollution and reduced amenity from the visibility of structures’.⁶⁷ According to LGAQ, ‘attempting to establish whether or not there was a contribution to an increase in value from a definable transport infrastructure improvement is extremely difficult’. LGAQ concluded:

Any proposal to levy a new property tax attributable to a (net) value benefit, based on the proposition that a quantified benefit applying to a defined area arises from a particular item of infrastructure, would require a precise, reliable and transparent modelling method.⁶⁸

- 3.60 The Australian Local Government Association concurred, stating that further consideration needed to be given to ‘the reliable measurement of the increase (or decrease) in land value due to enhanced transport connectivity relative to other factors impacting land value’. ALGA believed that ‘any new systems that sought to value capture uplift would require substantial legislative change and education amongst governments, the private sector and broader community’.⁶⁹

⁶⁵ Local Government Association of Queensland, *Submission 24*, p. 5.

⁶⁶ Local Government Association of Queensland, *Submission 24*, p. 6.

⁶⁷ Local Government Association of Queensland, *Submission 24*, p. 13.

⁶⁸ Local Government Association of Queensland, *Submission 24*, p. 6.

⁶⁹ Australian Local Government Association, *Submission 76*, p. 6.

- 3.61 Urban Taskforce Australia believed that ‘while new transport connectivity is likely to lift property values it is very difficult to discern the change in property values associated with the infrastructure improvements’. It noted that there would be ‘a range of “winners” and “losers” for varying locations and varying uses’.⁷⁰ Urban Taskforce Australia argued that ‘many studies and approaches to value capture tax fail to recognise the wide range of variables that impact upon development sites’. It stated that as a result, ‘conclusions are drawn about the ability for development to absorb taxes or profit share, based on development with only one type of cost and risk profile’.⁷¹
- 3.62 The ARA observed that identifying the extent of uplift was difficult, and any assessment of uplift needed to be project specific, taking into consideration a range of factors. It stated:
- The significant range in value uplift demonstrates the complexity around determining the value public transport connections provide and reiterates that a ‘blanket’ average value increase cannot be attributed to all projects. Rather, individual projects must be individually considered, taking into account the many variations—the type of property, the mode of public transport offered (and the availability of other public transport links in the vicinity), the proximity to public transport and other amenities in the region.⁷²
- 3.63 The ARA also identified fragmented land ownership as a serious barrier to value creation, citing a study which found that ‘the “highly fragmented land ownership” around Sydney’s Central Station was ‘a barrier that would probably result in modest value uplift if the station precinct was redeveloped’. It also noted, however, that ‘improved value of \$30billion could be realised if the “airspace above the rail yards was redeveloped for

⁷⁰ Urban Taskforce Australia, *Submission 66*, p. 2.

⁷¹ Urban Taskforce Australia, *Submission 66*, p. 3.

⁷² Australasian Railway Association, *Submission 49*, p. 5.

passive recreation” and developments occurred on the adjacent land and surrounding areas’.⁷³

- 3.64 Mr Chris Johnson, Chief Executive Officer of Urban Taskforce Australia, also questioned the degree to which any uplift brought about by improved transport connectivity could be exploited through value capture. He observed in relation to windfall increases in property values that ‘while we might think that is a big uplift that people are getting, if they are not getting some sort of big windfall uplift, they are just not going to combine together to get a bigger site’. He was concerned that ‘if a tax was put on these sites to the extent that no development occurred, the whole planning system would not go anywhere’.⁷⁴ His feeling was that ‘unless these house owners get some pretty major uplift they are just not going to move’:

We might think that is ludicrous—that it is only worth \$1 million and they have got \$5 million. But if they only got \$3½ million, or you took \$1 million off, would they or wouldn’t they move? Would there be incentive? That is the delicate issue.⁷⁵

- 3.65 Mr Johnson noted that there was no rational threshold, ‘because there are a lot of emotive issues about your home, where you live, your kids, your family, the school—all those sorts of things’. He observed that ‘to have to trade all of that for some other value is a lot more than just rational numbers. I think we need to be careful about that.’⁷⁶
- 3.66 The link between value creation and value capture was also problematic for regional areas. The Committee for Geelong acknowledged that ‘improving access to Melbourne and around the region, is expected to have a positive impact on property prices in the region’, but was concerned that ‘increasing property related taxes to fund transport improvements could have a

⁷³ Australasian Railway Association, *Submission 49*, p. 15.

⁷⁴ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 9.

⁷⁵ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 13.

⁷⁶ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 13.

detrimental impact on housing affordability across the region', with 'financial and social impacts on the community'.⁷⁷

- 3.67 Ms Paula Lawrence, Executive Officer of the Peri Urban Group of Rural Councils, highlighted the differences between urban and regional areas when it came to creating value around transport connectivity. She argued that:

... the premise of value capture is that those who live or work next to the infrastructure have the most to gain. This is not the case in rural and regional areas, as those projects benefit the wider community; second, if value capture is used to fund infrastructure in rural and regional areas, there would be insufficient capital in those areas to contribute to the required infrastructure; and third, the distinction between metro and rural areas. The metropolitan councils have, for many years, prospered under other forms of funding and already have significant infrastructure projects, whereas these guys are coming off a very low base and, in a value-capture style model, will never catch up.⁷⁸

- 3.68 Ms Lawrence highlighted problems with developing new centres based on HSR stations in areas where 'there are low land values' outside regional centres and small towns, because 'most of that land is agricultural land, and we do need that for Victoria and Australia's future food production'. Her suggestion was that 'a fast-rail stop should be incorporated into one of the existing centres between Melbourne and Sydney, slightly outside Melbourne and Badgerys Creek':

Using an existing centre would give you existing support infrastructure that would not need to be provided. It would also give you an existing cohort of developers and community that were ready to invest, play a role in that value capture and contribute to that project; whereas, if we pop it in the middle of

⁷⁷ Committee for Geelong, *Submission 32*, p. 2.

⁷⁸ Ms Paula Lawrence, Executive Officer, Peri Urban Group of Rural Councils, *Committee Hansard*, 11 March 2016, p. 15.

nowhere, while you will have developers who speculate, we will not have a ready cohort.⁷⁹

3.69 While Ms Lawrence thought that value capture was ‘an eminently sensible model for metropolitan areas, she thought that ‘across the smaller shires there is not necessarily expertise in planning. There is not the expertise nor the resources to do the masterplans that perhaps we are talking about that would enable value capture.’⁸⁰ She emphasised the fact that the popularity of the peri-urban region was ‘being driven by affordability, accessibility and lifestyle’.⁸¹

3.70 Mr Andre Kaspura, representing Engineers Australia, suggested that value capture was not ‘a silver bullet in and of itself’, but ‘one of a range of options that needs to be seriously considered in the funding of infrastructure’. He saw a ‘myriad of pitfalls’ in implementing value capture, ‘given our taxation arrangements, local government arrangements and differences in regulations and legislation between states and territories, are all matters that impinge on this problem’.⁸²

Committee conclusions

3.71 Value creation is one of the key purposes and outcomes—perhaps the key purpose and outcome—of improved transport connectivity. The creation of value, and its capture, provides the means to pay for enhanced connectivity. (Details of value capture—what it is, the benefits that may flow from it, and different forms of value capture—will be discussed in Chapter 5).

3.72 The evidence presented to the Committee indicated that there was a strong, though not consistent, correlation between improved transport connectivity and uplift in property values. Transport mode and location could have

⁷⁹ Ms Paula Lawrence, Executive Officer, Peri Urban Group of Rural Councils, *Committee Hansard*, 11 March 2016, p. 14.

⁸⁰ Ms Paula Lawrence, Executive Officer, Peri Urban Group of Rural Councils, *Committee Hansard*, 11 March 2016, p. 16.

⁸¹ Ms Paula Lawrence, Executive Officer, Peri Urban Group of Rural Councils, *Committee Hansard*, 11 March 2016, p. 14.

⁸² Mr Andre Kaspura, Policy Analyst, Engineers Australia, *Committee Hansard*, 4 March 2016, p. 1.

significant outcomes on value creation. One key to consistency was effective planning. For example, the nature and timing of zoning could have a significant impact on the effectiveness of transport infrastructure, its value creation, and the ultimate distribution of benefits. Another key to consistency was the successful modelling of transport benefits. The Committee was advised by several organisations that the capacity to develop sophisticated models of value creation around transport infrastructure was already available and was continuing to develop.

- 3.73 Planning for value creation is the basis for improved transport connectivity. By focussing on value maximisation when developing projects, we ensure that a funding pool will be created and that construction will be realised. This presents opportunities for value capture, which, in turn, has the potential for providing a lever for the Australian Government to establish long-term planning and funding of infrastructure, urban renewal and regional development. It also presents significant opportunities for financing high speed rail.
- 3.74 The Committee notes that the various proposals for the development of HSR presented in Chapter 2 have at their core the explicit intention to fund HSR through the harvesting of the uplift in land value along the proposed route. The creation and capture of value has a potentially significant role to play in the development of this transformational technology.

Recommendation 7

- 3.75 The Committee recommends that the Australian Government recognise the potential contribution towards the costs of new transport infrastructure of the capture of increased property values and associated taxes that directly result from the new connectivity.**

4. Role of Government

Planning

Integrated planning

- 4.1 Integrated planning—planning of land use and transport in a coordinated and mutually supportive way—was seen as critical to the successful development of transport connectivity in Australia. In its submission, KPMG emphasised that:

Ultimately, what cannot be lost sight of in the broader debate on infrastructure delivery and funding is that the benefits expected to be delivered, and capture via various mechanisms, will only materialise from the integration of transport network planning and land use planning (at a node and corridor level) and for all levels of government, particularly State and local government, to prioritise the “right” projects that maximise the productivity and agglomeration benefits, and drives value capture at the real economy and real property level.¹

- 4.2 The City of Melbourne argued that ‘you have to have some sort of master plan to provide certainty’;² while the Committee for Sydney criticised the tendency to plan the infrastructure that we can fund rather than funding the infrastructure that we need, and highlighted the need to attach funding to

¹ KPMG, *Submission 41*, p. 9.

² Mr Richard Smithers, Transport Coordinator, City of Melbourne, *Committee Hansard*, 11 March 2016, p. 33.

infrastructure planning and development.³ In this regard, the Department of Infrastructure and Regional Development acknowledged the potential utility of value capture, stating:

Appropriately applied value capture mechanisms can encourage governments to better integrate infrastructure investments into wider planning decisions by linking payment for new infrastructure with those households and businesses which benefit from the new infrastructure.⁴

4.3 Construction firm Goodman highlighted the importance of planning by observing that ‘there is universal recognition across government and industry that well-planned investments in transport infrastructure increase surrounding property values and tax revenues’. It noted research showing that ‘these increases are greatest when transport investment is teamed with integrated land use–transport planning’. Integrated land use–transport planning involved a number of factors, including:

- Long term strategic land use and infrastructure planning linked to adequate and reliable funding sources
- Appropriate and dependable zoning and development controls on land and infrastructure corridors
- Consistent, coordinated and supportive public policies, guidelines and processes that enable public and private sector stakeholders to invest with confidence.⁵

4.4 Goodman emphasised the link between planning and value creation, noting that ‘evidence shows that property values increase by an average of 12 per cent as a result of proximity to transport investment’, but that the level of increase ‘varied between +150 per cent and -21 per cent’. The variation was attributed to differences in ‘market conditions, the presence of supportive planning and development policies, and most importantly, the degree of integrated land use–transport planning’. Goodman concluded that:

³ Dr Tim Williams, Chief Executive Officer, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 4.

⁴ Department of Infrastructure and Regional Development, *Submission 57*, p. 2.

⁵ Goodman, *Submission 65*, pp. 7–8.

Integrated land use–transport planning involves long term strategic planning linked to reliable funding sources, appropriate and dependable controls on land and infrastructure corridors, and public policies that support public and private investment.⁶

- 4.5 Engineers Australia observed that ‘comprehensive and integrated land use and infrastructure planning’ was ‘necessary to ensure that scarce funds are directed towards projects with the highest potential returns for the nation and State, Territory and local economies’. It stated that ‘present practices are simply not working’, although it conceded that ‘change is already underway as demonstrated by the important improvements occurring in Sydney’. Taking an overview of investment in transport infrastructure, Engineers Australia noted:

The status of Australian transport infrastructure has not improved substantively since 1999. Research based on constant price statistics shows that although the monetary value of infrastructure construction has increased, it has simply kept pace with economic expansion and population growth, the two key factors determining the demand for infrastructure services.⁷

- 4.6 Engineers Australia observed that ‘well managed infrastructure and infrastructure services give rise to substantial economic externalities that underpin productivity growth essential to continued improvement in Australia’s standard of living’. It argued that ‘the value of an overarching plan is that incremental progress on solving connectivity problems can be achieved in the knowledge that related matters are also covered by the plan’. It identified eight key planning principles that should underpin transport connectivity:

- Infrastructure must be managed to advance socio-economic goals not political ones.
- Infrastructure planning without land use planning is not sensible
- Infrastructure planning is integral to governing not an optional extra

⁶ Goodman, *Submission 65*, p. 8.

⁷ Engineers Australia, *Submission 53*, p. 1.

- Infrastructure is not the exclusive preserve of governments, the private sector is a key player
- Infrastructure must be managed sustainability and over its full expected life
- Infrastructure governance must be rigorous and must be de-politicized
- ICT enabled infrastructure delivers more value for money, especially in coordinated system
- Short term acquisition practices should be discarded in favour of whole of life considerations.⁸

4.7 Engineers Australia noted that Infrastructure Australia had recommended that State and Territory governments ‘deliver long term regional infrastructure plans’, and that the Australian Government ‘prioritise investment in regional infrastructure where the population is growing quickly and where the bulk of our regional economic growth can be found’. Engineers Australia strongly endorsed these recommendations, expressing astonishment that they were even necessary.⁹ Mr Kaspura stated:

So we are consistently making that point that land use planning and infrastructure planning must be integrated and there must be some long-term perspective for the community, for investors and for politicians about where infrastructure should be heading, given the way our population growth and the growth of our cities is coming together.¹⁰

4.8 The Council of Mayors (SEQ) thought that ‘the integration of infrastructure planning and land use planning is vital’, that it was ‘critical to the cost effective provision of infrastructure and efficient urban form’.¹¹ The Council of Mayors (SEQ) also argued that:

As well as integration between infrastructure provision and land use, it is highly desirable for the planning of national and state infrastructure to be

⁸ Engineers Australia, *Submission 53*, p. 2.

⁹ Engineers Australia, *Submission 53*, p. 7.

¹⁰ Mr Andre Kaspura, Policy Analyst, Engineers Australia, *Committee Hansard*, 4 March 2016, p. 1.

¹¹ Council of Mayors (SEQ), *Submission 33*, p. 2.

integrated with local infrastructure delivery and local land use planning to achieve the greatest possible efficiencies.¹²

- 4.9 The Council of Mayors (SEQ) believed it desirable for there to be ‘a strong, linking relationship between the national and state-wide infrastructure planning, regional planning and local strategic planning’. It stated that ‘only through this process will integrated planning and genuine, mode-neutral transport connectivity be achieved’.¹³ Moreover, the Council of Mayors (SEQ) stated that:

Infrastructure funding should not only be considered in relation to responding to forecast growth and development, but should also be considered as a catalyst for planned development (e.g. opening new development opportunities) and preferred urban development scenarios (e.g. a significant modal shift to public transport use).¹⁴

- 4.10 Consult Australia observed that ‘when carefully integrated with land use planning, transport infrastructure has the potential to leverage the public’s infrastructure investment to achieve other complementary benefits’. Benefits of integrated transport-land use planning included:

- Reduced traffic congestion and more travel options
- Increased housing options created by new residential development
- Lower housing construction costs and a greater supply of housing
- Improved public transport services and reduced journey-to-work times
- Increased jobs opportunities for employees and a larger pool of workers for companies
- More compact urban form and improved urban amenity
- More efficient use of existing urban land and public infrastructure.¹⁵

¹² Council of Mayors (SEQ), *Submission 33*, p. 3.

¹³ Council of Mayors (SEQ), *Submission 33*, p. 3.

¹⁴ Council of Mayors (SEQ), *Submission 33*, p. 4.

¹⁵ Consult Australia, *Submission 13*, Attachment 1, *Value Capture Roadmap*, p. 2.

4.11 Consult Australia noted that it was ‘now widely accepted that investment in well-conceived transport infrastructure generates economic benefits that exceed costs’.¹⁶

4.12 Mr Michael Apps, Executive Director of the Bus Industry Confederation of Australia (BIC), urged a focus on ‘land-use management, planning and integrated transport’. He argued that to date, planning of our cities was not what it needed to be:

In our view, up until where we are at the moment state and local governments have not done very well, and our cities are not running or functioning efficiently, or liveable. They are still good, but if we look to a 20-, 30- or 40-year horizon and keep doing the same things we are doing now, we are not going to be in a good position.¹⁷

4.13 Professor John Stanley, also representing the BIC, identified ‘key elements in terms of structuring our cities that we need to focus on if we want them to be highly productive, socially inclusive and with a low footprint’. He stated that ‘strong CBDs are really important in terms of the agglomeration benefits that they generate’; and noted that ‘we also need a small number of high-tech, knowledge-based hubs throughout our middle suburbs’. He urged a ‘focus on large urban regeneration opportunity sites, the way London has done’; and argued for a new focus on ‘transit corridors’, stating:

Vancouver—this is probably the best example around the world—has over half of its population growth happening in major transit corridors, not just around stations but through those whole corridors. In that process you are actually setting up a city that is going to function more efficiently and be more productive as well. It is not something that we have done well in Australia.¹⁸

4.14 Professor Stanley observed that ‘we are not really all that good at doing our land-use transport planning in Australian cities at the moment,’ and that

¹⁶ Consult Australia, *Submission 13, Attachment 1, Value Capture Roadmap*, p. 4.

¹⁷ Mr Michael Apps, Executive Director, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, p. 49.

¹⁸ Professor John Stanley, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, p. 49.

‘some of the projects that are being put up are probably not the projects you would think are the best ones for those cities if you really were to take an integrated approach to the planning’. He argued that there were ‘national benefits from this process of our cities working better’, and that ‘the federal government needs to be involved in the process at the strategic level’. He stated:

The Commonwealth government really has an interest in this because you actually get a lot of the benefits from a more productive economy, and that is the reason you need to be at the table. You get 30 per cent every time anybody sneezes!¹⁹

- 4.15 Professor Stanley also highlighted the need for funding agreements between different levels of government to cover major infrastructure developments. He recommended the Government look at the Swedish model:

It is a really interesting way of lining up the national, county and local governments across funding of major infrastructure initiatives. It is a really interesting model.²⁰

- 4.16 The Australian Local Government Association also stressed the importance of coordinated planning, highlighting the need ‘for integrated planning and funding mechanisms that involve all levels of government working together to deliver better ways of building and maintaining much needed community infrastructure’.²¹
- 4.17 Stressing the need for integrated planning, Professor Sue Holliday noted that ‘if transport does not support existing and proposed land uses a city will fall behind in terms of its economic productivity due to congestion, long commute times, inefficiency in terms of freight performance’. She argued that:

¹⁹ Professor John Stanley, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, p. 52.

²⁰ Professor John Stanley, Bus Industry Confederation of Australia, *Committee Hansard*, 7 March 2016, p. 52.

²¹ Australian Local Government Association, *Submission 76*, p. 2.

If major new transport infrastructures are proposed unrelated to existing land uses, it is likely that business and residents will respond by moving land uses to benefit from the enhanced accessibility whether by road or rail.²²

- 4.18 Focussing upon Sydney, Professor Holliday noted that ‘the city’s infrastructure is 40 to 50 years old and operating beyond its planned capacity’:

We do not have the governance arrangements or leadership in place to help us agree on a vision for the long-term future of our city. As a result, changes are piecemeal, short term and reinforce past patterns. Our cities are on the edge of failing.²³

- 4.19 Professor Holliday proposed ‘a genuine partnership organisation with a mandate and a funding mechanism to develop an integrated city vision and the authority within government to raise and allocate funds for implementation’. She saw a need for ‘senior elected representatives to provide leadership including mayors, and ministers who are decision-makers with authority to commit’.²⁴

- 4.20 The Planning Institute of Australia (PIA) supported:

... an integrated planning and decision making framework where land use planning processes fully account for the transport implications and requirements of our towns, cities and regions, noting that transport and development are not two separate things but two facets of the same challenge (i.e. transport is land use planning).²⁵

²² Professor Sue Holliday, *Submission 74*, p. 1.

²³ Professor Sue Holliday, *SMH* online, 14 October 2015.

²⁴ Professor Sue Holliday, *SMH* online, 14 October 2015.

²⁵ Planning Institute of Australia, *Submission 8*, p. 4.

- 4.21 PIA thought that this was important because ‘transport planning and investment decisions continue to occur with an inadequate understanding of the land use and development consequences of such decision making’.²⁶
- 4.22 PIA also emphasised the need for long term planning. Its president, Mr Brendan Nelson, stated:

I think any plan the federal government considers really needs to have a time period of 30 to 50 years. It needs to focus on a future population. For example, the Planning Institute of Australia is developing a position paper on Australia—‘Journey towards Australia @50 million’. It is a document which we will be releasing in the coming weeks. It is not intended to provide all the answers but it is intended to actually articulate some of the challenges that we are going to have to deal with as a nation as we continue to grow. It is not a question about a big Australia or a small Australia: it is a fact that we will grow to 50 million. We are growing at the moment at around 400,000 a year. It is just a matter of when.²⁷

- 4.23 Mr Nelson noted that ‘if we are in a situation where we have a clear plan around our cities and we have a clear plan where our infrastructure investment is going to be, then everyone knows there is consistency, certainty and confidence for the development sector’. Long-term planning would ‘help improve the economic productivity of our cities, because people will have the certainty and confidence to invest in them’.²⁸ He believed it was more important in the first instance to focus on cities rather than the regions, stating that ‘having a clear plan for our cities will allow us to focus in on the areas where, particularly, most of the infrastructure spending is allocated’. He thought that ‘the role of the Department of Infrastructure and Regional Development, which has had its toe in the water for some time,

²⁶ Planning Institute of Australia, *Submission 8*, p. 6.

²⁷ Mr Brendan Nelson, President, Planning Institute of Australia, *Committee Hansard*, 8 April 2016, p. 11.

²⁸ Mr Brendan Nelson, President, Planning Institute of Australia, *Committee Hansard*, 8 April 2016, p. 13.

needs to be broadened and focused into more of a focus around cities'.²⁹ Mr Nelson also thought that 'we need to have an authority or some form of commitment to a long-term plan which does transcend one term of parliament'.³⁰

Long-term planning

- 4.24 AECOM highlighted the need for long term strategic planning, stating that it was 'critical for mitigating future land costs of infrastructure'.³¹ It noted that 'the benefits of long term, strategic planning include the ability to avoid costly compulsory acquisition programs which occur when sites and corridors for critical infrastructure are taken for incompatible uses'. AECOM observed that 'improved transport connections and supportive land use plans create agglomeration opportunities for businesses, lifting the demand for and value of land, and generating economic activity that multiplies tax revenue'.³² It stated that 'transport and development are not separate issues, but two facets of the same issue. Addressing one without the other will miss the advantages and opportunities presented by both'.³³
- 4.25 Mr Ian Bell, Director of Financial-Architects.Asia Pty Ltd, highlighted the need for very long term vision. He noted that transport infrastructure was designed to operate for very long periods of time—in excess of 100 years—but was expected to pay off in shorter timeframes, creating a bias towards some transport modes over others. He stated:

The use of seven per cent real discount rates means that you automatically cut out most of your long-term decision making, you automatically favour and

²⁹ Mr Brendan Nelson, President, Planning Institute of Australia, *Committee Hansard*, 8 April 2016, p. 11.

³⁰ Mr Brendan Nelson, President, Planning Institute of Australia, *Committee Hansard*, 8 April 2016, p. 12.

³¹ AECOM, *Submission 63*, p. 12.

³² AECOM, *Submission 63*, p. 38.

³³ AECOM, *Submission 63*, p. 19.

bias the system towards projects that can pay their way in a 20- to 30-year time frame. For example, do a motorway and put a toll on it.³⁴

- 4.26 Mr Bell noted that the Sydney-Newcastle railway had been built over 125 years ago, 'yet we go into evaluations of rail projects and we expect them to pay off over 30 years. I mean, be real.'³⁵ He also advocated 'government borrowing for infrastructure'.³⁶
- 4.27 Mr Brett Casson, Digital Infrastructure Leader with Autodesk Australia, made a similar observation about the planning focus in Australia, stating that there was 'an enormous focus on the short-term planning, design and construction here'. Citing the experience of working on High Speed Two in the UK, he observed that 'one of the things that they recognise is that this project leaves, probably, a 150-year legacy'. He noted that 'the 10 years that it is going to take to plan, design, deliver and construct really are insignificant when you look at the 150 years that it is going to take to operate and maintain'.³⁷
- 4.28 Consult Australia stated that it made sense 'that infrastructure assets that last 50 years or more should be based upon long-term comprehensive planning and funding strategies', and that governments 'must do more and better long term planning'.³⁸ It urged that the 'benefits of a longer-term view of infrastructure investment, and governments' vital role in facilitating those longer-term benefits as part of a vision for our cities and regions, needs to be re-established'. Consult Australia highlighted the benefits of transformational investments such as the Guggenheim Museum in Bilbao (Spain) and the Sydney Opera House. It observed that 'there is no doubt that this is a similarly "transformational investment" that has been recouped

³⁴ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 23.

³⁵ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 23.

³⁶ Mr Ian Bell, Director, Financial-Architects.Asia Pty Ltd, *Committee Hansard*, 7 March 2016, p. 24.

³⁷ Mr Brett Casson, Digital Infrastructure Leader, Autodesk Australia, *Committee Hansard*, 7 April 2016, p. 3.

³⁸ Consult Australia, *Submission 13*, Attachment 1, *Value Capture Roadmap*, p. 18.

both economically and culturally in the decades that have followed—though this would not likely have been reflected in any cost-benefit analysis’.³⁹

State and local government planning

4.29 Several state and local governments highlighted current initiatives to achieve integrated planning outcomes. The Government of South Australia advised that a ‘world-class, new planning act is currently working its way through the South Australian Parliament’, and that it would ‘enable planning controls and compulsory acquisition powers that provide urban renewal authorities with the ability to undertake widespread urban renewal programs where necessary’.⁴⁰ The Queensland Government noted that the Draft State Infrastructure Plan sought ‘to strengthen the link between regional planning and infrastructure planning’, ensuring that ‘regional planning and regional transport planning appropriately protects corridors and combines land-use, infrastructure and economic development planning’.⁴¹ The City of Melbourne stated that its Transport Strategy 2012 emphasised ‘the importance of integrated transport and land-use planning and highlights the value of transport to the city’s economy’. The City of Melbourne observed that:

In 2011 more than 50 percent of journeys to work in the City of Melbourne were by public transport (Australian Bureau of Statistics, cited in City of Melbourne, 2014). Journey to work by car to the municipality decreased by ten per cent between 2001 and 2011 (Australian Bureau of Statistics, cited in City of Melbourne, 2014). Public transport, cycling and walking are the City of Melbourne’s preferred methods of transport. The Transport Strategy 2012 seeks to increase the connections and service performance of these modes to transport people to and around central Melbourne to support economic growth.⁴²

4.30 Highlighting the potential tensions between different levels of government over planning, the City of Melbourne observed that the ‘Victorian State

³⁹ Consult Australia, *Submission 13*, p. 3.

⁴⁰ Government of South Australia, *Submission 67*, p. 4.

⁴¹ Queensland Government, *Submission 64*, p. 10.

⁴² City of Melbourne, *Submission 62*, p. 2.

Government's Plan Melbourne aspires to foster more localised living across the metropolitan area through a compact mixed-use urban morphology', but that 'this will not be achieved without the right governance to drive it'. It considered that, 'in order to maximise chances of effective implementation', the governance model needs to be 'tailored to current needs, be targeted at the right scale and should drive greater role clarity for all entities involved in urban management'. The City of Melbourne stated that 'fundamental to any successful urban governance model must also be a genuine partnership with local government'.⁴³

Regional planning

- 4.31 The importance of regional planning was also highlighted in the evidence presented to the Committee. The Committee for Geelong called on the Australian Government to take a leadership role in 'developing a national policy for second-tier cities'.⁴⁴ Ms Kirsten Kilpatrick, representing the Committee for Geelong, stated:

We are of the opinion that there needs to be a specific strategy, vision and articulation about Geelong's future as a city, not in the broader context of the region. What that means is we need to have a conversation about the infrastructure needs for our city and bring together that conversation about how it integrates. The value capture about funding fits into that. One of the things we are talking about is the governance framework – what is the infrastructure that needs to be put in place to support future population of our city? Not that I am suggesting this will be the actual figure, but whether we have a city of about 500,000 or a million people, one of those fundamental questions is: how do we support those people in that city? What is the infrastructure that needs to underpin that? Transport is imperative to helping that movement network around the city.⁴⁵

⁴³ City of Melbourne, *Submission 62*, p. 7.

⁴⁴ Ms Rebecca Casson, Chief Executive Office, Committee for Geelong, *Committee Hansard*, 11 March 2016, p. 22.

⁴⁵ Ms Kirsten Kilpatrick, Board Member, Committee for Geelong, *Committee Hansard*, 11 March 2016, p. 22.

- 4.32 The Committee for Geelong was ‘actively seeking improved road and rail connections throughout Victoria, and particularly between Melbourne and Geelong’. It supported ‘an integrated transport planning system which delivers a cost effective, efficient and sustainable movement of people and freight in and around the city and across the State’.⁴⁶

Limits of master planning

- 4.33 The concept of master planning was, however, criticised by several witnesses. Professor Peter Newman did not believe the Australian Government should be involved in the master planning of cities. He regarded master planning as ‘a state role’. He indicated that strategic criteria drawn up by the Australian Government could clarify the planning process, making ‘transparent where that money is going and how best to use it’, but it would not focus on specifics of individual projects. Professor Newman stated:

In relation to the idea of a strategic light rail plan, for example, you could do it but you would not want to make it so specific that you said exactly where it was going and all that sort of thing. Get the broad scheme of where corridors should be linked in some way in the centres, but then get bids from the private sector on how best to do it.⁴⁷

- 4.34 Mr Martin Butterworth, Managing Director of Space Syntax Limited, questioned the whole concept of master planning, noting that many of the problems we are now dealing with, such as congestion, are the result of master planning failures:

We have put all the eggs in one basket and the congestion we have in Western Sydney is because we are planning it. We are not actually doing the opposite and solving the problem; we are actually making more and then asking the

⁴⁶ Committee for Geelong, *Submission 32*, p. 2.

⁴⁷ Professor Peter Newman, *Committee Hansard*, 23 February 2016, p. 8.

federal government to spend more money to try to fix up what we have got wrong.⁴⁸

Corridors

4.35 An essential part of long-term planning for transport connectivity is the preservation of infrastructure corridors. In its submission, AECOM noted that ‘protecting transport corridors well in advance of need is good for long term planning and can significantly reduce land acquisition costs when projects are eventually developed’.⁴⁹ AECOM noted, for example, that:

... high speed rail corridors require minimum 30 metre wide corridors stretching thousands of kilometres to accommodate two dedicated tracks for their exclusive use. In addition, HSR trains travel in excess of 350 km/hr, requiring a much wider turning radius than conventional suburban or intercity rails.⁵⁰

4.36 AECOM stated that ‘major infrastructure requires appropriately aligned and adequately sized land corridors to ensure its cost effective delivery and maintenance of infrastructure assets’.⁵¹ It suggested the use of overlay zoning to reserve corridors:

Overlay zoning provides one method of reserving land for a proposed corridor by reducing the risk of significant development occurring within the corridor. Overlay zoning allows existing uses to continue while notifying land holders and the public of its future public need. Regulations are attached to the overlay zone to help guide development in the corridor, such as avoiding major construction projects.⁵²

4.37 AECOM noted, however, that:

⁴⁸ Mr Martin Butterworth, Managing Director, Space Syntax Limited, *Committee Hansard*, 4 March 2016, p. 14.

⁴⁹ AECOM, *Submission 63*, p. 12.

⁵⁰ AECOM, *Submission 63*, p. 38.

⁵¹ AECOM, *Submission 63*, p. 38.

⁵² AECOM, *Submission 63*, p. 39.

While these zones can help preserve corridors and reduce acquisition costs, infrastructure delivery agencies may be required to purchase land ahead of need if landowners are financially disadvantaged by the overlay zoning. Upfront funding of these programs is therefore frequently required.⁵³

4.38 The Government of South Australia observed that all jurisdictions have ‘systems that can deliver escalating levels of protection for future infrastructure land, depending on the timeframes and maturity of the project’. It noted that these systems had broadly similar characteristics, being:

- Identification of an indicative route in strategic planning documents.
- Zoning (or planning overlays) of a more discrete (but sometimes still quite wide) corridor for ‘future infrastructure’ or something similar, which tends to restrict development and can introduce some rights for compensation in most jurisdictions (this happens under planning legislation).
- Identification of a clearly defined corridor of land under transport legislation, which generally also introduces compensation rights of one kind or another.
- Negotiated (voluntary) acquisition (usually by a transport agency, who in some cases may lease the land back to the owner until it is required for development).
- Compulsory acquisition—ideally only used once a project is imminent as there are much higher financial and social costs involved.⁵⁴

4.39 The South Australian Government noted that the ‘core issue is that generally that once any form of firm identification or protection is introduced for a piece of land, so are compensation rights for the existing land owner’.⁵⁵

4.40 The Committee for Geelong observed that ‘long term transport planning necessitates designating land for future transport uses’. It acknowledged that ‘preserving rail and transport corridors for development in the future is critical’, but also highlighted the need for ‘accommodating “temporary” uses

⁵³ AECOM, *Submission 63*, p. 39.

⁵⁴ Government of South Australia, *Submission 67*, pp. 8–9.

⁵⁵ Government of South Australia, *Submission 67*, pp. 8–9.

during the period when the land is not being used for the designated purpose'. The Committee for Geelong stated that 'leasing land owned by the relevant agencies is the most logical option, but a clear understanding about the future use of the land is required'.⁵⁶

4.41 The ACT Government believed that for important pieces of infrastructure 'it would actually assist states to have the federal government ensuring that a state government cannot just sell off corridors'.⁵⁷ It suggested that:

... if the Australian government wants to be serious about protecting corridors of national significance then maybe there needs to be some co-ownership in terms of purchasing land or securing lands in some way – some sort of reservation over lands.⁵⁸

4.42 With regard to HSR, the ACT Government indicated that 'one of the things that the Australian government could consider doing is actually having some skin in the game in protecting the corridors'.⁵⁹

4.43 The need to protect the HSR corridor was raised as a matter of urgency by several individuals and organisations. Financial-Architects.Asia highlighted increasing land values along the entire east coast corridor as a potential threat to HSR as the cost of acquiring land would only increase over time.⁶⁰ It stated:

What this tells us is that the history of Australia's examination of HSR makes a very compelling case for Government taking extremely seriously the notion of reserving and acquiring land for a HSR corridor even if it does not proceed to

⁵⁶ Committee for Geelong, *Submission 32*, p. 5.

⁵⁷ Ms Dorte Ekelund, Director-General, Environment and Planning Directorate, ACT Government, *Committee Hansard*, 4 March 2016, p. 23.

⁵⁸ Ms Dorte Ekelund, Director-General, Environment and Planning Directorate, ACT Government, *Committee Hansard*, 4 March 2016, p. 22.

⁵⁹ Ms Dorte Ekelund, Director-General, Environment and Planning Directorate, ACT Government, *Committee Hansard*, 4 March 2016, p. 22.

⁶⁰ Financial-Architects.Asia, *Submission 27.1*, p. 1.

determine its technological choice, the finer details of its route and connections and the timing of decision to proceed with construction.⁶¹

- 4.44 The ARA believed that ‘priority needs to be preserving the corridor, and then looking at how we fund it’,⁶² noting that before governments could count on the potential benefits of land sales and value capture they ‘must first preserve the corridor’.⁶³ Ms Emma Woods, representing the ARA stated:

I understand at the moment that the current route includes, I think, 144 kilometres of tunnels, so the longer that preservation takes, and the more development that continues in that time—we obviously risk corridor preservation costing more.⁶⁴

- 4.45 Mr Alan Thompson, of the Transport Australia Society, agreed, stating that:

We should get state and federal governments to consciously preserve the corridor—and have that in legislation—and then start to look at all the value capture within that corridor even if the train is not actually going to be built over that length.⁶⁵

- 4.46 The Hon Tim Fischer highlighted the need for urgent action on corridor preservation, noting that ‘Capital City HSR “corridor close out” continues to occur, notably with some near disgraceful planning approvals around outer Melbourne, especially the suburban muddle unfolding at Donnybrook’.⁶⁶ He told the Committee:

But as you are focusing on high-speed rail, I will leave you with the thought: it is now or never. The corridors are being gradually occupied, even around

⁶¹ Financial-Architects.Asia, *Submission 27.1*, p. 2.

⁶² Mrs Emma Woods, General Manager, Passenger and Member Services, Australasian Railway Association, *Committee Hansard*, 4 March 2016, p. 20.

⁶³ Australasian Railway Association, *Submission 49*, p. 15.

⁶⁴ Mrs Emma Woods, General Manager, Passenger and Member Services, Australasian Railway Association, *Committee Hansard*, 4 March 2016, p. 20.

⁶⁵ Mr Alan Thompson, Member, National Executive, Transport Australia Society, *Committee Hansard*, 4 March 2016, p. 6.

⁶⁶ The Hon Tim Fischer AC, *Submission 52*, p. 1.

Donnybrook, where some dreadful estates have been allowed to creep in and are very close to encroaching on the logical corridor north and north-east of Tullamarine to, ultimately, Canberra and Sydney. You need to be aware that there are land usage problems already around Tullamarine, which, I would strongly submit, are germane to your high-speed rail studies.⁶⁷

4.47 Dr Philip Laird observed that Australia needed ‘land for corridors, not only for a future high-speed rail, which has been recognised in many reports, but also for upgrading existing systems to medium-speed standards at least’.⁶⁸ He highlighted the graduated roll-out of the Shinkansen network in Japan, which ‘opened in 1964, a 517-kilometre Tokyo-Osaka link’, but which was now about 2,800 kilometres, with ‘every year or two another hundred kilometres or so is rolled out’. He stated: ‘We cannot do it all at once, but we should start with corridor protection’.⁶⁹

4.48 Dr David Adams, Director of Strategex Pty Ltd, emphasised the need for long-term thinking stating:

Corridors are very difficult to get because they are long and thin. If you have to go through a brownfield area, it is almost impossible to get a corridor. So the proposition was to look at the corridors that we need out till 2050, based on the settlement patterns that we think the country ought to have out to 2050, reserve the corridors now for shared infrastructure, whether it be road, rail, power, water, gas, hydrogen—I mean, let’s think ahead—or optic fibre, and make the corridors wide enough, so that when we need the infrastructure in 20, 30 years time we do not have to go and tunnel it. The price of land is rising very quickly and if we do not have the corridors we have to tunnel. That keeps pushing out the date at which it is possible to build these things because the costs of tunnelling basically cripple most infrastructure projects.⁷⁰

4.49 The Department of Infrastructure and Regional Development (DIRD) noted that it had been ‘working with the relevant jurisdictions around the

⁶⁷ The Hon Tim Fischer AC, *Committee Hansard*, 11 March 2016, p. 30.

⁶⁸ Dr Philip Laird, *Committee Hansard*, 7 March 2016, p. 52.

⁶⁹ Dr Philip Laird, *Committee Hansard*, 7 March 2016, p. 57.

⁷⁰ Dr David Adams, Director, Strategex Pty Ltd, *Committee Hansard*, 7 March 2016, p. 15.

corridor’, but that ‘the jurisdictions are responsible for the corridors’. It stated:

Our focus has been on those areas that are most at threat and they tend to be most at threat from other development. Those tend to be the areas in the urban centres. We are looking at working through their own planning and zoning requirements to make sure that they have got the mechanisms available to them to look at what they need to do to preserve the corridor.⁷¹

- 4.50 DIRD noted that most jurisdictions were hesitant about committing to the reservation of land because ‘that can often involve outlaying large sums of money to purchase the land. Where they can use other mechanisms to make sure that it is safe from development that is the course most of them are taking.’ With regard to working with the states and territories over the preservation of HSR corridors, DIRD stated:

They are working with us cooperatively. The phase 2 report also outlines a proposed route but there is also variability in that route. It did not get down to identifying where exactly the track would go. As I said, until that work is done, it is making sure we both preserve the corridor and leave ourselves planning room to make sure we come up with ultimately the best alignment. So it is the art of the possible: you do not want to get to reservation and paying for land when in fact the route you may ultimately need is not exactly that.⁷²

- 4.51 DIRD noted that the Australian Government’s current focus is ‘directed to engaging with the governments of New South Wales, Victoria, Queensland and the Australian Capital Territory to determine their level of interest in HSR, and to seek to confirm, preserve and protect the corridor’. It regarded these as ‘necessary steps before any decision could be taken to proceed with a HSR project’, and observed that:

These measures will be determined by individual jurisdictions and could include planning mechanisms and instruments which ensure that any impacts

⁷¹ Ms Philippa Power, Executive Director, Policy and Research Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 5.

⁷² Ms Philippa Power, Executive Director, Policy and Research Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 5.

on the identified corridor are considered in land use and development planning, processes and approvals.⁷³

Coordination and funding

4.52 Aside from the important role of government in planning transport connectivity, there is also an important role for government in the areas of coordination—particularly between the various jurisdictions and different levels of government—and funding. There was a range of views presented regarding the role of government—and particularly the Australian Government—in the development and financing of transport connectivity.

4.53 Brisbane City Council viewed collaboration between different levels of government as critical to infrastructure development, stating:

Sustainable cities and regions can only be achieved through all levels of government and other stakeholders collaborating and contributing to the planning, funding and delivery of infrastructure. Council looks forward to continuing to work with the Australian Government in these efforts.⁷⁴

4.54 PIA believed that the Australian Government had a leadership role in shaping Australia's cities, 'through the provision of infrastructure, protection of values of national significance and development of a clear national growth strategy which focuses on spatial productivity, liveability and sustainability'. PIA suggested that Infrastructure Australia be required to consider financing and funding issues, such as value capture, in its assessment of projects. It also proposed placing 'Federal funds appropriated for urban infrastructure purposes into an Urban Infrastructure Fund', with projects being 'assessed against the goals of the National Urban Policy before funds are released'.⁷⁵

4.55 In its issues paper, *Are we there yet? Value capture and the future of public transport in Sydney*, the Committee for Sydney suggested that:

⁷³ Department of Infrastructure and Regional Development, *Submission 57*, p. 7.

⁷⁴ Brisbane City Council, *Submission 6*, cover letter, p. 1.

⁷⁵ Planning Institute of Australia, *Submission 8*, p. 9.

It may be appropriate for the Federal Government to decide that it will only contribute funding to strategically important city transport projects in jurisdictions that have appropriate value capture funding mechanisms in place.⁷⁶

- 4.56 It suggested that the Australian Government could ‘incentivise good practice in terms of value capture mechanisms’ by linking funding to ‘the policy or institutional reform they wish to see within states. After all, “he who pays the piper calls the tune”’.⁷⁷ The Committee for Sydney noted that ‘most effective methods of value capture—those that achieve the goals of capturing value in an efficient, equitable and proportionate way—rely on different levels of government working collaboratively’.⁷⁸ Collaboration between different levels of government was the key to success:

Our government institutions will also need to change their thinking and change the way they operate. Each level of government will have a role to play in planning and financing our public transport. The current disjointed and siloed approach will need to be challenged and overthrown.⁷⁹

- 4.57 KPMG thought that the role of the Australian Government was ‘to provide the right incentives, encourage better planning and economic prioritisation, and reward the Local and State governments that choose to go the extra mile’. KPMG suggested that the focus should be upon ‘getting the better mix of programs and projects that are truly beneficial in the way they boost productivity and growth’, increasing ‘the overall size of the pie, rather than just the way the pie is sliced’.⁸⁰ This included exploring new funding mechanisms, including value capture:

⁷⁶ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 3.

⁷⁷ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 3.

⁷⁸ Committee for Sydney, *Submission 25*, p. 4.

⁷⁹ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, p. 10.

⁸⁰ KPMG, *Submission 41*, p. 8.

As previously mentioned, Australia has already had experience with local and city-wide value capture methods. The role of the Commonwealth government here is to encourage State and Local government to explore all these types of funding arrangements to be explored fully when funding applications from the Commonwealth are sought so that the burden is reduced and that the best projects are brought forward.⁸¹

- 4.58 The ARA proposed that the Australian Government consider ‘developing a policy to implement a form of value capture with all new public transport projects’ and that it ‘complement this policy with one that encourages transit-oriented developments’. It suggested that the Australian Government might also ‘consider whether it stipulates the inclusion of value capture as a requirement in providing Federal funds to public transport projects’.⁸²
- 4.59 Both Goodman and AECOM⁸³ highlighted recent reviews by Infrastructure Australia and the Productivity Commission which pointed to deficiencies in the current governance and funding arrangements surrounding the provision of infrastructure. In its submission, Goodman stated:

The current system within Australia of identifying necessary infrastructure and the collection of revenue and allocation of funds for the delivery of infrastructure is dysfunctional, creating an infrastructure deficit in Australia estimated at \$300 billion (Infrastructure Australia 2012). According to the Productivity Commission’s 2014 report on public infrastructure, ‘institutional and governance arrangements for the provision of much of Australia’s public infrastructure are deficient and are a major contributor to unsatisfactory outcomes’.⁸⁴

- 4.60 Goodman also pointed to research which found that:

Fragmented institutional structures and governing arrangements are one of the biggest obstacles to the establishment of value capture funding mechanisms in Australia. Although the federal and state governments are responsible for setting broad strategies and policies, implementation and

⁸¹ KPMG, *Submission 41*, p. 6.

⁸² Australasian Railway Association, *Submission 49*, p. 12.

⁸³ AECOM, *Submission 63*, pp. 10, 29.

⁸⁴ Goodman, *Submission 65*, p. 13.

administration of these policies falls principally to the state and local governments.⁸⁵

- 4.61 Goodman believed that ‘the introduction of value capture funding mechanisms in this country will require specific action at various levels of government’.⁸⁶ It viewed the principal role of the Australian Government in the implementation of value capture mechanisms as being ‘to develop national legislation, standards and guidelines to remove any obstacles to their use by state and local governments’. It believed that discussion ‘about infrastructure funding should be made part of the COAG debate’. Goodman urged Australian Government leadership, stating:

The challenge of reforming all levels of government to co-ordinate their regional and state infrastructure planning and delivery should probably, logically and practically commence with the Federal government using its current grants system to impose non-commercial contractual and performance outcomes on state governments that seek financial assistance for infrastructure projects.⁸⁷

- 4.62 Goodman also believed that the Australian Government needed to consider its own role in value capture:

Instead of an ad-hoc grants approach that is not transparent and lacks commitment to a stable and sustainable expenditure on infrastructure, the Commonwealth needs to consider hypothecating into a separate infrastructure fund, that proportion of income tax, capital gains tax and GST that is related to value improvement in property values. That might go some way to demystifying the conjecture around value capture.⁸⁸

- 4.63 The Strategic Intelligence Group (SIG) noted that ‘implementing a value capture framework for funding transport infrastructure development would open new partnership opportunities between all levels of government’. It believed that the Australian Government had ‘a critical role in identifying,

⁸⁵ Goodman, *Submission 65*, p. 13.

⁸⁶ Goodman, *Submission 65*, p. 13.

⁸⁷ Goodman, *Submission 65*, pp. 13–14.

⁸⁸ Goodman, *Submission 65*, p. 14.

prioritising and evaluating major transport needs for Australia; and this should be reflected in its infrastructure appraisal process including its means for allocating funding'. SIG proposed that the Australian Government develop, promote and implement 'a national value capture framework, designed to ensure national consistency and reduce any anomalies between different states and territories'. SIG noted that to implement this framework, 'legislative changes are likely to be required at each level of government'.⁸⁹

- 4.64 Mr John Marinopoulos, Managing Director of SIG, emphasised the importance of tying funding to outcomes:

When state governments are seeking funds from the federal government—or when councils are seeking funding from state governments—they can understand that there are certain requirements to make sure that they have met those hurdles around value creation and, then, value capture for everyone to understand the benefits that they are seeking. This is just a parallel of what Infrastructure Australia did many years ago when we had a cost-benefit analysis; this is the extension of that.⁹⁰

- 4.65 Mr Marinopoulos thought that it 'would be very good to be able to have a state-wide policy in all different states, and also the Commonwealth', that 'allows people to understand the types of things that are expected of proponents and central agencies to be able to provide back to the different tiers of government'.⁹¹

- 4.66 Mr Alan Thompson, representing the Transport Australia Society, supported placing conditions on federal infrastructure funding, stating that such conditions could 'be a very powerful way of getting good results without totally overturning the Constitution and overriding the states'.⁹² Mr Chris Johnson, CEO of Urban Taskforce Australia, agreed, noting that while it was

⁸⁹ Strategic Intelligence Group, *Submission 30*, p. 16.

⁹⁰ Mr John Marinopoulos, Managing Director, Strategic Intelligence Group, *Committee Hansard*, 11 March 2016, p. 2.

⁹¹ Mr John Marinopoulos, Managing Director, Strategic Intelligence Group, *Committee Hansard*, 11 March 2016, p. 5.

⁹² Mr Alan Thompson, Member, National Executive, Transport Australia Society, *Committee Hansard*, 4 March 2016, p. 5.

‘the Commonwealth’s role in a lot of this is to contribute funding ... it needs to be tied funding with certain requirements and outcomes’.⁹³

- 4.67 Mr Brett Casson, Digital Infrastructure Leader with Autodesk Australia, urged a more nuanced approach to policy development and implementation, stating:

I think there are a couple of things that we need to consider. We have to be very careful not to—again, to use an analogy—hit the states with a stick to say: ‘You must do this, otherwise you won’t get the funding for this.’ I think it has to be a much more pragmatic approach. It is a very important approach, because it brings together disciplines that historically have not really played ball with each other through that design, construction and operation of life cycle.⁹⁴

- 4.68 Consulting firm Arup stressed the need for ‘a consensus leadership approach’, which they conceded ‘is not necessarily an easy thing’.⁹⁵ Mr Justin Madden, former Minister for Planning in the Victorian Government and a Senior Consultant with Arup, stated that:

The federal government is often in the funding space. There are certain responsibilities where they deliver directly, but often it is the funding mechanisms that come out of federal governments. I think it has the ability, just by virtue of where it sits, to bring people to the table and engage different levels of government—whatever the persuasion of that government is—to agree to a series of principles or a gateway mechanism that could really deliver a net benefit to the community and work better for government, at the end of the day, as well.⁹⁶

⁹³ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 11.

⁹⁴ Mr Brett Casson, Digital Infrastructure Leader, Autodesk Australia, *Committee Hansard*, 7 April 2016, p. 3.

⁹⁵ Mr Justin Madden, Senior Consultant, Infrastructure and Planning, Arup, *Committee Hansard*, 11 March 2016, p. 10.

⁹⁶ Mr Justin Madden, Senior Consultant, Infrastructure and Planning, Arup, *Committee Hansard*, 11 March 2016, p. 10.

- 4.69 Mr Madden noted that for all the useful work COAG did, 'the agreements are made at a very high level but the devil is in the delivery and the detail'. He continued:

I have seen on occasions, and it is still the case, where COAG will agree to something but the implementation of it can be diabolical at a local level because of trying to get cross-jurisdiction agreement. Do you rise to the highest level, or do you fall to the lowest level, in terms of what the standard is, or what you are agreeing to, and its implementation? That is a very difficult challenge. It is part of that federation model, which is probably one of the key issues that, to some extent, holds us back.⁹⁷

- 4.70 He emphasised the importance of a single gateway to coordinate planning and funding, citing the success of planning for the Olympics as an example of what might be achieved:

If there is one thing that is a continuous theme in this space and in the discussion is the notion of a single gatekeeper. Whether that is a single authority or an agency or a portfolio minister, whatever it might be, but a single gateway would allow you to do a lot more in this space. To come back to the Olympics as a model, when Olympic Games, or something of that magnitude, are delivered then there is often a single authority but it has various levels of government involved in that authority and it often has legislative and regulatory mechanisms to oversight that delivery. It is slightly different in that the Olympic Games has to deliver a whole lot of infrastructure but it also generates revenue. Ticket sales are different from the sort of the revenue that we are talking about here but that concept where there is cross-government and cross-party commitment to deliver the infrastructure through an agency is a key issue. That is why Olympic Games often get a lot of infrastructure delivered by that cross-party, multilevel government support through a single agency and a single gateway and that is why it is probably successful and that is why countries often use Olympic Games as a mechanism

⁹⁷ Mr Justin Madden, Senior Consultant, Infrastructure and Planning, Arup, *Committee Hansard*, 11 March 2016, p. 10.

to deliver these things rather than deliver them through traditional levels of government or traditional mechanisms.⁹⁸

- 4.71 The Council of Capital City Lord Mayors thought it ‘critical that tiers of government work together to plan for and implement transport and urban domain changes’;⁹⁹ and believed it important ‘for all levels of government to collaborate on potential value-capture mechanisms, and how they might be implemented in each city’. It noted that:

The structure of urban governance in many Australian cities places the responsibility of metropolitan planning and infrastructure design on the State/Territory Government. Therefore, State/Territory Government planning and transport authorities are likely to play a central role in the establishment of value-capture mechanisms tied to city-wide infrastructure projects.¹⁰⁰

- 4.72 The Council of Capital City Lord Mayors suggested that ‘State/Territory and local governments could work together to develop overarching place-based strategies for new hubs created by the provision of infrastructure such as high speed rail’. It believed that ‘communities need to be able to access the infrastructure—especially in outer metropolitan areas to connect with jobs and services’.¹⁰¹

- 4.73 The City of Port Phillip supported ‘the development of consistent guidelines to forecasting property value uplift and assessing value capture for use at both the Commonwealth and State levels of government’. It believed the Australian Government ‘could enable this through the required legislative and regulatory changes, ideally as part of a framework that includes a standardised and consistent methodology for use in cost benefit analyses’.¹⁰²

⁹⁸ Mr Justin Madden, Senior Consultant, Infrastructure and Planning, Arup, *Committee Hansard*, 11 March 2016, p. 9.

⁹⁹ Council of Capital City Lord Mayors, *Submission 72*, p. 3.

¹⁰⁰ Council of Capital City Lord Mayors, *Submission 72*, p. 2.

¹⁰¹ Council of Capital City Lord Mayors, *Submission 72*, p. 3.

¹⁰² City of Port Phillip, *Submission 29*, p. 2.

4.74 The City of Port Phillip also supported ‘the concept of value capture mechanisms being applied at the appropriate level of government to fund transport and other infrastructure’. It stated:

A consistent and transparent approach to infrastructure funding through value capture is required. As a key administrative action, standard methods of assessing value capture should be introduced to cost benefit analysis guidelines at the national level (e.g. Infrastructure Australia), to enable consistent methodology to be applied in all jurisdictions. This consistency is particularly important given the ongoing role that Infrastructure Australia will play in the assessment and funding of major infrastructure projects.¹⁰³

4.75 The ACT Government observed that ‘nearly everything that the Australian government does touches cities in some ways’, thus providing ‘a fantastic opportunity for the Australian government to encourage certain outcomes in cities by the way it invests in cities’.¹⁰⁴

4.76 Mr Andre Kaspura, representing Engineers Australia, noted that Infrastructure Australia had recommended the ‘consolidation of all Commonwealth funds that are directed towards infrastructure into one integrated fund’, and that the Australian Government ‘use its position as a funder of infrastructure to leverage broader change in infrastructure and institutions’.¹⁰⁵

4.77 In its submission, the Queensland Government noted that there was already a high level of coordination with regard to planning between the state and federal governments. It stated:

The Council of Australian Governments (COAG) Transport and Infrastructure Council (TIC) has agreed to a long term vision for infrastructure and transport in Australia. Its membership includes representatives of all three levels of government and its work is focussed on advancing a collaborative approach to

¹⁰³ City of Port Phillip, *Submission 29*, p. 6.

¹⁰⁴ Ms Dorte Ekelund, Director-General, Environment and Planning Directorate, ACT Government, *Committee Hansard*, 4 March 2016, p. 22.

¹⁰⁵ Mr Andre Kaspura, Policy Analyst, Engineers Australia, *Committee Hansard*, 4 March 2016, p. 2.

“infrastructure and transport systems and services that enhance Australia’s productivity, competitiveness and liveability”.

Queensland is an active participant in the TIC, the related senior official groups the Transport and Infrastructure Senior Officials Committee (TISOC) and the Infrastructure Working Group (IWG). The work of TIC includes developing sustainable, efficient funding and delivery models.¹⁰⁶

- 4.78 Similarly, the Brisbane City Council highlighted the coordination between state and local government in Queensland:

There is already quite a bit of coordination. As I said, there is a South-East Queensland regional plan, which has a number of concepts in it, such as transit oriented development. It sets in place requirements for the way in which the region will develop. As a requirement of satisfying state interests, in preparing our planning scheme we are required to go through a state government review. That has been consistent with the regional plan and that has set in place a pattern of land use for Brisbane which sets the shape of the city going into the future. That is entirely consistent with the planning from state government in a regional plan. So, in terms of planning and the outcomes, the state interests have been satisfied and met. The land-use pattern which we have in place is a fairly efficient pattern based on nodes and corridors and really making the most of our infrastructure. So, on that basis, the state’s requirements and Brisbane City Council’s requirements are closely aligned.¹⁰⁷

- 4.79 Nonetheless, Brisbane City Council noted that the coordination was not always perfect. Citing the example of the upgrade of the Gateway Motorway, Council observed that:

What we are saying in that example is that, if there had been a better coordinated approach to the project itself and the wider impacts, we could have had a better result where council would not have had to find \$140

¹⁰⁶ Queensland Government, *Submission 64*, p. 8.

¹⁰⁷ Mr Kerry Doss, Manager, City Planning and Economic Development, Brisbane City Council, *Committee Hansard*, 8 April 2016, p. 34.

million that we did not actually have in our the forward planning of our budget process and the forward years.¹⁰⁸

4.80 Mr Chris Johnson, Chief Executive Officer of Urban Taskforce Australia, thought it would be good to have a national approach to infrastructure planning and governance, but the national approach needed ‘to calm down a little bit the kind of glint in the eye that a lot of smaller local government authorities have got—that this is a federal government endorsed approach to loosen up planning rules so that they can make money’.¹⁰⁹ He was concerned that local councils were ‘throwing out the rule book and saying, “We’ll go up, up and up and the more money we can get the better”’. He believed that there was ‘an ethical problem in terms of a planning system across metropolitan areas’, that ‘approval authorities now seem to be moving more into a role of trying to encourage more development, not for urban design benefits or anything but to raise funds’.¹¹⁰

4.81 Mr Johnson wanted ‘a structure around this that makes it a fair playing field for landowners, the development industry and, ultimately, planning authorities’.¹¹¹ He believed that it was important for the state governments rather than local governments play a leading role. He stated:

There is a fundamental governance issue and our position would be that in those areas the state government should be the dominant planning body to determine those issues, because then there can be a direct dialogue with the

¹⁰⁸ Mr Brett Turville, Branch Manager, Transport Planning and Strategy, Brisbane City Council, *Committee Hansard*, 8 April 2016, pp. 31–2.

¹⁰⁹ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 9.

¹¹⁰ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 8.

¹¹¹ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 9.

Commonwealth about funding and about outcomes. Councils may well not like that, but it gives some discipline to the way it happens.¹¹²

- 4.82 Citing the example of Sydney's North West Rail Link, he observed that 'if the state government is spending billions of dollars putting the North West Rail in, the state government should determine the planning envelopes et cetera around it', not local government.¹¹³ Mr Johnson believed that:

...there needs to be through the three layers of government some rigour to this that puts a discipline to it. Our members do not want to find that there is a local government levy, a state government levy and a federal government levy and then no development occurs.¹¹⁴

- 4.83 DIRD saw the Australian Government's role as twofold. The first was 'informed investment':

Currently the Australian government has committed over \$50 billion in public infrastructure investment to transport infrastructure. It is in the interests of the government and the Australian taxpayer to ensure that this investment is well targeted and reflects best value for money. In part, this involves ensuring that, where practical and fair, those who directly benefit from major infrastructure investments also contribute to the cost of infrastructure.¹¹⁵

- 4.84 The second was 'in supporting all Australian governments to make efficient and effective decisions around the provision of infrastructure'. DIRD noted that:

In recent years, the Australian government has led reforms in consultation with state and territory governments designed to achieve this outcome. These

¹¹² Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 12.

¹¹³ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 12.

¹¹⁴ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 11.

¹¹⁵ Mrs Jessica Hall, General manager, Infrastructure Policy Branch, Infrastructure Investment Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 1.

include improving our project assessment and selection processes, increasing the robustness of infrastructure cost estimation, and harmonising regulation across jurisdictions. The department has led most of this work on behalf of the government. The department recognises that there remain a range of areas for further reform in infrastructure, and we welcome the recent contributions to this national conversation by Infrastructure Australia through its 15-year plan and the Harper competition policy review.¹¹⁶

- 4.85 DIRD believed that the ‘implementation of value capture mechanisms, which generally involve the imposition of land and property taxes or the sale of state government owned assets, primarily sit with state and local governments’. It suggested that ‘while the Commonwealth can help support these governments to identify and deliver opportunities for value capture funding, it has limited capacity to directly intervene’.¹¹⁷
- 4.86 The Treasury noted that most infrastructure projects were, ‘at best, citywide-type projects’, and did not call for uniform funding solutions at a national level. Moreover, most of the existing revenue mechanisms which could be used in value capture operated at a state and local level. According to the Treasury, ‘it is not obvious that a Commonwealth tax is going to be any better than those’.¹¹⁸
- 4.87 DIRD acknowledged that in the past governments had not done planning well, and that there was a history of poor coordination between jurisdictions.¹¹⁹ It believed that the Commonwealth should focus on funding levers rather than tax changes to promote better outcomes, saying to state, territory and local governments, “‘We’re not going to give you funding unless you do, perhaps, X, Y and Z’”. Nonetheless, the Department urged

¹¹⁶ Mrs Jessica Hall, General manager, Infrastructure Policy Branch, Infrastructure Investment Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 1.

¹¹⁷ Department of Infrastructure and Regional Development, *Submission 57*, p. 6.

¹¹⁸ Mr Damien White, Chief Advisor, Industries and Infrastructure Division, Fiscal Group, The Treasury, *Committee Hansard*, 15 March 2016, p. 10.

¹¹⁹ Mrs Jessica Hall, General manager, Infrastructure Policy Branch, Infrastructure Investment Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 9.

caution in the use of funding levers, 'because governments will still want these projects to be delivered':

We need to think about how we can actually use those mechanisms so that you are actually working out what the right roles of the three governments are, and how you can actually get that framework to work cohesively knowing who actually has what levers.¹²⁰

Hypothecation

4.88 The question of whether revenue raised from infrastructure investment, whether directly or by means of value capture, should be hypothecated to infrastructure funding was also raised in the evidence presented to the Committee. Hypothecation is the dedication of the revenue from a specific tax or taxes to a particular expenditure purpose.

4.89 Mrs Emma Woods, representing the Australasian Railway Association (ARA), expressed support for hypothecation, stating:

We believe that if you are going to generate the value and you are going to capture that value from a transport project it makes sense that you put back into transport infrastructure. So, rather than put it back into general funds, we think it makes sense. We think it would also help sell it to the community. And if you are saying, 'we are going to capture X percentage and we anticipate we will generate X dollars, and those dollars are going to go into a dedicated fund and we are going to reinvest it either back into the system itself or into the next public transport infrastructure project, whatever that might be,' we think that would help it to be transparent but also create the case for the public accepting value capture.¹²¹

¹²⁰ Mrs Jessica Hall, General manager, Infrastructure Policy Branch, Infrastructure Investment Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 11.

¹²¹ Mrs Emma Woods, General Manager, Passenger and Member Services, Australasian Railway Association, *Committee Hansard*, 4 March 2016, p. 19.

- 4.90 The ARA believed that ‘the benefit to providing a reliable and dedicated source of revenue is that long term planning can then occur’.¹²²
- 4.91 A range of witnesses regard hypothecation as essential to value capture. The Committee for Sydney stated that funds collected through value capture ‘are hypothecated to the project they are designated to fund’. This was to ensure that ‘partners in the project are able to plan effectively over the life of the project—but also to achieve public buy-in to the model—removing the potential for the accusation that value capture is a “cash-grab”’.¹²³
- 4.92 Property group Charter Hall made a similar point, stating:
- As a significant national landlord across office, retail and industrial properties, Charter Hall is keen to ensure that any uplift in property-related tax revenues received by local and state governments as a result of improved transport connectivity are apportioned to the provision of infrastructure and related services, and not directed to consolidated revenue.¹²⁴
- 4.93 Goodman suggested that ‘instead of an ad-hoc grants approach that is not transparent and lacks commitment to a stable and sustainable expenditure on infrastructure’, the Australian Government needed to ‘consider hypothecating into a separate infrastructure fund, that proportion of income tax, capital gains tax and GST that is related to value improvement in property values’. That approach would ‘go some way to demystifying the conjecture around value capture’.¹²⁵
- 4.94 In the context of the development of the airport at Badgerys Creek, Professor Sue Holliday proposed that the new airport be linked to HSR and the value capture of developing a ‘city’ on the airport land (owned by the Australian Government) be hypothecated to the cost of providing the HSR service. She stated:

¹²² Australasian Railway Association, *Submission 49*, p. 7.

¹²³ Committee for Sydney, *Submission 25*, p. 4.

¹²⁴ Charter Hall Group, *Submission 50*, p. 5.

¹²⁵ Goodman, *Submission 65*, pp. 13–14.

It would be an excellent case study of value capture. The Badgery's Creek site should not be wasted on only developing an airport, which the private sector can easily deliver. Its public value should contribute back to a piece of nation building infrastructure that the private sector alone cannot deliver.¹²⁶

4.95 Mr Peter Thornton, Managing Director of Transportation Associates Pty Ltd, gave qualified support for hypothecation, stating that he thought that 'mechanisms that do hypothecate some of that value uplift back to pay for the infrastructure that has created them is justifiable'. He suspected, however, 'that it could be a very tricky mechanism, and a difficult mechanism', and preferred to focus on a simpler mechanism for capturing value—the direct purchase and sale of land.¹²⁷

4.96 Mr Peter Olah, Executive Director of the Council of Mayors (SEQ) saw hypothecation as a partial solution. He stated:

We are not talking a complete hypothecation, because it is not a perfect model and there is no incentive if governments do not get to keep some of that money to spend on other things, so inevitably it will be a partial return on that expected or modelled growth.¹²⁸

4.97 Mr Olah further noted that 'in local government land there is some genuine concern around a model that involves any form of land tax that potentially hits the one revenue base of councils to fund state infrastructure'.¹²⁹

¹²⁶ Professor Sue Holliday, *Submission 74*, p. 3.

¹²⁷ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 33.

¹²⁸ Mr Peter Olah, Executive Director, Council of Mayors (SEQ), *Committee Hansard*, 8 April 2016, p. 21.

¹²⁹ Mr Peter Olah, Executive Director, Council of Mayors (SEQ), *Committee Hansard*, 8 April 2016, p. 21.

- 4.98 The Business Council of Australia was sceptical of hypothecating future revenues, noting that ‘hypothecation provides additional complexity to government budgets, and may result in additional inefficiencies’.¹³⁰
- 4.99 Dr James McIntosh, Principal of LUTI Consulting, rejected hypothecation. He did not believe that the ‘Australian market is designed, in its current ad valorem tax system, to implement hypothecation of these taxes’:

There are issues with redistributing Commonwealth taxes towards discrete projects in a hypothecated sense. You could do it with a state based tax but with the Commonwealth it is too hard. I would say a first pass with all projects is that we should understand what net benefit is generated by projects and how that can be attributed to the different tiers of government and have grant allocations commensurate with it.¹³¹

- 4.100 He concluded:

It often sounds really important to ‘hypothecate’ and ‘ring-fence’ money. But that term is only important if you are going to use it to go through and, say, repay a bond issue or have a financing mechanism associated with it. If it is a grant based model, then we do not need to hypothecate.¹³²

Different approaches to government involvement

- 4.101 Different approaches to the role of government in the development of transport connectivity were presented to the Committee. Mr Thornton believed it was ‘the job of government to oversee the creation of transport infrastructure and to choose the means to do that’. He stated that ‘at the end of the day it is government who is the lender of last resort, but, more than that, it is government that carries the responsibility that whatever systems are created have continuity’.¹³³ He believed the best way forward in developing transport connectivity was for government to develop the

¹³⁰ Business Council of Australia, *Submission 68*, p. 2.

¹³¹ Dr James McIntosh, Principal, LUTI Consulting, *Committee Hansard*, 7 March 2016, p. 60.

¹³² Dr James McIntosh, Principal, LUTI Consulting, *Committee Hansard*, 7 March 2016, p. 60.

¹³³ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 29.

infrastructure, create the value, then sell it to the private sector. Regarding HSR, he stated:

The main three east coast states have to be involved, but I think it has to be driven from government down. There is a lot of testing to be done to find out where your risk point is and you can say, 'Yes, government is prepared to take the risk on this.' As an example, it might be, say, that government is prepared to take the risk on acquiring a certain amount of land in certain strategic locations because it is committed to this project; and, by acquiring that land, government will then add value to it. In the same way as the Commonwealth added value to airport sites in its various different ways by various improvements until they had a value to the private sector, the government will add value and then, at some point, will be confident that it will be able to on-sell that to the private sector.¹³⁴

4.102 On the other hand, Dr David Adams, Director of Strategex Pty Ltd, thought the private sector should take the lead. He explained:

There is a long-term role for government in planning to an extent, but the first role for government is to try and get the appraisal guidelines right, for a start, and then get the market frameworks right so that the market can actually deliver these long-term transport solutions, rather than perennially relying on bureaucrats and consultants doing benefit-cost assessments, which are a third-best method of assessing infrastructure.¹³⁵

4.103 In its submission, the Curtin University Sustainability Policy Institute (CUSP) presented the Entrepreneur Rail Model, which advocated private sector development of transport connectivity, with the role of government being to facilitate private sector development. The Entrepreneur Rail Model envisaged several functions being retained or adopted by government:

- Land acquisition and assembly
- Network coherency and integration
- Zoning land use changes, so as not to prohibit re-development

¹³⁴ Mr Peter Thornton, Managing Director, Transportation Associates Pty Ltd, *Committee Hansard*, 7 March 2016, p. 31.

¹³⁵ Dr David Adams, Director, Strategex Pty Ltd, *Committee Hansard*, 7 March 2016, p. 12.

- Urban design and building standards.¹³⁶

4.104 Professor Peter Newman, Director of CUSP, explained that:

Government's role in this is to do the land assembly to ensure that there is fare-system integration, but they should not get in the way of saying exactly where a railway should go because that may not be where the best land development opportunities are. This is, in fact, how trams and trains were originally built, and it is now the way in which they are built, managed and operated in Japan, in all of their cities, and in Hong Kong. The difference with Hong Kong is that that is a government based process but with a largely entrepreneurial private sector dominated agency that now runs Melbourne's rail system, for example—the MTR. The Japanese system, however, is more like what I am suggesting.¹³⁷

4.105 CUSP observed that the solution to funding transport connectivity 'is found in land development around stations':

If enough land can be found to enable redevelopment by the private sector to sell and lease buildings around stations, or to redevelop jointly with private owners or government for mutual benefit, then they can create the capital to enable them to build the rail line, to own it and to operate it. This is the Entrepreneur Rail Model.¹³⁸

4.106 CUSP stated that it was 'important that a government bidding process is controlled by Treasury as the central agency required to ensure private sector funds are attracted to achieve public-good goals':

Treasury would ensure consortia are evaluated by financial criteria, land development criteria and transit criteria, in an integrated way. This cannot be done by a transit agency as their emphasis on choosing the routes in detail first

¹³⁶ Curtin University Sustainability Policy Institute, *Submission 40, Attachment 1, Entrepreneur Rail Model: A Discussion Paper*, February 2016, p. 18.

¹³⁷ Professor Peter Newman, *Committee Hansard*, 23 February 2016, p. 1.

¹³⁸ Curtin University Sustainability Policy Institute, *Submission 40, Attachment 1, Entrepreneur Rail Model: A Discussion Paper*, February 2016, p. 3.

will not optimise land development opportunities so the rail will not get built.

¹³⁹

4.107 CUSP stated that ‘a transit agency’s only task in our model is to ensure transit system compatibility with any new rail lines’. CUSP believed that:

The delivery process will require the powers of a redevelopment agency to provide government’s role in land acquisition, zoning and land assembly to unlock the latent value in land development around the stations.¹⁴⁰

Collective bargaining

4.108 Another issue raised in the evidence presented to the Committee was that of ‘collective bargaining’ – different jurisdictions combining together for the purpose of coordinating infrastructure procurement, especially the purchase of rolling stock. The ACT Government thought collective bargaining ‘an interesting concept to think of for the future’. Citing its own light rail procurement, it noted that:

Had we had others tendering at the same time or there was some sort of collective approach which had the support of the federal government, then may be it would have put extra competitive pressure to get an even better deal.¹⁴¹

4.109 Professor Peter Newman liked the idea of collective bargaining, believing that it was ‘something that the federal government could play a role in significantly, because there are ways in which we could get economies of scale together that could create a much better rail industry in Australia’. He saw the advantages of using it to develop and promote technological

¹³⁹ Curtin University Sustainability Policy Institute, *Submission 40, Attachment 1, Entrepreneur Rail Model: A Discussion Paper*, February 2016, pp. 5–6.

¹⁴⁰ Curtin University Sustainability Policy Institute, *Submission 40, Attachment 1, Entrepreneur Rail Model: A Discussion Paper*, February 2016, pp. 5–6.

¹⁴¹ Ms Dorte Ekelund, Director-General, Environment and Planning Directorate, ACT Government, *Committee Hansard*, 4 March 2016, p. 21.

innovation, generating expertise and technologies in Australia that could then be sold for export.¹⁴²

- 4.110 Mr Alan Thompson, of the Transport Australia Society, endorsed collective bargaining, noting that the 'idea of using one template for rolling stock has actually worked in Australia':

Think of the modern carriages that run up and down the motorway between Perth and in Joondalup. I think Perth was first and then Brisbane tacked onto the back end of that. Brisbane had a different paint job but essentially the same carriages internally, and that got them a much better price. They were not so proud that they felt they had to have something different. They were happy to go for the same project—two Holdens, if you like, rather than one Holden and one Ford. That was a very good deal for them. I think light rail rolling stock could be a very similar proposition.¹⁴³

- 4.111 Dr Patrick Yu, Chief Executive Officer of the Centurion Group, also endorsed the concept, stating:

We would be very happy to participate in the competitive tender or expression of interest with all other light rail carriage suppliers. We had already thought and planned this. We believe, if we were so lucky as to win—there could be two or three such manufacturers in the country manufacturing to the same standards set by yourselves. We are already thinking about taking over some of the land to be vacated by BHP in the Illawarra. Because, remember, we are doing the outer port extension with NSW Ports. We would put our factory there ... and if a light rail manufacturing facility can be built—because we have the technology—we would be good for probably 2,000 or 3,000 jobs, and we could lower the cost per carriage by 50 per cent.¹⁴⁴

- 4.112 Mr Peter Olah, Executive Director of the Council of Mayors (SEQ), was less sanguine about the benefits of collective bargaining. Highlighting his experience with the State Transit Authority in New South Wales, he stated that he was 'yet to see a circumstance where governments in procurement

¹⁴² Professor Peter Newman, *Committee Hansard*, 23 February 2016, p. 9.

¹⁴³ Mr Alan Thompson, Member, National Executive, Transport Australia Society, *Committee Hansard*, 4 March 2016, p. 5.

¹⁴⁴ Dr Patrick Yu, Chief Executive Officer, Centurion Group, *Committee Hansard*, 7 April 2016, p. 38.

achieve genuine economies of scale'. In his experience, 'the bigger a government capital order, especially for items involving any form of technology, it ends up adding cost rather than saving'. He stated that 'in simple terms, it is arguable that providers see governments coming when they put big orders together'. Mr Olah also identified an 'Australian tendency, especially in transport, to over specify':

An example could be a metro system in, say, Hong Kong that looks to order a new set of carriages. Because it uses standard metro carriages it will have availability from, potentially, dozens of global suppliers, very cheaply because they are not changing anything from off the rack, whereas in Sydney you are, effectively, inventing a space shuttle every time you order a new train—hence the cost.¹⁴⁵

4.113 Within the context of the discussion of collective bargaining another proposal was put forward—a single national ticketing system. In her evidence to the Committee, Ms Paula Lawrence, Executive Officer of the Peri Urban Group of Rural Councils, commented:

I was interested in your comments about light rail and, perhaps, a common tendering for carriages. Certainly, another thing that would be worthwhile throwing into that mix would be common tendering for a consistent ticketing system across Australia. If we are going to go down the path of bulk buying carriages, we may as well get everyone on board with the one ticketing system.¹⁴⁶

Committee conclusions

4.114 The evidence presented to the Committee highlighted the importance of integrated transport and land-use planning to the successful development of transport connectivity. Planning transport without reference to land use and vice versa leads to sub-optimal outcomes. Integrated planning has significant benefits, not least of which is matching transport to land use in a

¹⁴⁵ Mr Peter Olah, Executive Director, Council of Mayors (SEQ), *Committee Hansard*, 8 April 2016, p. 20.

¹⁴⁶ Ms Paula Lawrence, Executive Officer, Peri Urban Group of Rural Councils, *Committee Hansard*, 11 March 2016, p. 15.

manner which optimises both, thereby increasing returns on investment. This benefits landowners, developers and governments.

- 4.115 There is a need for long-term planning horizons. Transport infrastructure, by its very nature, involves the creation of assets with a very long operational life, potentially in excess of one-hundred years. Infrastructure planning—and funding—needs to take this into account. Financing of infrastructure projects—and estimated returns—should be based on the expected service life of the asset. This will ensure that the cost-benefit comparison of different transport modes will be done on a fair basis.
- 4.116 Corridor preservation, especially for major projects such as HSR is very important. The ability to protect corridors ensures that transport infrastructure will follow the optimum route. Failure to protect corridors will mean compromises in planning and significant increases in cost. In addition, there has to be consistency in the management of corridor preservation between jurisdictions to ensure consistent outcomes. This is especially important in dealing with infrastructure that crosses jurisdictional boundaries, such as HSR. The Committee also supports the use of overlay zoning, which protects transport corridors in the longer term, while allowing compatible land uses in the short term. This is important given the very long lead times between conception and construction in large scale projects.
- 4.117 A high level of coordination between different jurisdictions, between different levels of government, and between government and industry is a prerequisite to successful outcomes, both in planning and funding. This is especially true in relation to projects that cross jurisdictional boundaries and involve different levels of government, such as HSR. The role of the Australian Government in providing leadership is particularly important, as is its ability to leverage outcomes through control of funding. Coordinating planning and procurement by linking funding to planning and outcomes is an effective tool for coordination of transport infrastructure development.
- 4.118 The evidence presented to the Committee highlighted a need for close coordination of funding arrangements between different levels of government and the tying of funding to planning and outcomes. The potential for the Australian Government to enforce coordination and

discipline on other levels of government was emphasised by some; the need for a cooperative approach by others. Everyone, agreed, however, that it was in no-one's interests to have different levels of government seeking funding solutions in isolation from each other. The concept of master funding – the creation of a single bucket of money drawn from a range of sources – hypothecated to the development of transport infrastructure was raised with the Committee. The Committee can see value in the idea of master planning, master funding, and the creation of transport connectivity plans directly linked to dedicated funding sources. This will ensure the integrity and viability of transport infrastructure.

- 4.119 The hypothecation of funding draws a direct connection between the wealth created by transport infrastructure investment and the investment itself. It is justified where the infrastructure creates investment or where the infrastructure will generate a significant increase in investment and economic activity over a longer period of time. Linking infrastructure funding to wealth generation through hypothecation provides both certainty and discipline in planning. Without hypothecation we will commit the sins of the past, allowing developers to build beyond the capacity of our infrastructure, which eventually congests, then finally occludes, investment.
- 4.120 The Committee further notes that value capture provides a mechanism by which planning and funding can be intimately linked, ensuring effective and efficient transport connectivity outcomes. The Committee believes that a bonding alignment agreement between the three levels of government should be established that maximises value capture revenues. It is important to form this unity of purpose so that the full potential of value capture is realised and is not compromised by any level of government acting in a way that is contrary to the interests of the agreed goal. A further alignment that considers stakeholder land owners and developers fairly and equitably will optimise outcomes for all levels of government while providing clear and continuous streams of opportunities with strong elements of certainty, stability and growth.
- 4.121 The Committee does not have a view on whether planning and funding should be driven primarily by the public sector or the private sector. Nonetheless, the Committee is aware that where once transport infrastructure development was dominated by the public sector, in recent

years increasing levels of private sector interest, money and expertise have emerged and should be utilised. Whether in the form of the Entrepreneur Rail Model or the Centurion proposal for HSR, the opportunities for private sector engagement are real, and provide opportunities for the provision of transport infrastructure in a timely and cost-effective way.

4.122 Likewise, the Committee considers there are significant savings to be obtained from the collective bargaining of procurement for vehicles and rolling stock. Governments should examine whether efficiencies can be achieved through the coordinated procurement of vehicles and rolling stock for transport infrastructure, such as new bus fleets, which would more likely have national operability. The Committee supports Australian Government funding of transport infrastructure being conditional on standardising rolling stock through a centralised procurement facility, ensuring best price or opportunities for local manufacturing when critical mass is projected.

4.123 The Committee believes that consideration should be given to:

- the creation of a single lead agency to coordinate infrastructure planning and funding;
- the creation of a common infrastructure fund, based on the quarantining and hypothecation of infrastructure related revenue—a master fund;
- the development of an infrastructure master plan, to be accompanied by an urban plan of development, zoning and facilitation of building approvals;
- infrastructure corridor reservation;
- promotion of private sector involvement in the development of transport connectivity; and
- coordinated procurement of materials, vehicles and rolling stock for transport infrastructure.

Recommendation 8

4.124 The Committee recommends that the Australian Government, in conjunction with state and territory governments, develop a system for coordinating the planning and funding of major infrastructure projects across all levels of government, including the quarantining and

hypothecation of funds to projects, the allocation of funds to projects being contingent upon compliance with prescribed planning and funding requirements.

Recommendation 9

4.125 The Committee recommends that the Australian Government, in conjunction with state and territory governments, examine whether efficiencies can be achieved through the coordinated procurement of vehicles and rolling stock for transport infrastructure, particularly in relation to new bus fleets. This coordinated procurement should ensure, when practicable, that Australian materials and products, skills and services are maximised in project delivery.

5. Value Capture

What is value capture

5.1 Value capture is a means by which governments can recoup some of the costs of transport infrastructure. Value capture uses mechanisms to capture any uplift in value generated by new transport infrastructure.

5.2 The SMART Infrastructure Facility at the University of Wollongong provided the following definition of value capture:

The term 'value capture' or, more fully, 'land value uplift capture' describes the process of government 'capturing' (via taxation) a proportion of any increase in the unimproved value of privately-owned land caused by the construction of new (or improved) publicly-funded infrastructure.¹

5.3 According to AECOM and Consult Australia:

Value capture supports smart decision-making by focusing on self-supporting and synergistic infrastructure investment.

- Infrastructure can be self-supporting by incorporating methods that capture some portion of the value it creates to help fund the investment.

¹ SMART Infrastructure Facility, *Submission 16*, p. 6.

- Infrastructure investment can be synergistic by targeting and attracting other complementary public and private sector investments, thereby generating wider benefits to stakeholders and the surrounding community.²

5.4 AECOM and Consult Australia explained the process of value capture:

[Value capture] allocates the uplift in benefits from public investments in ways that do not affect current or future tax rates. The ‘beneficiary pays’ principle lies at the heart of successful value capture programs. Importantly, these programs capture revenues that would not otherwise exist without the public investment, and can permanently increase the levels of revenue to the taxing authority.³

Purpose of value capture

5.5 Value capture offers an alternative mechanism for funding infrastructure projects. In its submission, Consult Australia noted that:

A key challenge highlighted in the 2015 Australian Infrastructure Audit is the need to find new sources of funding for infrastructure, as state and federal budgets are increasingly constrained in their ability to fund projects.⁴

5.6 In addition to the need for new sources of infrastructure funding, the SMART Infrastructure Facility stated that:

The theoretical justification (from a public policy perspective) for value capture is to address the inefficiency and inequality of a small number of private households or businesses enjoying a windfall gain from the provision of infrastructure that is funded by the whole taxpayer base.⁵

² Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 2.

³ Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 5.

⁴ Consult Australia, *Submission 13*, p. 1.

⁵ SMART Infrastructure Facility, *Submission 16*, p. 7.

- 5.7 The SMART Infrastructure Facility was of the view that the issue of value capture ‘should be considered primarily from an efficiency and equity, rather than a “financing”, perspective’.⁶
- 5.8 A recent review of planning reform in South Australia suggested that value capture was valuable because:
- Those who benefit most from infrastructure, including land owners and developers, should be required to fund a reasonable proportion of its costs.
 - Infrastructure funding should be calculated across the life of the asset, not overly weighted towards initial costs.
 - Mechanisms should enable different ways of attributing cost sharing, including value increase.⁷
- 5.9 According to the Department of Infrastructure and Regional Development (DIRD):

When applied appropriately, value capture mechanisms can generate new partial funding streams by tapping into the value created for beneficiaries. In turn, this can allow governments to deliver new infrastructure with less impact on public finances, or to bring forward planned infrastructure ahead of its scheduled delivery. Delivering projects earlier also brings forward the benefits of those projects, both to the wider public and to those indirect beneficiaries who are contributing to the funding stream through the value capture mechanism. This can improve the fairness of an infrastructure investment programme by re-allocating part of the burden of funding from the general tax payer to those households and businesses which obtain financial benefits from the infrastructure services.⁸

- 5.10 Additionally, DIRD noted:

Appropriately applied value capture mechanisms can encourage governments to better integrate infrastructure investments into wider planning decisions by linking payment for new infrastructure with those households and businesses which benefit from the new infrastructure. In addition, by more closely

⁶ SMART Infrastructure Facility, *Submission 16*, p. 11.

⁷ Government of South Australia, *Submission 67*, p. 4.

⁸ Department of Infrastructure and Regional Development, *Submission 57*, p. 1.

aligning funding sources with the benefits of infrastructure, value capture can encourage greater discipline in project selection, and thereby more efficient investment.⁹

- 5.11 Urban Taskforce Australia was less supportive of value capture mechanisms that were applied at a per-square metre or flat rate charge on new housing developments within a specified distance of new transport infrastructure. It noted that:

Value capture or betterment taxes are extremely difficult to administer and sustain in a fair and equitable manner for any extended period of time. This is due to the generic nature of the tax, which does not take into account the fluctuating nature of the property market and the wide range of highly-volatile variables which impact upon the level of 'value' which can be sustainably 'captured' from the development of sites. The impact of value capture can also encourage unsustainable urban form and place an unfair financial burden upon particular sectors of society.¹⁰

- 5.12 Urban Taskforce Australia also stated that 'value capture taxes also deter key elements of sustainability which the investment in transport infrastructure is trying to encourage':

For example, the state and federal governments may wish for people to live in areas well connected to the public transport network, to decrease congestion and traffic, improve air quality, and a range of other beneficial reasons. However, the use of value capture taxes risks providing an incentive for developers to provide homes in areas that are not affected by the tax, and hence not so well serviced by the improvement to the public transport network.¹¹

- 5.13 Additionally, Urban Taskforce Australia was sceptical of the idea that value capture can assist in inter-generational equity:

Established owners are excluded from contributing towards the cost of the new infrastructure (which they also benefit from), with the burden of the cost

⁹ Department of Infrastructure and Regional Development, *Submission 57*, p. 2.

¹⁰ Urban Taskforce Australia, *Submission 66*, p. 4.

¹¹ Urban Taskforce Australia, *Submission 66*, p. 4.

largely imposed on those trying to enter the market (such as first homebuyers) who are unfairly hit with a large lump payment.¹²

- 5.14 Conversely, Dr Tim Williams, of the Committee for Sydney, raised an example of why value capture is a necessary component of infrastructure planning:

The North West Rail Link [in Sydney] is a big disappointment in terms of what could have been designed to make a payback to the public sector from a big investment. We know that the benefits have essentially been privatised. There has been a bit of a feeding frenzy along the line, and some of that could have been captured for the public benefit.¹³

- 5.15 Furthermore, Dr Williams stated:

If the federal government is investing in major infrastructure... it is entirely reasonable for the federal government to require some structures or some mechanisms to be in place. They might like to see something around value capture so that state governments can come to them with projects that actually have some value capture elements attached to them. Indeed, there may be an element in the appraisal by the federal government on what they wish to invest in – that is, does it have a good value capture mechanism attached to it?¹⁴

- 5.16 City of Port Phillip noted the benefits of value capture:

The application of value capture as a standard method of assessing wider economic benefits would allow for a transparent and evidence based approach to precinct planning to enable the best overall economic and accessibility outcome, and provide confidence to the private sector over the timing of delivery.¹⁵

¹² Urban Taskforce Australia, *Submission 66*, p. 4.

¹³ Dr Tim Williams, Chief Executive Officer, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 1.

¹⁴ Dr Tim Williams, Chief Executive Officer, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 2.

¹⁵ City of Port Phillip, *Submission 29*, p. 7.

Limits of value capture

- 5.17 The Northern Territory Government told the Committee that value capture has some clear limitations, particularly in regard to regional areas:

While the Northern Territory supports Policy Principle 1 for larger urban areas, it is clear that value capture methods will not be appropriate for implementation in smaller regional areas especially for transport infrastructure projects. Many remote roads are not used with a high level of frequency and thus basing the allocation of funding for their maintenance on vehicle usage would not cover the cost of ensuring they are kept to an acceptable standard. The cost of road building and upkeep is also more costly in the Northern Territory when compared to other jurisdictions due to factors like remoteness and weather conditions. Additionally, the transport infrastructure base is of a lower standard than other jurisdictions and requires substantial capital input to upgrade to a reasonable standard to encourage economic growth. For example, 75% of the total road network is unsealed. The allocation of funds via road usage would not adequately reflect these issues.

Therefore, value-capture methods cannot achieve a reasonable level of cost recovery, particularly in regional and remote areas. Due to a lack of scale and limited congestion even in urban areas of the Territory, the benefits of value capture methods are questionable. As such, substantial community service obligations payments would still need to be made by all tiers of government to maintain basic road standards.¹⁶

- 5.18 Similarly, the Government of South Australia noted the potential limitations of value capture in regional areas:

Value-capture is unlikely to be an effective funding mechanism for regional developments, particularly if those developments are restricted to transport infrastructure on its own. For value-capture to be a viable funding option, the development (or transport connectivity in its broadest definition) must stimulate the key drivers of property value, i.e. improved access to jobs and housing, more efficient and productive uses of land and infrastructure, and the ability of employers and employees to specialise in order to produce high value services and products (economies of agglomeration). The viability of

¹⁶ Northern Territory Government Department of Transport, *Submission 54*, p. 5.

value-capture (specifically property value-capture) is likely to diminish in line with population density and transit intensity.¹⁷

- 5.19 The SMART Infrastructure Facility raised some practical issues that need to be considered when applying value capture methods to infrastructure developments, noting that:

It is difficult to accurately measure unimproved land value and so difficult to measure the increases in rents from an infrastructure project and so difficult to put on a non-distorting tax...

If the value capture charge is ex post (after the infrastructure is built), it will be difficult to measure the resulting increase in land values attributable to the new transport service. The Valuer-General in the relevant state applies methodologies to determine the uplift in value, but decomposing that uplift into an increment attributable to a specific transport project would be problematic.¹⁸

- 5.20 Furthermore, the SMART Infrastructure Facility stated:

In a built-up urban area, most land changes hands only as part of a package that includes buildings as well as land. The same is true for rentals. Trying to separate out the value of land from the value of the rest of the package and then further separating that into the value relevant to proximity to schools, employment, recreation and transport is very difficult.¹⁹

- 5.21 Strategic Intelligence Group similarly argued that 'value capture requires models and methods that provide a robust estimate of a property's value, and most importantly, explicitly isolate the components that make up the value of a property'. Strategic Intelligence Group noted that these methods or models 'need to allow the change in value resulting from a change in any one component' to be accurately estimated.²⁰

¹⁷ City of Port Phillip, *Submission 67*, p. 5.

¹⁸ SMART Infrastructure Facility, *Submission 16*, p. 12.

¹⁹ SMART Infrastructure Facility, *Submission 16*, p. 12.

²⁰ Strategic Intelligence Group, *Submission 30*, p. 6.

- 5.22 Strategic Intelligence Group put forward its Margin Optimisation and Value Enhancement Model (MOVE) as a potential means of providing governments with the highest level of confidence and certainty:

Strategic Intelligence Group's MOVE Model is a predictive, forecasting tool (for up to 30 years) that models the direct value change (positive and negative) of infrastructure changes over a specified geographical area. The modelling can apply to multiple properties, and takes into account historical property values, regression modelling and 'consumer value', providing a (verified and validated) confidence level of up to 90 per cent and above in its calculations.²¹

- 5.23 According to the Strategic Intelligence Group, MOVE works by understanding and measuring:

The dollar value consumers are willing to pay for their choices (including proximity, location and multiple other econometric variables) to determine the change in property values resulting from infrastructure changes. Relying on historic property values and regression analysis alone results in higher variation and broader ranges in price and/or value estimates. By including consumer value, the variation and range is significantly reduced, hence providing significantly more reliable estimates.

Importantly, the MOVE Model also isolates each attribute that is changing consumer value. By deconstructing the property/land development process into its constituent characteristics, the absolute and relative value of each of the attributes can be estimated. The model is also scalable to address both localised or site-specific opportunities as well as opportunities within projects of a larger scale, such as an urban precinct, municipality or metropolitan area.²²

Methods of value capture

- 5.24 During the course of this inquiry, a wide range of potential value capture mechanisms were raised. These mechanisms relate to revenue raising methods utilised by all levels of government in Australia.

²¹ Strategic Intelligence Group, *Submission 30*, p. 7.

²² Strategic Intelligence Group, *Submission 30*, p. 7.

5.25 The SMART Infrastructure Facility argued that possible mechanisms of value capture could be split into two streams. The first are ‘relatively permanent taxes that act to capture value uplift’, and include:

- Capital gains tax (although the main residence is exempt);
- Stamp duty in property transactions;
- Local government rates (including on the main residence), although subject to rates caps in some states, which limit the amount of value uplift captured;
- Land tax (main residence is exempt), but only imposed in some states and territories or with relatively high unimproved value thresholds; and
- Company tax, payroll tax and GST (in terms of increased economic activity in the neighbourhood of the new publicly funded infrastructure, or developer profits).²³

5.26 The second category of mechanisms relate to the application of ‘a temporary or project-specific tax or financing mechanism’, including:

- ‘Betterment’ levy or tax, whereby private landowners pay a temporary levy on the (ex ante) estimate increase in the unimproved value of their land.
- Change of use charge, usually relating to a rezoning of land.
- Tax Increment Finance (TIF), which is a form of public borrowing against the future uplift in revenue derived from existing property-related taxes (used in the United States but not in Australia).
- Joint Development, whereby private contractors are granted public land in exchange for developing that land.
- Land sales, where the relevant jurisdiction owns parcels of land.²⁴

Capital gains tax

5.27 The Australian Taxation Office defines capital gains tax (CGT) as a tax paid on any capital gains made from the sale of an asset. It is important to note

²³ SMART Infrastructure Facility, *Submission 16*, p. 7.

²⁴ SMART Infrastructure Facility, *Submission 16*, p. 7.

that in Australia, the owner-occupied dwellings are currently exempt from CGT.²⁵

5.28 According to Consult Australia and AECOM:

Under current provisions, owner-occupiers of residential properties do not pay CGT upon the sale of their properties. A proposal has been put forward at the federal level to introduce CGT on owner-occupied properties experiencing a sharp increase in value as a result of a public infrastructure investment. The CGT would only apply to ‘super’ profits from property sales attributed to the public infrastructure investment.²⁶

5.29 The Planning Institute of Australia agreed that CGT is a useful value capture mechanism, stating that:

In suitable cases it is appropriate to design a suitable mechanism to ‘value capture’ some of the capital gains associated with planning decisions, on affordability and intergenerational equity grounds.²⁷

5.30 Mr Joseph Branigan, of the SMART Infrastructure Facility, warned against the unintended consequences of applying CGT to homes that are owner-occupied, even in cases where the home is being sold to an investor rather than another owner-occupier. Mr Branigan stated that ‘it may impact on how people choose to buy houses—whether they choose to be an owner-occupier or an investor.’²⁸

5.31 Similarly, Mr Bede Fraser, representing the Treasury, noted that applying capital gains tax as a value capture mechanism carried difficulties:

In relation to capital gains tax, as noted in the department’s submission, there are significant issues with using it as a tax base for value capture. You have

²⁵ Australian Taxation Office website, *Capital gains tax*, <<https://www.ato.gov.au/General/Capital-gains-tax/>>, viewed 8 August 2016.

²⁶ Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 5.

²⁷ Planning Institute of Australia, *Submission 8*, p. 5.

²⁸ Mr Joseph Branigan, Senior Research Fellow, SMART Infrastructure Facility, *Committee Hansard*, 4 March 2016, p. 10.

mentioned the first one—that there is a CGT exemption for owner-occupied housing currently. The second major issue is around the fact that capital gains are generally paid on a realisation basis, so at the sale, which might be unlikely to align with the timing of the infrastructure funding requirements. The third major issue is around the practical difficulties in determining the value of the uplift and the range of other factors. In *Re:think*, the discussion paper that the government issued in March, it did talk about capital gains tax and noted that, given the central importance of the home for Australian families, there is a strong consensus that it would not be appropriate to tax owner-occupied housing for capital gains benefits.²⁹

5.32 DIRD further noted that, at present, CGT acts as an automatic value capture point for the Commonwealth government:

For example, if property becomes more valuable because of nearby infrastructure investment, this will be reflected in the sale price and flow through to increased stamp duty revenue upon sale. For investment properties, additional capital gains will be generally subject to CGT and result in increased revenue.³⁰

5.33 Hypothecating revenue from property uplift that is gained via CGT can be problematic under the current CGT arrangements. Mr Fraser told the Committee that:

If the existing homeowners are owner occupiers and they decide to stay, we will not realise any capital gains tax until they sell on to an investor who then sells.³¹

5.34 This potential outcome raises risks that government needs to consider. According to DIRD, the extent to which governments rely on CGT for hypothecated revenue:

Depends on how much risk the Commonwealth or the relevant government wants to take on in regards to realising that uplift. That would be a key issue.

²⁹ Mr Bede Fraser, Principal Adviser, Individuals and Indirect Tax Division, The Treasury, *Committee Hansard*, 15 March 2016, p. 4.

³⁰ Department of Infrastructure and Regional Development, *Submission 57*, p. 5.

³¹ Mr Bede Fraser, Principal Adviser, Individuals and Indirect Tax Division, The Treasury, *Committee Hansard*, 15 March 2016, p. 4.

There would be nothing stopping you saying, 'We are prepared to wait until that house is onsold to be able to get to a capital gain,' but in the meantime you have to say, 'I think the infrastructure is going to cost this amount of money to build and therefore I am taking on the risk that I am going to make that money at a later date.' That is a risk for government that it actually has to balance.³²

- 5.35 AECOM was supportive of using CGT as a value capture mechanism, stating that it is possible to take legislative or administrative action to 'hypothecate an equitable share of capital gains "super profit" from property value uplift cause by a public infrastructure investment', and then 'use this as a funding source for the infrastructure.'³³

Land taxes/stamp duties

- 5.36 The SMART Infrastructure Facility noted the benefits of land taxes as a form of value capture, stating that:

There is substantial literature on the economics of taxation that demonstrates the relative efficiency of broad-based land taxes compared to taxes on capital, labour or transactions. Land taxes are relatively efficient because land is in fixed supply, is immobile and cannot be hidden. If land taxes are accurately set, they do not distort people's choices and, therefore, do not create any efficiency losses. Land taxes are, therefore, an efficient method for capturing any windfall gains in land value that might accrue to private landowners from the construction of taxpayer-funded infrastructure.³⁴

- 5.37 There are a variety of land tax mechanisms that could be applied as value capture mechanisms. For example, AECOM and Consult Australia outlined three:

- Transfer (stamp) duties. Stamp duty is applied to all property transfers and some other transactions in NSW. In 2014-15, stamp duty is expected to

³² Mrs Jessica Hall, General Manager, Infrastructure Policy Branch, Infrastructure Investment Division, Department of Infrastructure and Regional Development, *Committee Hansard*, 15 March 2016, p. 4.

³³ AECOM, *Submission 63*, p. 31.

³⁴ SMART Infrastructure Facility, *Submission 16*, p. 8.

generate \$7.2 billion (31 per cent) of NSW tax revenue. Changes in legislation would be required to use this source in a value capture program.

- Property taxes. Property taxes are the most commonly used source of value capture programs in North America and are typically based upon the combined value of land and improvements on a given parcel of land. In NSW, land tax does not apply to principal place of residence. In some jurisdictions, including NSW, unimproved land value only is used in calculating land tax. Land tax is expected to contribute \$2.7 billion of the state's tax revenue in 2014-15. Legislative changes would necessarily be required to use land tax as a value capture mechanism.
- Council rates. In NSW, council rates generally apply uniformly throughout a local government area (LGA), as opposed to a specific benefitted area within the LGA, which is a characteristic of value capture programs overseas. Council rates are set and strictly controlled by the NSW Government based on the cost of administering the LGA. Local councils have little control over this revenue source as annual rate increases are capped and any increase in rates requires state government approval. Council rates are therefore not well suited to value capture methods without approval of the NSW Government and changes to current legislation.³⁵

5.38 The Committee for Sydney was very supportive of the use of land taxes as a value capture mechanism:

Being near a light rail line or within walking distance of a train station is highly valued and land prices around these nodes reflects this. A broad based land tax would capture the improvements in land value driven by new public transport. They also help resolve some of the spatial inequalities which affect NSW. Our existing public transport network is not comprehensive and many neighbourhoods have little or no access to it. A land tax would mean that those neighbourhoods with good access to public transport would pay more for public transport, because their land is more valuable than those with no public transport access.³⁶

³⁵ Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 9.

³⁶ Committee for Sydney, *Submission 25*, Attachment 1, *Are we there yet? Value capture and the future of public transport in Sydney*, Issues Paper 11, December 2015, p. 15.

- 5.39 Mr Eamon Waterford, of the Committee for Sydney, suggested that land taxes could assist in capturing residential property value uplift:

What you would essentially do is similar to the way that council rates are collected. You would add an additional rate on to that person's property that would be either over a 30-year period or in perpetuity to essentially collect a small amount from each property owner over a long period of time.³⁷

- 5.40 The Committee for Sydney expressed the view that, while difficult, reforming land tax to better capture the value of transport infrastructure is nonetheless possible:

In spite of its perceived economic and social benefits it is a very difficult political task to sell. Land taxes are often seen as a tax on wealth, and every major political party in NSW has promised to never tax the family home. Yet these political barriers can be overcome. If it was hypothecated to a service the community supported, they might just vote for it. The Australian Capital Territory recently introduced a new land tax, phasing it in gradually over the next decade. Similarly, the South Australian government has started a conversation with their citizens about introducing a state wide land tax and has flagged their intention of introducing it next year. Hard doesn't mean impossible. Unpalatable doesn't mean indigestible.³⁸

- 5.41 Conversely, Urban Taskforce Australia argued against a per-square metre or flat rate charge on new housing developments within a specified distance of new transport infrastructure as a means of capturing the value of transport infrastructure. In its submission, Urban Taskforce Australia stated:

Value capture tax increases the underlying cost of development, which in turn has a flow-on effect on housing affordability. During the 'boom' period, the cost of housing will rise as a result of the tax. This is due to the high demand for housing which allows the market to absorb the costs. Alternatively, if there is a downturn in the property market, the additional cost of the tax can undermine project viability, reduce housing supply, reduce employment in the property development, building and construction industries and reduce

³⁷ Mr Eamon Waterford, Head of Strategy and Advocacy, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 2.

³⁸ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, Issues Paper 11, December 2015, p. 15.

the industry's contribution to the economy. In practice, land owners will delay development until the tax can be absorbed or passed on.³⁹

- 5.42 South Australia already has legislation under consideration to effect value capture via a levy on property rates:

The legislation currently before the South Australian Parliament—the *Planning, Development and Infrastructure Bill 2015*—expressly allows for value-capture by way of a levy on property rates, as a mechanism for harvesting value uplift associated that results from rezoning to increase development potential or infrastructure that contributes to property amenity.⁴⁰

Broad-based and benefitted area levies

- 5.43 According to DIRD, broad-based levies and benefitted area levies:

Involve applying additional charges on property owners, either as increases to existing rates of property taxation or as a special charge collecting some of the increases in property values. The revenue from these additional charges are earmarked to cover the costs of new or upgraded infrastructure, often by paying down financing used to deliver the original infrastructure project over time. This approach generates real revenue streams for local and state governments that can support financing for major infrastructure. Levies can be used to finance specific projects or can be used to support wide-scale infrastructure programs. In the latter case, broad-based levies are particularly suited to network-based projects.⁴¹

- 5.44 For example, a broad-based levy is used by the Gold Coast Regional Council. DIRD explained:

The City Transport Improvement Charge established by the Gold Coast Regional Council is an example of a successful broad-based levy which is used to help fund Council cabs, bus stops, bicycle and pedestrian pathways, rapid

³⁹ Urban Taskforce Australia, *Submission 66*, p. 5.

⁴⁰ Government of South Australia, *Submission 67*, p. 4.

⁴¹ Department of Infrastructure and Regional Development, *Submission 57*, p. 3.

transport and improvements to local roads, and expanded bus services across the city.⁴²

5.45 DIRD also discussed the use of a broad-based levy in Perth:

Western Australia has taken an alternative approach using a broad-based levy to support a range of works. The Metropolitan Regional Improvement Tax has been in place since 1959 to help fund the cost of land for roads, public spaces and other public facilities in greater Perth.⁴³

5.46 The Committee for Sydney raised an example of a levy from Sydney:

In the 1990s South Sydney Council asked businesses along King Street, Newtown to agree to a 'special' increased rate to improve the struggling shopping precinct. The street had been struggling for a number of years and was in need of some significant improvements which the Council could ill afford. The business owners agreed and a three year 'special' rate was imposed. The money raised was hypothecated to improving the street scape, removing ugly overhead power lines, widening footpaths, and improved seating and lighting. Money was also dedicated to supporting the local arts community and promoting the precinct as a creative hub. The levy lasted only three years but had a dramatic impact. By the early 2000s, King Street had become the best performing, non-CBD shopping precinct in Australia, employing thousands of people and became a major tourist attraction and shopping and dining precinct.⁴⁴

5.47 Another example of a levy is drawn from the Crossrail project in London, United Kingdom. AECOM told the Committee that:

Crossrail is an eight station, 21 kilometre addition to the metropolitan area's underground commuter rail network currently under construction. Working with UK transport agencies and local businesses, the City of London introduced innovative funding methods to capture its benefits to help pay for the project, a Business Rate Supplement (BRS). The BRS collects two per cent of the value of non-domestic properties in the project's catchment having a

⁴² Department of Infrastructure and Regional Development, *Submission 57*, p. 4.

⁴³ Department of Infrastructure and Regional Development, *Submission 57*, p. 4.

⁴⁴ Committee for Sydney, *Submission 25*, Attachment 1, *Are we there yet? Value capture and the future of public transport in Sydney*, Issues Paper 11, December 2015, p. 14.

rateable value of over \$102,950. These funds will be collected over 30 years and used to fund \$7.6 billion (26 per cent) of the \$29.6 billion project.⁴⁵

- 5.48 KPMG also raised an example from the UK, where Greater Manchester made an arrangement with the UK Treasury to establish the Greater Manchester Infrastructure Fund and City Deal:

The arrangement means that a number of financial resources are pooled to provide for transport investment in the region. This combines locally raised funds through an annual levy on the 10 local authorities that make up Greater Manchester, a Department for Transport grants that is devolved to the authorities, committed funding through the City Deal arrangements and an Earn Back agreement (which is the payment by results part of the funding). The overall funding is worth £2.75 billion with the value capture approach in the form of Earn Back accounting for around 11 per cent of the funding arrangement.⁴⁶

- 5.49 The Business Council of Australia was sceptical of using betterment levies:

Betterment levies can be poorly targeted and imposed on individuals or businesses who will not derive genuine benefit—or sufficient benefit to justify the levy—from the project.

Without widespread support from those being levied, it can represent an arbitrary tax increase and detract from the economic benefits of the infrastructure project in the first place. This ultimately detracts from the jobs, income and services the community would otherwise derive from the infrastructure.⁴⁷

- 5.50 Mr Eamon Waterford, of the Committee for Sydney, was supportive of the use of a residential area levy as a potential value capture mechanism:

At a very simplistic level you draw a circle around a new transport station or an existing transport station 400 meters out, which is roughly five minutes' walk from the station, and you apply a levy to the people who live within that circle; you might draw an additional circle 800 meters out, which is 10

⁴⁵ AECOM, *Submission 63*, p. 20.

⁴⁶ KPMG, *Submission 41*, p. 5.

⁴⁷ Business Council of Australia, *Submission 68*, p. 2.

minutes' walk from the station, and apply a smaller levy to people there. Essentially, this is to capture ongoing, over time, some of the value these people collect as a result of living near a train station. That value includes property uplift values, so the value of their property might increase significantly because a train station has all of a sudden opened up opportunities to access jobs and community and culture. It might also be the less obvious value that all of a sudden they have a shopping centre down the street from them or they have a whole bunch of cafes and communities that get developed because the density increases. All of those things bring value to people and while it is not appropriate for us to tax all of that value, there is a very good argument to say that we should be collecting some of the value to pay for the public contribution that has given them that value.⁴⁸

- 5.51 The Committee for Sydney suggested that a mechanism similar to broad-based levies could be applied in association with the collection of rates by councils:

An alternative to a broad-based land tax could be a metropolitan transport levy. A flat \$100 levy on every Council rate notice in the Greater Sydney Area would raise approximately \$180 million per annum. This could also be varied and increased for those properties and neighbourhoods which are better serviced by public transport.

Alternatively it could be expressed as percentage surcharge on each existing rate notice. Council rates in Sydney are generally much lower than other Australian cities because they have been 'capped' since 1976. A ten or twenty per cent surcharge on each rate, and hypothecated to public transport, would still leave our Council rates below the national average. This is politically difficult but the community might be prepared to pay if they know for sure it would be hypothecated to a service they want and need.⁴⁹

- 5.52 Furthermore, Mr Waterford argued that levies are a more accurate reflection of the value generated by transport infrastructure than some other value capture mechanisms:

⁴⁸ Mr Eamon Waterford, Head of Strategy and Advocacy, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 2.

⁴⁹ Committee for Sydney, *Submission 25, Attachment 1, Are we there yet? Value capture and the future of public transport in Sydney*, Issues Paper 11, December 2015, p. 15.

A lot of the value is not just in that initial sale of the property. Certainly there is a lot of speculation when someone gets 16 times their property value, but the person who then lives in that property gets a lot of benefit from living next to a train station forever, whether they bought the property for \$400,000 and sold it for \$16 million or whether they bought it for \$16 million and sold it for \$17 million. That person continues to benefit day-in day-out because they can access jobs, because they live five minutes' walk from the train station, because they have a coffee shop downstairs—because they have a bunch of things that they would otherwise not have received, which are in large part due to the public purse investing in their local area.⁵⁰

5.53 Mr Chris Johnson, of Urban Taskforce Australia, was also supportive of the use of levies as a value capture mechanism. He told the Committee that 'when you slug a particular issue like selling a house with a tax... it is a regressive tax that does not help the sale of houses and increases the price'.⁵¹

5.54 Mr Johnson was of the view that the beneficiaries of new transport infrastructure 'are in fact much broader than just the new residents coming into place. The beneficiaries are everybody in an area' where new transport infrastructure is built.⁵²

5.55 As such, Urban Taskforce Australia made three suggestions for levy-based value capture methods, the first of which is a broad based levy across a metropolitan area:

The approach here is that the whole city gets a benefit from new infrastructure so a small contribution from all residents and businesses on an annual basis for a fixed number of years will raise significant funds over time. The collection mechanism would be either through an extra levy (a 'Sydney Metropolitan Transport Levy') on council rates for say 20 years or through a land tax. The Crossrail project in London is raising funds through a levy on all business rates for 30 years. An alternative metropolitan wide collection

⁵⁰ Mr Eamon Waterford, Head of Strategy and Advocacy, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 3.

⁵¹ Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 7.

⁵² Mr Chris Johnson, Chief Executive Officer, Urban Taskforce Australia, *Committee Hansard*, 7 April 2016, p. 8.

method could be through an increase in Land Tax and applying this to all properties over a fixed period of time. The rate of land tax levy could be increased in some areas closest to new infrastructure.⁵³

- 5.56 Urban Taskforce Australia's second suggested method was a regional/district infrastructure fund. It used an example from the Sydney region to illustrate:

Sydney's metropolitan area is divided into six districts or regions. Some regions/districts may need to raise more or less revenue for infrastructure, depending on growth in population size and the level of infrastructure needed to service the population. The regional/district infrastructure levy would be a small contribution from all new development approvals in the region, similar to local government contributions levied under section 94 of the *Environment Planning & Assessment Act 1979* [discussed below], but would be used for regional infrastructure. The income to the funds would vary depending on market conditions but over time significant funds could be raised.⁵⁴

- 5.57 Finally, Urban Taskforce Australia outlined the third suggested levy designed to capture the uplift in value generated by new transport infrastructure—individual site and precinct levies:

The developer and the approval authority would agree on a density uplift that related to an Infrastructure Contribution through a Voluntary Planning Agreement (VPA). This would be a one off payment that would be allocated to a District Infrastructure Fund to be expended on specific transport infrastructure projects. The VPA payments would be separate from Section 94 contributions for local infrastructure or public domain improvements. It is important that the contribution/levy be at a local level that did not threaten the viability of the project. The amount raised will therefore be variable related to location, site conditions, extent of uplift and current market conditions.⁵⁵

- 5.58 The Government of the Northern Territory was supportive of the application of betterment levies, but cautioned that such levies need to be carefully planned and implemented:

⁵³ Urban Taskforce Australia, *Submission 66*, p. 5.

⁵⁴ Urban Taskforce Australia, *Submission 66*, p. 6.

⁵⁵ Urban Taskforce Australia, *Submission 66*, p. 6.

In terms of potential value capture tools suitable for the Northern Territory, betterment levies may be appropriate if the project offers diffuse benefits on land values or business efficiencies, and has substantial and quantifiable benefits.

However, one of the major risks with a betterment levy is the potential for political pressure resulting in its removal before cost recovery is achieved. This is particularly the case when the levy is applied arbitrarily to an area, even though the benefits are not equally shared. In addition, the compulsory nature of the levy means it could also be applied even if the benefits are insignificant.⁵⁶

Tax increment financing

5.59 According to the SMART Infrastructure Facility, tax increment financing (TIF) is:

A form of public borrowing against the future uplift in revenue derived from existing property-related taxes (used in the United States but not Australia).⁵⁷

5.60 Strategic Intelligence Group provided an example of the way that TIF can be used:

An example [of TIF] is a government agency issuing infrastructure bonds based on the expected increase in property tax revenue (the increment) that will be generated by the project.⁵⁸

5.61 The *Moving Australia* report discussed the use of TIF in the United States:

TIF has been used for 50 years in the US to fund a range of infrastructure and development projects, with almost every US state having passed relevant enabling legislation. Bonds are usually issued to provide the necessary upfront funds for infrastructure/urban renewal initiatives, additional annual

⁵⁶ Northern Territory Government Department of Transport, *Submission 54*, p. 7.

⁵⁷ SMART Infrastructure Facility, *Submission 16*, p. 7.

⁵⁸ Strategic Intelligence Group, *Submission 30*, p. 13.

local tax revenues being used to meet interest and principal repayments. TIF is particularly suited to an urban renewal context.⁵⁹

5.62 While TIF is generally used by local governments, the *Moving Australia* report noted that:

TIF might also be relevant at state level, where the incremental revenues could be state property related taxes (primarily land tax and stamp duty). This revenue would be used mainly to fund infrastructure otherwise funded by state governments.⁶⁰

5.63 However, the Business Council of Australia (BCA) urged caution in adopting TIF, as it 'carries the risk that the increases in property tax may not eventuate, or that the overall cost of borrowing may be higher than other types of debt.'⁶¹

5.64 Similarly, the *Moving Australia* report noted that:

A key issue in relation to TIF as a possible funding source is the extent to which the infrastructure programs being financed lead to a net increase in the development related revenues to the sponsoring government, as distinct from simply diverting revenue from one area to another (even within the same municipality).⁶²

5.65 DIRD related this potential issue to the relative risks incurred by the parties involved:

TIF involves hypothecation of future revenue with limits future governments' flexibility to invest in alternative policy objectives, and creates a risk imbalance, where government carries the downside risks associated with

⁵⁹ Planning Institute of Australia, *Submission 8*, Attachment 1, *Moving Australia 2030*, March 2013, p. 75.

⁶⁰ Planning Institute of Australia, *Submission 8*, Attachment 1, *Moving Australia 2030*, March 2013, p. 75.

⁶¹ Business Council of Australia, *Submission 68*, p. 2.

⁶² Planning Institute of Australia, *Submission 8*, Attachment 1, *Moving Australia 2030*, March 2013, p. 75.

changes to tax revenue due to events unrelated to the project or poor benefit forecasting by the project deliverer.⁶³

- 5.66 The Shopping Centre Council of Australia raised another potential issue with the use of TIF, noting that its appropriateness in the Australia context was ‘questionable’, as it ‘could result in considerable administration and cost demands being placed on Governments and the private sector stakeholders involved.’⁶⁴
- 5.67 The Committee for Sydney was of the view that TIF would not work in an Australian context, because it would require an approach similar to that in the US where property is taxed, rather than land, the current approach in Australia. As a result, the Committee for Sydney argued that the use of TIF would require radical change.⁶⁵
- 5.68 The Queensland Government was generally supportive of the TIF approach, noting that:
- ‘Financing’ addresses the problem of a timing mismatch between funding streams and expenditure outlays. There is typically a mismatch between the early investment expenditure required for large infrastructure projects and longer terms funding sources. Financing has a key role to play in leveraging future revenues to raise capital that can be applied to construction costs today. In short, financing brings the benefit of future funding forward to support upfront spending obligations.⁶⁶
- 5.69 In this regard, the Queensland Government is currently in the process of bringing together a ‘dedicated value capture unit’ to ‘determine and implement frameworks to secure innovative project funding and financing’.

⁶³ Department of Infrastructure and Regional Development, *Submission 57*, p. 5.

⁶⁴ Shopping Centre Council of Australia, *Submission 44*, p. 6.

⁶⁵ Committee for Sydney, *Submission 25*, Attachment 1, *Are we there yet? Value capture and the future of public transport in Sydney*, Issues Paper 11, December 2015, p. 14.

⁶⁶ Queensland Government, *Submission 64*, p. 6.

One of its intended key functions will be consideration of TIF as an option for securing funding for key infrastructure projects.⁶⁷

5.70 Conversely, the Government of the Northern Territory did not believe that TIF was suitable for the Northern Territory:

Tax increment financing (TIF) is unlikely to be suitable for the Territory, at least in the short term. TIF is based on the premise that new infrastructure increases the value of properties thus increasing the revenue collected from existing property taxes.

Given the small population and the limited growth potential, there is some concern that infrastructure projects could generate a smaller increase in tax revenue than what is required to service the debt. The price of borrowing may also be higher unless government guarantees a return on the project's finance. In addition, hypothecating part of the future revenue to a specific project can add complexity and may not be more efficient than relying on consolidated revenue.⁶⁸

Development rights sales

5.71 DIRD informed the Committee that the sale of development rights was another potential mechanism for capturing value:

The sale of development rights to land adjacent to, or above, public transport developments is another common mechanism used in Australia and internationally to assist in funding transport infrastructure and has been demonstrated to create new value when appropriately applied. Governments generate newly valuable property (both land and airspace) by putting in place improved infrastructure services. In turn, governments can sell or rent this property to return an immediate revenue source that can help construct the new infrastructure. Development rights are frequently accompanied by amendments to land use planning regulations, which support increased density or commercial land use around key transport nodes.⁶⁹

⁶⁷ Queensland Government, *Submission 64*, p. 3.

⁶⁸ Northern Territory Government Department of Transport, *Submission 54*, p. 8.

⁶⁹ Department of Infrastructure and Regional Development, *Submission 57*, p. 4.

5.72 Similarly, Consult Australia and AECOM noted the use of the sale of air rights:

Government agencies frequently sell or lease air rights above publicly-owned land, such as for development over road reservations and railway corridors. The St Leonards railway station on Sydney's north shore is a good example of air rights development. This method is widely used in Hong Kong, Japan, the US, France and the UK to fund metropolitan transport systems.⁷⁰

5.73 Additionally, AECOM and Consult Australia noted that the sale of development rights to surplus public land is a potential source of value capture:

The sale or lease of surplus public land has been frequently recommended as a source of revenue for infrastructure and desirable policy reform by the Productivity Commission, Infrastructure Australia and the NSW Parliament. UrbanGrowth NSW is pursuing this option in a number of instances. However, government agencies and community groups often resist the sale of government assets, delaying or preventing projects from proceeding.⁷¹

5.74 DIRD discussed the advantages of this mechanism:

The sale of development rights has the advantage that the revenue from value capture is realised upfront at the same time as capital costs are incurred. However, to maximise the value of development rights and to ensure that developments do not result in adverse policy outcomes, it is desirable for development rights approaches to be incorporated as part of regional or city strategic plans. Providing industry and the community with a clear, forward-looking strategic plan for land use around the public infrastructure will help increase the value of the surrounding property to longer-term commercial investors and will also lead to better transport and land use planning outcomes.⁷²

⁷⁰ Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 9.

⁷¹ Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 9.

⁷² Department of Infrastructure and Regional Development, *Submission 57*, p. 4.

The Entrepreneur Rail Model

- 5.75 One detailed proposal received by the Committee was developed by Professor Peter Newman at the Curtin University Sustainability Policy Institute. Professor Newman calls this potential approach to utilising the value created by infrastructure the Entrepreneur Rail Model, and he characterises the idea as ‘a new governance instrument that integrates transit, land use and finance’ which ‘reverses the traditional approach to transit planning’.⁷³
- 5.76 In essence, the Entrepreneur Rail Model seeks to harness the entrepreneurial skills of the private sector to both develop and fund sites for new public transport infrastructure. It does this by seeking input from the private sector to identify opportunities for urban redevelopment and determine how much private financing is available for the development of new urban public transport infrastructure. After redevelopment occurs, the model proposes allowing the private sector to own and operate the infrastructure. Professor Newman notes that this is the way that much of Australia’s existing tram and train networks were originally built.⁷⁴
- 5.77 According to Professor Newman, the model:
- Starts by predicting how much land can be developed as the fundamental source of the funding. Under the new model, land development is planned as the basis of financing, then an estimate of the potential transit patronage can be produced to match a fit-for-purpose infrastructure design.⁷⁵
- 5.78 The role of government in this process is significantly different to more traditional value capture methods, and is essentially:
- Land acquisition and assembly;
 - Network coherency and integration;
 - Zoning land use changes, so as not to prohibit redevelopment; and

⁷³ Curtin University Sustainability Policy Institute, *Submission 40*, p. 1.

⁷⁴ Curtin University Sustainability Policy Institute, *Submission 40*, p. 1.

⁷⁵ Curtin University Sustainability Policy Institute, *Submission 40*, p. 9.

- Urban design and building standards.⁷⁶

5.79 Professor Newman elaborated on the role of government in land acquisition and assembly:

In order to link together land development opportunities along a potential rail corridor it may be necessary for government to compulsorily acquire some land parcels to enable the station precincts to be large enough for transit-oriented developments to be built, as well as some land for the rail lines.

Land assembly is also needed to enable development to occur. Private sector proposals can suggest how best to do land assembly to make the most out of a site.⁷⁷

5.80 Professor Newman also discussed the role of government in relation to network coherency and integration, noting that it would involve:

- Ensuring an integrated ticketing system. This would require a process for sharing revenue between lines when passengers transfer;
- Regulating fares, ideally by a statutory or judicial body, rather than through a political process; and
- Potentially facilitating negotiations between different proponents whose lines should interconnect, or otherwise interact with each other. Also, ensuring that these interchanges run smoothly and are well maintained.⁷⁸

5.81 Given that this model 'relies on land use change to capture the potential benefits of rail infrastructure', Professor Newman stated that:

Government's role in relation to zoning is to ensure that projects are not prevented from going ahead due to land use planning restrictions and will need to engage the public in detailed design discussions as well as showing the advantages of the new rail line and activity centre.⁷⁹

⁷⁶ Curtin University Sustainability Policy Institute, *Submission 40*, p. 18.

⁷⁷ Curtin University Sustainability Policy Institute, *Submission 40*, p. 18.

⁷⁸ Curtin University Sustainability Policy Institute, *Submission 40*, p. 19.

⁷⁹ Curtin University Sustainability Policy Institute, *Submission 40*, p. 19.

5.82 Finally, in regard to urban design and building standards, Professor Newman argued:

A high quality public realm and enduring urban design are vital to ensuring public acceptance of rail-based redevelopment. Such high quality is usually in the immediate commercial interests of developers as well and redevelopment agencies are experienced in ensuring there are detailed design guidelines. These can include a proportion of social housing, to ensure access to such quality living is not just for the wealthy...⁸⁰

5.83 According to Professor Newman, there are three ways this model can commence:

- Unsolicited bids—a consortium of land developer, train builder, train operator and financier, provide government with a bid that makes a rail project proceed to an evaluation phase;
- Government calls for bids—a general consensus that a particular corridor could have the required land development potential as well as fulfilling transport needs, means that government can request bids from consortia before evaluating the best one; and
- Government controls internally—a new government agency (or revamped land agency) creates a rail project through land development in the same way that Hong Kong MTR does it. This could be a semi-private enterprise.⁸¹

5.84 Professor Newman also discussed the three potential funding and financing methods available under this model:

- Totally private capital. Government's role would be kept to in-kind activity to ensure land assembly and land acquisition, zoning and other transport integration is fully covered. This would depend on sufficient land being available to generate the capital and enabling whatever mechanisms are needed to generate private investment. It would mean that the project could be off balance sheet and hence would help with State Government credit ratings;
- Substantial private and some public capital. Substantial private capital can be supplemented by some government capital. Government's expected land

⁸⁰ Curtin University Sustainability Policy Institute, *Submission 40*, p. 19.

⁸¹ Curtin University Sustainability Policy Institute, *Submission 40*, p. 25.

value based tax flow on could be hypothecated to cover their contribution. This approach would ensure that the rail project is still generating all the capital required though some is from public sources at the three levels of government.

- Some private and substantial public capital. This seeks help from private sources through land development, but primarily raises government capital through a mixture of sources such as parking levies, tolls on associated private traffic, developer contributions, and increase in registration fees or some other form of tax hypothecated to the rail project.⁸²

5.85 Professor Newman further noted the need for a new government agency to facilitate this process:

It is not a process that would be managed by a transport agency. Transport agencies do not know how to do this. We are suggesting that it should be managed through a Treasury or redevelopment agency — preferably a redevelopment agency. It is a land-orientated process that needs clever abilities to purchase and reassemble and redevelop land in ways that benefit the whole system and the whole city, but also enables a rail project to be built.⁸³

5.86 In this regard, Professor Newman suggested:

The formation of a new Entrepreneur Rail Delivery Agency to facilitate the planning and delivery process. The delivery agency would be similar to development corporations and authorities that have been created in Australia over the last two decades for undertaking the planning and development of urban renewal projects.⁸⁴

5.87 In terms of Commonwealth Government involvement, the best role was considered to be helping 'fund bids for potential demonstration projects'.⁸⁵

5.88 The criteria for evaluating potential projects was also set out by Professor Newman:

⁸² Curtin University Sustainability Policy Institute, *Submission 40*, p. 25

⁸³ Professor Peter Newman, Private Capacity, *Committee Hansard*, 23 February 2016, p. 3.

⁸⁴ Curtin University Sustainability Policy Institute, *Submission 40*, p. 27.

⁸⁵ Curtin University Sustainability Policy Institute, *Submission 40*, p. 25.

- Financial—the project should aim to be self-sufficient in capital and operating expenses based on land development, fares and other means such as advertising;
- Land—the project should aim to utilise government land provided as part of the bidding process as well as private land that will need to be built into development partnerships or purchased as part of the project’s financing. Land acquisition, zoning and assembly will be assisted by government to achieve required activity centre goals as well as sufficient funding outcomes to enable the rail line to be built; and
- Transit—the project should provide a high quality transit service that is linked into the rest of the system and generates its own patronage from the land development activity centres. The quality of the system should be high enough to unleash the potential for development of the activity centres.⁸⁶

5.89 In addition to those criteria, Professor Newman told the Committee that population density was also necessary:

It will not work unless you are going to get density around the line. If you are just building for the sake of transport alone—in some areas of outer suburbs that are still developing it would be hard to get private sector commitment to build around stations if that was the case—then you are still on the welfare model, where clearly governments need to do that.⁸⁷

The value-uplift model

5.90 Consolidated Land and Rail Australia (CLARA) proposed a private sector-led financing model for the proposed high speed rail network on Australia’s east coast. As discussed in Chapter 2, CLARA’s proposed high speed rail network is planned to include the building of eight new greenfield cities between Sydney and Melbourne, ultimately accommodating up to 3.2 million people over the 35 to 50 years it would take to build the rail infrastructure.⁸⁸

⁸⁶ Curtin University Sustainability Policy Institute, *Submission 40*, p. 26.

⁸⁷ Professor Peter Newman, *Private Capacity*, *Committee Hansard*, 23 February 2016, p. 3.

⁸⁸ Mr Nicholas Cleary, Chairman, CLARA, *Committee Hansard*, 28 October 2016, p. 1.

5.91 Mr Nicholas Cleary, Chairman of CLARA, told the Committee that CLARA seeks ‘no capital from state or federal governments or from our cities’ to build the rail, instead relying entirely on what Mr Cleary characterised as a ‘value-uplift model’.⁸⁹

5.92 Mr Cleary elaborated on how this model differs from a value capture model:

The value capture that has been referenced up until now has certainly been value capture in which the government puts in place the infrastructure and the development gets the up-side. Tax revenue is increased and the government has to find a mechanism to capture that. Our value-uplift model is about [purchasing] vacant farmland and turning it into residential allotments, getting a significant uplift from those residential allotments which... is adequate enough to provide for the civil infrastructure, the major infrastructure and the high speed rail infrastructure, as well as giving a commercial return back to CLARA and its investors.⁹⁰

5.93 Mr Jay Grant, Head of Business Strategy at private investment firm Newhaven Wealth, discussed Newhaven’s experience as a seed funder and provider of start-up capital to CLARA with the Committee. Mr Grant noted that in Australia, infrastructure is mainly funded via public-private partnerships, where governments provide some money, while the rest is provided by banks or superannuation funds, and then financed in capital markets. However, Mr Grant stated that capturing land value uplift can ‘open up some interesting finance opportunities’.⁹¹

5.94 Specifically, Mr Grant argued that the greatest land value uplift occurs where there is rezoning. To illustrate this point, Mr Grant raised the comparative total land values of residential and rural land in Victoria. While the total value of residential land in Victoria was more than \$800 billion in 2012, the total value of rural land in Victoria was less than \$100 million. According to Mr Grant:

⁸⁹ Mr Nicholas Cleary, Chairman, CLARA, *Committee Hansard*, 28 October 2016, p. 2.

⁹⁰ Mr Nicholas Cleary, Chairman, CLARA, *Committee Hansard*, 28 October 2016, p. 2.

⁹¹ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 25.

If we can provide, through mass transit that is perhaps rapid, a fast train or one of the other technologies that you have heard about today, we can compress the time and space between rural and residential, between a city outside of a tier one city and the CBD of a tier one city where we have seen that a majority of the economic activity is taking place. In doing so we can arbitrage or leverage from this difference in the land values. That is an uplift that you can really capture.⁹²

- 5.95 To illustrate the process, Mr Grant used the example of an area called Rockbank in Melbourne's west. At 32 kilometres from Melbourne's CBD, with no public transport or rail connection, it was rezoned for residential use and released for development by the Victorian state government in 1999 and a 12.6 hectare lot was bought for \$315,000, making its base value \$1,750 per lot after subdivision into 180 residential lots. After the necessary civil infrastructure was in place at an approximate cost of \$80,000 per lot, these lots were valued at \$220,000 each. Of the 7,900 per cent uplift that was observed in this case, the available profit on each lot would have yielded a profit of \$140,000 had the land been controlled by a single entity throughout the shift from farmland to residential land.⁹³
- 5.96 To support the financing of the sort of long term projects that are necessary to realise the value-uplift model of infrastructure funding, Mr Grant noted that there are three steps that federal government could take. Firstly, according to Mr Grant, the first is to 'look at tax regimes and superannuation'.⁹⁴
- 5.97 According to Mr Grant:

58 per cent of infrastructure investment in this country comes from superannuation funds. Superannuation is a bit of a contentious issue around infrastructure, because the highest contribution of any Australian fund at the

⁹² Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 25.

⁹³ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 25.

⁹⁴ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 26.

moment is AustralianSuper, with nine per cent of its funds under management devoted to infrastructure. I break out there the example of the Canadians. The top ten Canadian pension funds have average allocations of 32 per cent to infrastructure. Another thing the Canadians do really well is own, operate and manage their infrastructure assets within their pension funds. The question is, why? The reason is not that there is anything wrong with AustralianSuper funds or the managers of AustralianSuper funds; the issue is the way that AustralianSuper funds are structured. We run what we call defined contribution funds; they run defined benefit funds.⁹⁵

5.98 Mr Grant argued that this leads superannuation funds to be less likely to invest in major greenfield infrastructure projects:

Super funds look to take over brownfields sites that are mature infrastructure, and they are happy to buy those. We just saw a number of groups, including the Future Fund, take over the port of Melbourne on a 50 year lease, with good income coming in, which matches their liabilities, and it works. The problem is that the greenfields infrastructure investments is much, much lower. It is less than half what it is in brownfield infrastructure investment. The issue with that is that if no one is putting in the early money then these greenfields projects do not move ahead, and they move ahead only where the government puts in the money.⁹⁶

5.99 Mr Grant used the case of the East West Link in Melbourne to illustrate the effects of the current approach to superannuation:

The state government had to throw in a large amount of money – it was going to be up to \$5 billion, I believe – to cover the funding gap, because given the length of the concession on the road and the way that the deal had been financed there was never going to be enough money from tolling drivers on that road to recover the capital costs of building the road. That is the high-risk early money that governments have always put into these projects, and that is why PPPs in Australia have worked and been the norm, as opposed to other places in the world. We do not have access to the pools of capital that they

⁹⁵ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 26.

⁹⁶ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 27.

have in North America and Europe. That is something we can change, and it is something that the federal government has purview over.⁹⁷

5.100 Mr Grant explained the steps that the federal government would need to take to support greater involvement of superannuation fund in infrastructure financing:

If you want to get super into the game, some of the measures you can look at are how to encourage allocated pensions and retirement income streams within superannuation that start to align superannuation liabilities with long term project bonds. This is one thing that can be done. The other things that can be done is that the government, in supporting My Choice, can provide a liquidity backstop for superannuation funds to encourage them to invest in longer term infrastructure assets, without have to worry about having money to turn over and roll over funds of members when they exit the fund. This issue on super is only going to get more compounded due to the ageing of the population and due to more retirees entering the pension phase. If we want a system that has capital adequacy and allows for a replacement rate of income, we have really got to look at the pre-2007 scenario when we had reasonable benefit limits: if you took your money out as a pension, you got a tax free income; whereas if you took out a lump sum, you were taxed at various rates. I understand why the government took that off in 2007, but there are now ramifications from that decision that affect these types of issues in how funds can manage their money and invest.⁹⁸

5.101 Secondly, Mr Grant argued that the federal government could support greenfields projects is in credit enhancement:

There is a great spread between risky products which are rated BBB and below – that is where greenfield infrastructure starts – and A, AA and AAA rated corporate bonds. The cost of finance can be the difference between the viability or not of a project. More importantly, it can also dictate where money is brought into a project from, and on what terms. The one the federal government can look at, I believe, is credit enhancement. Credit enhancement is a method whereby a company attempts to improve its debt or

⁹⁷ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 27.

⁹⁸ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 28.

credit worthiness. With a credit enhancement, the lender is provided with reassurance that the borrower will honour the obligation through additional collateral.⁹⁹

5.102 By offering credit enhancement, Mr Grant noted that the 'rating on a greenfield bond up from BBB to AA, which the market will then take'. Mr Grant discussed how the federal government could achieve this:

Credit enhancement is provided around the world in different ways. The US have a system called TIFIA and in Europe they have a system called the Project Bond Credit Enhancement Fund, which provides money. The benefits of credit enhancement, and the Australian government looking at credit enhancement to assist major projects, is that it will give projects access to a greater variety of funding markets and to deeper funding markets.¹⁰⁰

5.103 Finally, Mr Grant suggested that the federal government can take steps to improve the uptake of long terms finance for major infrastructure projects:

What you see from 2009 onwards, since the Global Financial Crisis hit, is that major funding for infrastructure projects and PPP projects has come through short term bank finance. That may not sound like a big issue, but here is why it is: between 2014 and 2018 there will be \$8 billion of debt to be refinanced in infrastructure. When you take a 30 year loan for an infrastructure project – and most of these are 20 to 30 year projects, be it a power station, a rail line or a desalination plant – you can lock in on a 30 year debt piece your interest repayments for that period of time. You have complete certainty about what your cash flows need to be to meet your finance obligations. When you are refinancing every five, seven or ten years you are obviously onboarding a great deal of risk into your project. Whilst the project looks great up front for the first ten years, you then have to go back to markets. What you are really doing is betting against interest rates going up. I would say, in this day and age, in the current economic environment with interest rates the lowest they have been in history you would have to be a fairly brave man to suggest that

⁹⁹ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 27.

¹⁰⁰ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 27.

you are not going to be facing higher interest rates at some point in the future.

¹⁰¹

5.104 Mr Grant raised an example from Europe to show how this can be achieved:

In looking at the Europeans, there are two ways that they participate in these programs. When I hear politicians saying that we need to be smarter with our money, I think infrastructure offers a very clear way to do that. You can as a government participate with a very small amount of money that can make a huge difference to the financing of major infrastructure programs. One of them is a funded mechanism which is taking what we call subordinated debt, or the first-loss position in a project. That may only be for 10 or 20 per cent of the total project cost. With that sitting in there, that alone can help de-risk the project sufficiently that capital markets can then participate.

The second way that it can be done is unfunded, which is the provision of a guarantee of money that the federal government provides to a particular project. That serves the same purpose. You do not have to front up with the money, but it says 'if there is trouble, we will guarantee that first-loss position'. Again, it is to a maximum of 20 per cent. So you do not have to guarantee the whole project. You do not have to fund the whole project. By having that insertion of smart capital in the right place in the capital stack, you can de-risk the project and allow the project to get cheaper finance from the private markets and longer-term finance from the private markets. That could be the difference between the viability of a number of greenfield projects that are currently under consideration.¹⁰²

Other methods

5.105 A range of other methods which can potentially act to capture the value of transport infrastructure were raised during the course of the inquiry. For example, AECOM and Consult Australia noted that retail sales taxes can be a value capture mechanism:

¹⁰¹ Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 27.

¹⁰² Mr Jay Grant, Head of Business Strategy, Newhaven Wealth, *Committee Hansard*, 28 October 2016, p. 28.

Modest increases or partitioning of retail sales taxes, similar to GST, are frequently used in overseas value capture programs at the local government level for a variety of public purposes, including for light rail projects and general revenue. These often require voter approval via a public referendum.

¹⁰³

- 5.106 Additionally, AECOM and Consult Australia raised developer contributions that are made under specific legislation in some jurisdictions. An example of this is Section 94 development contributions in NSW:

Councils in NSW have the ability to levy developers for contributions towards local infrastructure under Section 94 or Section 94A of the *Environment and Planning Assessment Act*. Section 94 contributions plans must identify specific public improvements and their costs, and the funds collected must be held in a separate account and applied only to those public improvements.¹⁰⁴

- 5.107 Similarly, in Victoria developers can contribute to infrastructure under Part 3AB and Part 9B of the *Planning and Environment Act 1987*, via developer contributions and the Growth Area Infrastructure Contribution (GAIC). This is 'a charge designed to contribute to the funding of essential State infrastructure in Melbourne's growth areas', and according to the Victorian Department of Environment, Land, Water and Planning:

An entity liable to pay a Growth Areas Infrastructure Contribution can, by agreement with the government, offset part or all of its liability by providing land or infrastructure works to the State, or a combination of land and works. This is known as Work-in-Kind.¹⁰⁵

- 5.108 According to Professor Matthew Burke, the GAIC 'charges effectively claim part of the windfall gains that rural landholders obtain when their land is

¹⁰³ Consult Australia, *Submission 13*, Attachment I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 9.

¹⁰⁴ Consult Australia, *Submission 13*, Attachment I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 9.

¹⁰⁵ Department of Environment, Land, Water and Planning website, *Growth Area Infrastructure Contribution*, <<http://www.dtpli.vic.gov.au/planning/about-planning/legislation-and-regulations/planning-legislation/growth-areas-infrastructure-contribution>>, accessed 2 September 2016.

designated as part of the urban footprint and uses them for transport infrastructure’, and ‘highly commended’ such models.¹⁰⁶

5.109 The City of Greater Geelong was supportive of the GAIC, stating:

It provides a mechanism to capture a ‘contribution’ to these future State projects (estimated at around 8 per cent of the total infrastructure need for Melbourne growth areas), while recognising the obligation of the broader community to fund the balance via taxation or other State income sources.¹⁰⁷

5.110 The City of Greater Geelong noted that the GAIC does not apply to brownfield development areas, ‘only Greenfield growth areas where a strong nexus can be established with need for future infrastructure’. Furthermore, the GAIC revenue ‘can only be spent within Melbourne greenfield growth areas’.¹⁰⁸

5.111 Furthermore, the Committee for Geelong stated that developer contributions made under Part 3AB could have negative consequences:

The Development Contribution scheme has limited ability to fund public transport infrastructure. Increasingly, there is concern that Development Contributions are negatively impacting on housing affordability.¹⁰⁹

5.112 In NSW, it is possible to use voluntary planning agreements (VPA) as an alternative to Section 94 development contributions. AECOM and Consult Australia stated:

A VPA is an agreement entered into by council and a developer during council’s consideration of a rezoning application (planning proposal) or

¹⁰⁶ Associate Professor Matthew Burke, *Submission 26*, p. 4.

¹⁰⁷ City of Greater Geelong, *Submission 23*, p. 5.

¹⁰⁸ City of Greater Geelong, *Submission 23*, p. 4.

¹⁰⁹ Committee for Geelong, *Submission 32*, p. 3.

development application. VPAs can either be in lieu of or in addition to a development contribution payment. This is negotiated as part of the VPA.¹¹⁰

5.113 Similarly, Section 6 of the Northern Territory's *Planning Act* provides for developer contributions to infrastructure funding:

Under Part 6 of the Territory's *Planning Act*, developers can be charged contributions, as specified in a contribution plan, for provision of infrastructure or public car parking. However, the definition of infrastructure only includes motor vehicle carriageways and stormwater drains. Where the owner of land constructs the infrastructure themselves, the amount of money spent in constructing that infrastructure is offset against the contribution amount payable.¹¹¹

5.114 The Government of the Northern Territory noted that while developer contributions had been considered an appropriate tool in the Northern Territory in the past, they needed to reflect the benefits derived from the infrastructure:

While developer contributions have been used in Australia and other developed countries for many decades, there are however, a number of limitations to this mechanism. Developer contributions can be complex and difficult to administer especially when the benefits from the infrastructure are not equally shared. Developers could also be required to contribute to infrastructure that benefits more than the developed properties. For example, if an electricity network is upgraded to cope with the additional demand being placed on it from the development, both the developed properties and the existing properties will benefit.¹¹²

5.115 Additionally, the Government of the Northern Territory argued that developer contributions could act to distort housing markets:

Another issue is that setting developer contributions that are higher than the cost of the infrastructure can potentially lead to adverse implications for

¹¹⁰ Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 9.

¹¹¹ Northern Territory Government Department of Transport, *Submission 54*, pp. 8–9.

¹¹² Northern Territory Government Department of Transport, *Submission 54*, p. 8.

housing affordability and supply. The impact of levying developer contributions on a developer's cash flows also needs to be considered, as the requirement to make these payments could place pressure on the developer's capacity to undertake and deliver the required works.¹¹³

5.116 Finally, local councils in NSW have the ability to sell bonus gross floor area (GFA). According to AECOM and Consult Australia:

Some local government councils in NSW enter into VPAs under which additional development rights above existing zoning are sold to developers and the proceeds used to fund community infrastructure. The sale of GFA is a common funding mechanism overseas and is a logical source of additional infrastructure funds where transport and other infrastructure capacities exist to support the additional demand for services. However, there are examples in NSW where state and local authorities have lifted development rights without additional services capacity being available, leaving infrastructure providers with no means of augmenting services to meet the increase in demand. The most evident result of the mismatch between approved development and lack of infrastructure capacity is traffic congestion.¹¹⁴

Committee conclusions

5.117 It is clear that, as government budgets become increasingly constrained, and as the infrastructure needs of the Australian community grow with the population, the current infrastructure funding deficit will continue to increase. This is likely to worsen should the Government decide to go ahead with necessary nation-building infrastructure projects such as high speed rail or fast freight rail.

5.118 It is also clear that new and innovative funding methods are needed if this deficit is to be filled in the long term. Indeed, it may well be the case that the nation-building infrastructure like high speed rail will not go ahead without these new funding methods.

¹¹³ Northern Territory Government Department of Transport, *Submission 54*, p. 8.

¹¹⁴ Consult Australia, *Submission 13*, Appendix I, AECOM and Consult Australia, *Value Capture Roadmap*, June 2015, p. 9.

-
- 5.119 As many submitters to this inquiry have noted, value capture is key to finding these new methods of infrastructure funding. While it is not a new method—with small examples of value capture schemes being pursued at state level in various jurisdictions—a more consistent approach to capturing the value uplift provided by new transport infrastructure is necessary.
- 5.120 In cases where property nearby to new transport infrastructure is sold at a massive profit as a result of, say, a new train station being built, a large portion of the value generated by the public spending on the infrastructure is currently ‘escaping’, and going directly into private hands. This ‘value escape’ is caused by public spending leading to private benefit. It is fundamentally unfair.
- 5.121 The Committee sees a need for action to prevent value escape. The federal government’s options are constrained by current taxation arrangements within Australia. One of the key mechanisms at the disposal of the federal government in this regard is CGT.
- 5.122 Under current CGT arrangements, the family home is exempt from CGT when it is being sold as a home. Nonetheless, the Committee sees potential for a considerable amount of value to be captured passively through current CGT arrangements, particularly in cases where rezoning is conducted at the same time as new transport infrastructure is built. Given the evidence received from the private sector about the accuracy of gauging the extent and source of value uplift, it is possible to accurately assess the amount of value that will be able to be captured.
- 5.123 Value uplift that is captured through existing CGT arrangements should be quarantined and hypothecated back into a dedicated infrastructure fund, which can then be used to provide capital for future infrastructure projects.
- 5.124 The Committee sees a need for a new value capture mechanism to be established at the federal level. With a master planning approach being applied to transport infrastructure, it is likely that the building of new transport infrastructure will be accompanied by rezoning in some form. As a result of this rezoning, it will be possible for the federal government to capture a portion of the uplift in property values as existing zoning shifts to other uses, and as subdivision and private sector investors take advantage of

both the potential for property value uplift and the new opportunities raised by rezoning.

Recommendation 10

5.125 The Committee recommends that the Australian Government seek a memorandum of understanding to establish value capture mechanisms for individual transport infrastructure projects as a condition of federal funding which applies to property value uplift that results from a combination of rezoning and new transport infrastructure. In doing so, the Government should:

- **define specific geographic areas nearby to new transport infrastructure where this mechanism will apply to properties;**
- **set a threshold of value uplift for property which will incur the new value capture mechanism;**
- **establish an offset mechanism, whereby commercial properties whose value uplift is partially captured by this mechanism can be offset against their capital gains tax liability; and**
- **hypothesize any revenue that results from this mechanism into a dedicated infrastructure fund.**

5.126 The Committee understands that it is not simply those living 400-800 meters from new transport infrastructure who benefit from that infrastructure. When a new train line is built in a major metropolitan centre, it is not only those who live along the train line who benefit, but also those using the roads which will see a reduction in traffic and the businesses in the area which will see an uplift in business due to more pedestrian traffic. It is the Committee's view that the benefits of new transport infrastructure are spread across a much wider geographic area than simply the areas within walking distance.

5.127 It is necessary to look beyond simply capturing the uplift in property values caused by new transport infrastructure. Indeed, governments at all levels in Australia have important roles to play in preventing value escape, and thereby providing increased funding for future transport infrastructure.

- 5.128 During the course of this inquiry, the Committee received a range of proposals for potential mechanisms for value capture, some of which have been used in Australia in the past, and some of which had only been applied in other countries. The Committee sees value in all of the potential mechanisms raised, and would like to see them developed by the federal government into a toolkit of value capture mechanisms.
- 5.129 This toolkit can be applied with flexibility. Different value capture mechanisms will be more appropriate than others, depending on a range of factors, the specific place where the infrastructure is located, or the type of infrastructure being built.

Recommendation 11

- 5.130 The Committee recommends that the Department of Infrastructure and Regional Development, in conjunction with state and territory governments, develop a toolkit of value capture mechanisms that can be applied by all levels of government, taking into account the different conditions in the various states, territories and local council areas. The use of the mechanisms in the toolkit should be a requirement in cases where the federal government is to contribute funding towards major infrastructure projects that will generate an uplift in property values or increased economic activity.**

Coordinating value capture

- 5.131 As can be seen from the preceding discussion of possible value capture mechanisms, the mechanisms include methods of revenue raising available to all three levels of government, local, state and federal.
- 5.132 Many submitters to this inquiry were of the view that a mix of different methods of value capture is the best means of capturing the uplift produced by transport infrastructure. For example, Dr Williams of the Committee For Sydney stated:

The phrase that comes to mind from the Crossrail experience—and it is a great phrase—is that it was a ‘cocktail of funding’. Crossrail has three or four devices. It has developer contributions, which are top sliced from across London through the London mayor, because every Londoner benefits from

Crossrail. All London ratepayers are effectively paying something to Crossrail. At the same time, there was a form of TIF for business rates where essentially the private sector—along the alignment that it was business that was going to benefit—would have some of its rates corralled for this project.¹¹⁵

5.133 Similarly, Mr John Marinopoulos of the Strategic Intelligence Group argued:

The key thing is to think of it like a cocktail of mechanisms. Crossrail have three, but you might be looking at seven, eight, nine or ten different ways. What you have got to try to do is think of it like a pill. You have got to cut it so small that it is easy to swallow.¹¹⁶

5.134 KPMG raised an example from the US of what can be achieved when cooperation across multiple levels of government is effectively coordinated:

The transport-led regeneration of the Transbay Redevelopment consists of replacing the Transbay Terminal with a new Transbay Transit Centre and the extension of the California High Speed Rail underground to the new Transit Centre. The cost of the project is US\$4.4 billion in nominal terms. The funding of the new project's capital cost is through a number of local, state and federal instruments. The value capture mechanisms used include a tax-increment financing package that is expected to raise US\$1.4 billion over its life, land sales worth US\$570 million and joint development opportunities that are expected to generate US\$400 million.¹¹⁷

Cooperation across levels of government

5.135 The range of possible value capture mechanisms discussed above is spread across all three tiers of government in Australia. As such, close cooperation between the federal, state and local governments of Australia will be necessary to effectively capture value uplift produced by new transport infrastructure.

¹¹⁵ Dr Tim Williams, Chief Executive Officer, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 3.

¹¹⁶ Mr John Marinopoulos, Managing Director, Strategic Intelligence Group, *Committee Hansard*, 11 March 2016, p. 4.

¹¹⁷ KPMG, *Submission 41*, p. 5.

- 5.136 The City of Port Phillip argued that the federal government could play a key role in setting standards and coordinating value capture mechanisms at a national level:

A consistent and transparent approach to infrastructure funding through value capture is required. As a key administrative action, standard methods of assessing value capture should be introduced to cost benefit analysis guidelines at the national level (e.g. Infrastructure Australia), to enable consistent methodology to be applied in all jurisdictions. This consistency is particularly important given the ongoing role that Infrastructure Australia will play in the assessment and funding of major infrastructure projects.¹¹⁸

- 5.137 DIRD stated that making the most of value capture requires an integrated approach to land use and infrastructure planning:

The greatest opportunities for value capture are likely to occur where the provision of new transport infrastructure is coordinated with changes to land use and zoning. A number of international case studies demonstrate how changes that enable higher residential densities and mixed use commercial developments in areas surrounding public transport nodes can generate significant increases in value. For example, Transit-Orientated Development (TOD) programmes which form part of the Bay Area Rapid Transit (BART) investment model in the United States are designed to increase transit ridership, enhance quality of life around stations, stabilise BART's financial base, provide investment opportunities for the private sector and support regional and local priorities.¹¹⁹

- 5.138 The Committee for Sydney argued that all levels of government need to be involved in coordinating value capture:

While it is certainly possible for individual levels of government to legislate to give themselves the powers to both collect funds through value capture and deliver infrastructure, it is the Committee's perspective that there is benefit to all levels being involved from the start of a project. This is in order to avoid conflict or opposition from governments not involved in the process, given that public transport projects often result in disruption to the public during their construction. The temptation for governments who are not partners in a

¹¹⁸ City of Port Phillip, *Submission 29*, p. 7.

¹¹⁹ Department of Infrastructure and Regional Development, *Submission 57*, p. 2.

public transport project but represent those affected by the construction of public transport will be to oppose it for political purposes, or to request unreasonable concessions part way through a project. Having all levels of government involved from the start as partners in a project avoids this risk.¹²⁰

5.139 Further to this point, KPMG argued that the framework for this type of cooperation already exists in Australia:

There are existing arrangements in Australia over how taxation revenues are shared, how grants funding is allocated, how borrowing is arranged at different levels of government, and ultimately how risks are allocated. What this means is that starting work from these parameters can provide the framework for some of these approaches to actually materialise. It is no doubt difficult but not impossible to achieve.¹²¹

5.140 Specifically, KPMG stated that Australia already has some experience in value capture methods that may usefully contribute to the process:

Australia has already had experience with local and city-wide value capture methods. The role of the Commonwealth government here is to encourage State and Local government to explore all these types of funding arrangements to be explored fully when funding applications from the Commonwealth are sought so that the burden is reduced and that the best projects are brought forward.¹²²

5.141 DIRD made a similar point on the level of government best placed to implement value capture:

State governments have revenue bases that could be more suited for value capture purposes. For example, through a reform of state land taxes to capture and quarantine additional revenue associated with new infrastructure projects.¹²³

¹²⁰ Committee for Sydney, *Submission 25*, pp. 4-5.

¹²¹ KPMG, *Submission 41*, p. 6.

¹²² KPMG, *Submission 41*, pp. 6-7.

¹²³ Department of Infrastructure and Regional Development, *Submission 57*, p. 5.

5.142 The Government of South Australia agreed that state and local governments are well placed for implementing value capture:

It would be most appropriate for State and Local Governments to establish appropriate value-capture mechanisms for transport funding if there is a case for its implementation. These levels of government have legislative control over development, and already administer property-related taxes and charges.

¹²⁴

5.143 Furthermore, the Government of South Australia noted that the federal government also has a role to play:

Federal Government principally invests in nationally significant infrastructure, which leads to increases in Australia's productive capacity. It already captures some of the benefit resulting from this investment through personal income and company taxes.¹²⁵

5.144 Strategic Intelligence Group argued that all levels of government in Australia need to play a role in implementing a well-designed value capture scheme. Specifically, they discussed their view of the Commonwealth Government's role:

The Commonwealth Government has a critical role in identifying, prioritising and evaluating major transport needs for Australia; and this should be reflected in its infrastructure appraisal process including its means for allocating funding. Going forward, the Commonwealth Government should consider developing, promoting and implementing a national value capture framework, designed to ensure national consistency and reduce any anomalies between different states and territories, especially in relation to the development of infrastructure business cases and in the timing of funding generation and/or distribution. Furthermore, a consistent national 'value capture framework' would assist to create a level of clarity and certainty for potential private sector partners and/or financiers.¹²⁶

¹²⁴ Government of South Australia, *Submission 67*, p. 5.

¹²⁵ Government of South Australia, *Submission 67*, p. 5.

¹²⁶ Strategic Intelligence Group, *Submission 30*, p. 16.

- 5.145 Strategic Intelligence Group went on to outline a proposal for state government involvement in this national coordination process:

State governments play a vital role in the planning, delivery and oversight of transport systems, infrastructure and services. This includes determining the timing, project scope and procurement of new transport infrastructure. These responsibilities, combined with their regulatory powers relating to land, ensures that states and territories are well placed to establish and implement a range of value capture mechanisms to contribute to funding transport infrastructure.¹²⁷

- 5.146 Additionally, Strategic Intelligence Group noted that local government also has a role to play:

Local governments work closely with their communities. Where transport development opportunities straddle multiple councils, councils could partner with other local councils and with State and Commonwealth governments to optimise the benefits to their communities. Councils could also have additional roles as project partners and to collect captured revenue.¹²⁸

- 5.147 Mrs Claire Ferres Miles, of the City of Port Phillip, was supportive of the idea of coordinating across the three levels of government in regard to value capture:

Council supports the principle of value capture to deliver infrastructure for our growing city and supports the development of consistent guidelines to calculate the likely property value uplift. We believe there is significant merit in the application of a consistent framework for value capture across all levels of government. The Australian government is well placed to lead this given the role of Infrastructure Australia in prioritising and funding infrastructure nationally.¹²⁹

- 5.148 In light of the role federal government plays in funding transport infrastructure built by state and local governments, the Metropolitan

¹²⁷ Strategic Intelligence Group, *Submission 30*, p. 16.

¹²⁸ Strategic Intelligence Group, *Submission 30*, p. 16.

¹²⁹ Mrs Claire Ferres Miles, General Manager, Place Strategy and Development, City of Port Phillip, *Committee Hansard*, 11 March 2016, p. 41.

Transport Forum noted that it would like to see the federal government establish:

A requirement that cities/states have a transport plan so that federally funded transport infrastructure contributes to the overall well being of the city.¹³⁰

5.149 Urban Taskforce Australia characterised the current system of ‘identifying the necessary infrastructure and the collection of revenue and allocation of funds’ for infrastructure delivery as ‘dysfunctional’, and in ‘clear need of urgent reform’. Urban Taskforce Australia stated:

The issue of infrastructure funding should be made part of an inter-governmental debate, addressing the jurisdictional, economic and legislative reforms required to develop an equitable, efficient and effective method for raising revenue across all levels of government and applying these to agreed infrastructure projects. The Council of Australian Governments (COAG) provides an appropriate forum for these discussions.¹³¹

5.150 Mr Justin Madden, representing Arup, was of the view that, in order to achieve this type of partnership between governments in Australia ‘some sort of compact and some sort of agreement’ is needed, so that agreement is achieved on the respective roles of each tier of government and commitments made on where the captured revenues would go within the business model that is developed.¹³²

5.151 KPMG agreed that some sort of agreement between the tiers of government is necessary, and noted that:

The issue that is often flagged in an Australian context is that the three-tiered level of governance makes some of the approaches to value capture too difficult to implement. While this is true to a certain extent, it is also true that other jurisdictions had their own governance difficulties. Stepping over these hurdles may in certain instances require new legislation, such as in the case of

¹³⁰ Metropolitan Transport Forum, *Submission 36*, p. 3.

¹³¹ Urban Taskforce Australia, *Submission 66*, p. 7.

¹³² Mr Justin Madden, Senior Consultant, Infrastructure and Project Planning, Arup, *Committee Hansard*, 11 March 2016, p. 9.

city-wide levying powers, or different arrangements between these government tiers, such as in the case is UK City Deals.¹³³

City deals

5.152 In the UK, a cross-jurisdictional approach to capturing value uplift has been formalised via the various City Deals that are either in place or being negotiated. The core goal of City Deals is 'to direct infrastructure spending to projects that boost productivity, employment and economic growth', and there are currently at least 20 in place, with more likely to eventuate.¹³⁴

5.153 City Deals were defined by KPMG and the Property Council of Australia as a process whereby:

Central and local government in the UK have collectively developed and implemented a new model for infrastructure funding and delivery. This City Deal model has provided a foundation for a growing number of city regions in the UK to overcome infrastructure deficits, reduce funding shortfalls and grow local economic activity.¹³⁵

5.154 A range of factors drove the development of the UK City Deals approach:

- realisation that what cities were asking for (total of project-by-project bids in the pipeline) was (even pre Global Financial Crisis) heading for 20 times the available budget, turning investment decisions into a huge source of tension and conflict between central and local government, with DfT [Department for Transport] having to use a long, drawn out appraisal challenge process as a means of managing demand;
- recognition that a combination of project-by-project traditional BCRs [benefit-cost ratios] and lobbying was a very costly and inefficient allocation mechanism, particularly against the background of central government's balanced growth objectives and cities' ambitions to grow their economies;
- recognition (sparked by the London Crossrail project) of the role of transport infrastructure in driving economic performance, leading to fundamental

¹³³ KPMG, *Submission 41*, p. 6.

¹³⁴ KPMG & Property Council of Australia, *Exhibit 3*, 'Introducing UK City Deals', 2014, p. 2.

¹³⁵ KPMG & Property Council of Australia, *Exhibit 3*, 'Introducing UK City Deals', 2014, p. 6.

questions about traditional (economy fixed i.e. jobs, population and incomes are fixed) BCR approaches to project appraisal; and

- increasing interest in alternative funding mechanisms (value capture etc) and (with Crossrail acting as a case study) questions about how to maximise incentives to develop and deploy these.¹³⁶

5.155 According to KPMG and the Property Council of Australia, City Deals offer:

- **a net measure of economic growth** at a sufficiently large level of geography ... such that most of the displacement effects of individual schemes are netted out;
- a program which robustly **prioritises net increases in jobs and productivity** at the appropriate level of geography;
- **a commitment to reinvest all money earned back** in further GVA [gross value added]-prioritised schemes—this provides a rolling investment fund that can target sustained economic growth, rather than a one-off step change; and
- **up-front money over and above central government funding** that earns the right to the fiscal gain share—the point being that this self-help generated tax is genuinely additional for the Exchequer (Treasury).¹³⁷

5.156 KPMG and the Property Council of Australia characterised City Deals as reflecting ‘a shift in accepted transport assessment methodologies in the UK’, in that:

The growth benefits associated with infrastructure investment become the central focus for the value for money assessment. In practice, this also means focusing on the outcomes that generate the tax revenues that pay for publicly funded investment, an inherently more commercial and entrepreneurial approach than is generated by more traditional appraisal methods. This has helped to capture the employment growth that can be attracted and

¹³⁶ Council of Mayors (SEQ), *Submission 33, Attachment II, An Economic Growth Partnership Model for Queensland*, 4 February 2014, p. 11.

¹³⁷ KPMG & Property Council of Australia, *Exhibit 3, 'Introducing UK City Deals'*, 2014, p. 6.

incentivised through improved connectivity and sound infrastructure investment.¹³⁸

5.157 KPMG and the Property Council of Australia explained the negotiation process under City Deals:

All projects within the scope of the deal are effectively ranked on the basis of their capacity to deliver productivity and employment outcomes. The onus is then placed back on stakeholders to determine how far down the list they are willing to fund. Ultimately, this has resulted in a much more rational approach to investment decision making. It makes it harder to argue for investment programs that generate fewer jobs and less growth, which is what reordering of projects prioritised on the basis of maximum impact of funds invested would mean.¹³⁹

5.158 City Deals have several aspects, only one of which is infrastructure funding:

City Deals are heavily reliant on the establishment of a transparent and quantifiable measure of success. The determination of this measure is entirely dependent on the region and overall goal for implementing the City Deal; however, it needs to reflect a strong link to the type of infrastructure being prioritised, and the funding streams from government (i.e. taxation) that could ultimately benefit from the investment.¹⁴⁰

5.159 Next, parties to the City Deal set the scope of the infrastructure being considered, and prioritise individual projects:

The scope of infrastructure is specifically linked to the set objectives of the City Deal and region more broadly. Following the determination of scope, the prioritisation of infrastructure projects is critical to implementing a City Deal in any established region. The priority list of infrastructure projects determines the order in which they are funded by the government through the City Deal model. It is important that prioritisation is undertaken using the set objectives and minima determined for each specific region in which a tailored City Deal is being implemented. The primary aim of prioritisation is to avoid attempts in the 'end game' to redefine the criteria in order to change priority

¹³⁸ KPMG & Property Council of Australia, *Exhibit 3, 'Introducing UK City Deals'*, 2014, p. 7.

¹³⁹ KPMG & Property Council of Australia, *Exhibit 3, 'Introducing UK City Deals'*, 2014, p. 7.

¹⁴⁰ KPMG & Property Council of Australia, *Exhibit 3, 'Introducing UK City Deals'*, 2014, p. 15.

rankings, and subsequent alterations to the funding schedule for infrastructure projects.¹⁴¹

5.160 Once priorities have been effectively set, the parties to a City Deal establish metrics for monitoring performance:

The monitoring of performance based on the set objectives and minima of the City Deal within a region is critical to the realisation of long-term benefits. Metrics are developed to both measure success and determine the scale of benefit realisation for all stakeholders involved in a certain City Deal...

The program minima are the metrics that the program as a whole has to address, not each and every scheme. The benefits associated with infrastructure investment, and their relative linkage to the lead metric of economic (GVA) growth, are summarised in the diagram below.¹⁴²

5.161 City Deals also incorporate considerations of geography:

The City Deal model is based on the identification of a functional geography, usually a number of smaller local regions that collaborate to better deliver infrastructure and achieve the set objective of the deal.

The geographic boundaries of deals generally align with either the metropolitan area or a broader, pre-defined regional geography. Alignment of City Deal geographies to the boundaries of existing governance entities simplifies any concerns about local authorities opting in or opting out of the City Deal.¹⁴³

5.162 In addition to geography, governance structures are a necessary consideration in negotiating City Deals:

The governance structures employed to implement a deal are just as important as the mechanical details of the deal itself. It is important to establish a suitable structure for the specified geography, to ensure that all stakeholders

¹⁴¹ KPMG & Property Council of Australia, *Exhibit 3, 'Introducing UK City Deals'*, 2014, p. 15.

¹⁴² KPMG & Property Council of Australia, *Exhibit 3, 'Introducing UK City Deals'*, 2014, pp. 15–16.

¹⁴³ KPMG & Property Council of Australia, *Exhibit 3, 'Introducing UK City Deals'*, 2014, p. 17.

are held accountable to responsibilities and that benefits from the deal are realised and shared across the combined region.¹⁴⁴

5.163 Finally, funding arrangements are negotiated between stakeholders to the City Deal:

The delivery of infrastructure, no matter the focus, is dependent on funding. Funding for the delivery of infrastructure under the City Deal model generally comprises baseline funding and earn-back funding. Baseline funding is funds contributed to a centralised funding pool by government and other stakeholders initially. Baseline funding provides certainty around future funding streams. Earn-back funds are generated through the implementation of the City Deal in a particular region and extend beyond the initial baseline funding commitments made by stakeholders.

Funding can also be generated through contributions beyond baseline funding from key stakeholders—this is termed ‘self-help funding’. Self-help funding determines how far down the prioritisation list the City Deal will be able to fund.¹⁴⁵

5.164 KPMG and the Property Council of Australia believed that the City Deals process had ‘resulted in increased certainty for the development sector and clarity on the likely pipeline of infrastructure projects that the government will commit to delivering’:

This certainty has encouraged investment and associated economic growth in precincts surrounding nominated infrastructure priorities. The increased certainty from prioritisation also benefits government by providing clarity on forward financial projections and the sequential roll-out of spatial planning for development.¹⁴⁶

5.165 Dr Williams, of the Committee for Sydney, argued that the City Deals approach would assist with overcoming one of the key problems with the current approach to infrastructure investment in Australia:

¹⁴⁴ KPMG & Property Council of Australia, *Exhibit 3, ‘Introducing UK City Deals’*, 2014, p. 17.

¹⁴⁵ KPMG & Property Council of Australia, *Exhibit 3, ‘Introducing UK City Deals’*, 2014, p. 18.

¹⁴⁶ KPMG & Property Council of Australia, *Exhibit 3, ‘Introducing UK City Deals’*, 2014, p. 11.

Our appraisal process at the moment does not really ask of those people proposing a road how many extra homes will be created as a result of that investment, or how much extra value. It does not really ask that. It just asks 'How much time will we cut off the travel time on this particular road?' So we do not really have, in my view, an appraisal process which lends itself to the city outcomes discussion that we need to have which is mode neutral. In a mode-neutral appraisal process you have to show as a city or as a state government that there are value capture mechanisms in place to maximise the investment by the public sector.¹⁴⁷

5.166 The Council of Mayors (SEQ) commissioned a study into the applicability of the City Deals model to southeast Queensland:

This work showed the strength of Local, State and Federal Governments, working together with industry to resolve the challenges of funding the ongoing growth of both the South East Queensland region, and ultimately the whole of the state.¹⁴⁸

5.167 Furthermore, the Council of Mayors (SEQ) believed that the model developed would assist in overcoming some of the key challenges for infrastructure funding in the region:

Importantly, such a funding model may respond well to two serious issues within this policy area: the insufficiency of funding available for infrastructure at the state and local level in Queensland, and the current impasse between the Queensland and Federal Governments regarding the funding of major infrastructure.¹⁴⁹

5.168 The model of collaboration (developed by KPMG) proposed an Economic Growth Partnership Model (EGPM) for infrastructure funding. According to the report:

The model has been built upon a foundation of a partnership approach to governance between state and local government and the participation of the

¹⁴⁷ Dr Tim Williams, Chief Executive Officer, Committee for Sydney, *Committee Hansard*, 7 March 2016, p. 6.

¹⁴⁸ Council of Mayors (SEQ), *Submission 33*, p. 4.

¹⁴⁹ Council of Mayors (SEQ), *Submission 33*, p. 4.

development sector. This foundation enables negotiation around infrastructure investment and prioritisation at a broader scope and geography than would have traditionally been considered. It enables the partners within geographical settings to approach infrastructure prioritisation around consistent metrics (including a proposed lead metric of Gross Value Added) and agree to a new approach to funding that will ultimately grow revenues and economic activity across the state.¹⁵⁰

5.169 According to the report, EGPM:

Surmises that in each year, local government, the state government and the private sector will contribute both financial and non-financial resources towards a pooled growth fund (GIF); which will in turn be utilised to progress an agreed program of sub-regional enabling infrastructure. This infrastructure investment will generate incremental increases in both local and state revenue streams, which will be partially reinvested back into the GIF through a payment by results scheme, should the infrastructure investment deliver agreed growth benchmarks.

Should the infrastructure investment yield real economic growth dividends as expected, the reinvested funding from growing revenue streams will grow the size of the GIF, and decrease traditional year-to-year funding contributions from stakeholders out of consolidated revenue. Accordingly, the model seeks to maximise economic growth outcomes and address current ongoing challenges around sub-regional infrastructure funding constraints.¹⁵¹

5.170 EGPM splits the process into three distinct phases. Phase one is focused on refining the scope of agreements, wherein the parties conduct any supplementary analysis of proposed infrastructure projects, conduct targeted engagement with stakeholders, and reach in-principle agreement on the infrastructure projects that will be pursued. Phase two involves the negotiation of agreed metrics for performance, the final selection of infrastructure projects to be pursued, and the prioritisation and optimisation of these projects. The third and final phase involves the finalisation of any

¹⁵⁰ Council of Mayors (SEQ), *Submission 33, Attachment II, An Economic Growth Partnership Model for Queensland*, 4 February 2014, p. 2.

¹⁵¹ Council of Mayors (SEQ), *Submission 33, Attachment II, An Economic Growth Partnership Model for Queensland*, 4 February 2014, p. 4.

necessary agreements, the prioritisation and optimisation of any funding agreements, and the negotiation and finalisation of payments by results.¹⁵²

Committee conclusions

- 5.171 The Committee finds significant merit in the City Deals approach. While the model would require adjustment to fit with Australia's three tiered system, as opposed to the UK's two tiered system, it provides many potential benefits.
- 5.172 One of these benefits is that it helps the various levels of government move away from a project-by-project approach to building new transport infrastructure. Rather than considering the benefits and costs of one piece of infrastructure in relative isolation, the City Deals approach encourages planners to consider the wider benefits that infrastructure can bring to a region, and very much encourages a master planning approach, rather than one that is designed to fix a particular gap in the existing infrastructure.
- 5.173 Additionally, it assists in thinking of infrastructure in terms of how it will grow the economy of a region or a city. This results in a focus on adding economic value and a move away from thinking of infrastructure as solving a particular transport issue in a region or city.
- 5.174 Another key advantage of the City Deals approach is that it sets quantifiable metrics for performance, and results in a written agreement where the funding to be provided by each party is clearly agreed and set out. This allows for certainty both for the governments that are funding and building the infrastructure, and the private sector investors who may seek to take advantage of the increased economic activity and value uplift that is caused by the transport infrastructure.
- 5.175 Given that federal funding plays a role in most major infrastructure projects at state level, it seems reasonable for the federal government to seek to make agreements with state and local governments along the lines of the City Deals model. The Committee commends the work commissioned by the

¹⁵² Council of Mayors (SEQ), *Submission 33, Attachment II, An Economic Growth Partnership Model for Queensland*, 4 February 2014, p. 6.

Council of Mayors (SEQ) and conducted by KPMG on adapting the City Deals model to southeast Queensland.

- 5.176 As part of the negotiations for establishing these agreements between the three tiers of government, consideration should be given to the relative priority of proposed infrastructure projects, the increases in value and economic activity that each project will generate, the specific value capture mechanisms that will be applied in the geographic areas that will benefit from the infrastructure, and the quantum of funding that will come from each tier of government.
- 5.177 Additionally, it is possible that collecting certain types of revenue, for example stamp duty and other land taxes, may hamper efforts to capture value using other revenue sources. As a result, it will be necessary for all levels of government involved in these negotiations to consider forgoing certain types of revenue in specific cases, so that the greatest possible value can be generated by the agreement, thus increasing the overall amount of value that can be captured by all parties to the agreement.
- 5.178 The agreements should also establish metrics for performance, with gross value added as the lead metric, so that governments have certainty about future funding streams and developers have certainty on the timing of future infrastructure being built.

Recommendation 12

- 5.179 **The Committee supports the roll-out by the Australian Government of City Deal-type agreements with the various state, territory and local governments. These agreements should:**
- **involve federal, state and territory, local governments, local communities, landholders and developers and other community stakeholders in the prioritisation and negotiation processes;**
 - **consider the building of new infrastructure from a state-wide or regional master plan perspective, rather than on a project-by-project basis;**

- **establish priorities for infrastructure projects based, in part, on the uplift in value that will result;**
- **drawing on the proposed value capture toolkit, define the value capture mechanisms that will be applied, and determine the amount of this uplift that can be captured by the three tiers of government involved in the agreement;**
- **in the negotiation process, the different levels of government should be prepared to consider forgoing certain types of revenue in order for the greatest possible level of value capture to be achieved overall;**
- **clearly define the amount of funding that will be provided by the governments and councils that are party to the deal, as well as the funding that is expected to come from the application of value capture mechanisms;**
- **establish metrics for performance, using gross value added as the lead metric; and**
- **culminate in a written agreement that clearly defines the roles of each tier of government involved in the agreement.**

5.180 The Committee recommends that the Australian Government should develop value capture models that can be applied to major infrastructure projects (such as high speed rail) and seek to negotiate with the states and territories a consistent and coordinated approach to the application of value capture for such projects. In so doing, the Australian Government should be prepared to act as the single point for the collection of value capture revenues.

Recommendation 13

5.181 **The Committee recommends that the Australian Government develop value capture models that can be applied to major infrastructure projects (such as high speed rail) and seek to negotiate with the states and territories a consistent and coordinated approach to the application of value capture for such projects. In so doing, the Australian Government**

should be prepared to act as the single point for the collection of value capture revenues.

John Alexander OAM MP

Chair

29 November 2016

A. List of submissions

- 1 Dr Gavin Putland
- 2 Australian Logistics Council
- 3 Land Values Research Group
- 4 Bus Industry Confederation of Australia
- 5 Strategex Pty Ltd
- 6 Brisbane City Council
- 7 LUTI Consulting
- 8 Planning Institute of Australia
- 9 Site Revenue Society Queensland
- 10 Cr. Heather Barwick and Cr. John Glisson
- 10.1 Supplementary to submission 10
- 11 G21- Geelong Region Alliance
- 12 Mr Leo Foley
- 13 Consult Australia
- 14 Wimmera Development Association

- 15 Associate Professor Philip Laird
- 16 SMART Infrastructure Facility
- 17 EarthSharing Australia
- 18 Whitehorse City Council
- 19 Inland Queensland Roads Action Plan Working Group
- 20 *Confidential*
- 21 City of Fremantle
- 22 Dwyer Lawyers
- 23 City of Greater Geelong
- 24 Local Government Association of Queensland
- 25 Committee for Sydney
- 26 Associate Professor Matthew Burke
- 27 Financial-Architects.Asia
 - 27.1 Supplementary to submission 27
- 28 Sustainable Transport Coalition of WA (Inc)
- 29 City of Port Phillip
 - 29.1 Supplementary to submission 29
- 30 Strategic Intelligence Group
- 31 *Confidential*
- 32 Committee for Geelong
- 33 Council of Mayors (SEQ)

-
- 34 Regional Development Australia Hunter
 - 35 Prosper Australia
 - 36 Metropolitan Transport Forum
 - 37 *Confidential*
 - 38 Transportation Associates Pty Ltd
 - 39 Geelong Port Pty Ltd
 - 40 Curtin University Sustainability Policy (CUSP) Institute
 - 41 KPMG
 - 42 Arup
 - 43 City of Wanneroo
 - 44 Shopping Centre Council of Australia
 - 45 EcoTransit Sydney Incorporated
 - 46 Ryde Community Alliance
 - 47 City of Whittlesea
 - 48 Mr Peter Knight
 - 49 Australasian Railway Association
 - 50 Charter Hall Group
 - 51 Rail, Tram and Bus Union Australia
 - 52 The Hon Tim Fischer AC
 - 53 Engineers Australia
 - 54 Northern Territory Government, Department of Transport

- 55 *Confidential*
- 56 Autodesk Australia Pty Limited
- 57 Department of Infrastructure and Regional Development
- 58 Peri Urban Group of Rural Councils
- 59 ACT Government
- 60 Action for Public Transport (NSW) Inc
- 61 Property Council of Australia
- 62 City of Melbourne
- 63 AECOM
- 64 Queensland Government
- 65 Goodman Limited
- 66 Urban Taskforce Australia
- 67 South Australian Government
- 68 Business Council of Australia
- 69 *Confidential*
- 70 Mr Frank Reale
 - 70.1 Supplementary to submission 70
- 71 Mr Yanis Garrett
- 72 Council of Capital City Lord Mayors
- 73 Transurban
- 74 Professor Sue Holliday

- 75 Hennik Group
- 76 Australian Local Government Association
- 77 Dr Leo Dobes
- 78 Uber
- 79 Ultraspeed Australia
- 80 Newhaven Wealth

B. List of exhibits

- 1 Armstrong B, Davison G, de Vos Malan J, Gleeson B and Godfrey B, *Delivering Sustainable Urban Mobility*. Report for the Australian Council of Learned Academies, 2015. (Provided by Australian Council of Learned Academies)
- 2 Knight P J, *High Speed Rail for Australia – Now*, March 2015. (Provided by Mr Peter J Knight)
- 3 Property Council of Australia, *Introducing UK City Deals: A smart approach to supercharging economic growth and productivity*, June 2014. Prepared by KPMG. (Related to Submission 27.1 - Attachment II) (Provided by Financial-Architects.Asia)
- 4 Victorian Competition and Efficiency Commission, *Securing Victoria's Future prosperity: A Reform Agenda. More productive space and time*, November 2011. Prepared by AECOM. (Provided by Dr David Adams)
- 5 Dobes L and Leung J, *Wider Economic Impacts in Transport Infrastructure Cost-Benefit Analysis – A Bridge Too Far?* Agenda, Volume 22, Number 1, 2015. (Provided by Dr Leo Dobes)
- 6 Neelagama I, *Rapid Transit, Investing in Australia's Transport Future*, Research Report, March 2014. (Provided by Bus Industry Confederation)
- 7 Bus Industry Confederation, *The Benefits of Brisbane's Rapid Transport Network. A summary of initiatives from 2000 to 2012, with particular focus on the benefits that have flowed from these projects*, Draft, 2016. (Provided by Bus Industry Confederation)

- 8 Senior R, Submission in Response to the Commonwealth Working Group on Affordable Housing, March 2016. (Provided by Mr R Senior)
- 9 NSW Parliament, Transport for NSW submission to the NSW Legislative Assembly Committee on Transport and Infrastructure's *Inquiry into the utilisation of rail corridors*, March 2012. (Provided by Mr R Senior)
- 10 NSW Government Response to the Legislative Assembly Committee on Transport and Infrastructure's report, *Inquiry into the utilisation of rail corridors*, May 2013. (Provided by Mr R Senior)
- 11 NSW Parliament, Legislative Council Select Committee on Social, Public and Affordable Housing, *Social, public and affordable housing*, Summary of Recommendations, September 2014. (Provided by Mr R Senior)
- 12 NSW Government Department of Transport, Map of Sydney Metropolitan Rail Network, March 2016. (Provided by Mr R Senior)
- 13 Senior R, *Existing Air Space Development Sites in Sydney and Melbourne*, March 2016. (Provided by Mr R Senior)
- 14 Senior R, *Indicative Yield Assessment from Air Space Developments within Metropolitan Sydney*, March 2016. (Provided by Mr R Senior)
- 15 Qld Government, Department of Infrastructure, Local Government and Planning, *Alternative Infrastructure Funding and Financing*, Research Paper, March 2016. Prepared by Ernst & Young. (Provided by Qld Government)
- 16 Qld Government, Department of Infrastructure, Local Government and Planning, *State Infrastructure Plan Part A: Strategy*, March 2016. (Provided by Qld Government)
- 17 Qld Government, Department of Infrastructure, Local Government and Planning, *State Infrastructure Plan Part B: Program*, March 2016. (Provided by Qld Government)
- 18 Monthly Statistics from Enterprise Geelong, February 2016. (Provided by the Committee for Geelong)

-
- 19 'NSW housing approvals continue to fall', Media release, Urban Taskforce Australia, 6 April 2016. (Provided by Urban Taskforce Australia)
- 20 'Growing trend for councils to sell planning decisions through Value Capture', Media release, Urban Taskforce Australia, 30 March 2016. (Provided by Urban Taskforce Australia)
- 21 *Crossrail 2—Funding and financing study*, PwC, 27 November 2014. (Provided by Urban Taskforce Australia)

C. List of public hearings and witnesses

Tuesday, 23 February 2016 – Canberra

Private Capacity

Professor Peter Newman

Tuesday, 1 March 2016 – Canberra

Central Japan Railway Company

Mr Torkel Patterson, Director

Mr Shohei Yoshida, General Manager, Sydney Office

Embassy of Japan

Mr Yasuhito Takahashi, First Secretary

Friday, 4 March 2016 – Canberra

SMART Infrastructure Facility, University of Wollongong

Mr Joseph Branigan, Senior Research Fellow,

Space Syntax Limited

Mr Martin Butterworth, Managing Director

ACT Government

Ms Dorte Ekelund, Director-General, Environment and Planning Directorate

Ms Kathy Goth, Director, Financial and Economic Analysis, Treasury Directorate

Engineers Australia

Mr Andre Kaspura, Policy Analyst

Mr Mark Stewart, Policy Analyst

Transport Australia Society

Mr Alan Thompson, Member, National Executive

Australasian Railway Association

Mrs Emma Woods, General Manager, Passenger and Member Services

Monday, 7 March 2016 – Sydney*Private Capacity*

Dr Philip Glencoe Laird

Strategex Pty Ltd

Dr David Adams, Director

Bus Industry Confederation of Australia

Mr Michael Apps, Executive Director

Professor John Stanley

Financial-Architects.Asia Pty Ltd

Mr Ian Bell, Director

Property Council of Australia

Mr Glenn Byres, Chief of Policy and Housing

Consult Australia

Mr Jonathan Cartledge, Director, Policy and Government Relations

AECOM

Mr Joe Langley, Technical Director

Shopping Centre Council of Australia

Mr Marcus Conabere, Representative

Mr Angus Nardi, Executive Director

LUTI Consulting

Dr James McIntosh, Principal

Transportation Associates Pty Ltd

Mr Peter Thornton, Managing Director

Committee for Sydney

Mr Eamon Waterford, Head of Strategy and Advocacy

Dr Tim Williams, Chief Executive Officer

Friday, 11 March 2016 – Melbourne*Private Capacity*

The Hon Tim Fischer AC

Mr Peter Knight

Committee for Geelong

Ms Rebecca Casson, Chief Executive Officer

Ms Kirsten Kilpatrick, Board Member

City of Port Phillip

Mr Tom Courtice, Strategic Transport Planner, Sustainable Transport, Sustainability and Transport, Place Strategy and Development

Mrs Claire Ferres Miles, General Manager, Place Strategy and Development

Mr Brett Walters, Manager, Sustainability and Transport, Place Strategy and Development

Arup

Mr Peter Dunn, Senior Associate

Mr Justin Madden, Senior Consultant, Infrastructure and Project Planning

Peri Urban Group of Rural Councils

Ms Paula Lawrence, Executive Officer

Strategic Intelligence Group

Mr John Marinopoulos, Managing Director

Mr Nic Mesic, Partner

City of Melbourne

Mr Richard Smithers, Transport Coordinator, City Strategy Branch, City Strategy and Place Group

Tuesday, 15 March 2016 – Canberra*Department of Infrastructure and Regional Development*

Dr Gary Dolman, Head of Bureau, Bureau of Infrastructure, Transport and Regional Economics, Policy and Research Division

Ms Cathryn Geiger, General Manager, Regional Economic Policy Branch, Policy and Research Division

Mrs Jessica Hall, General Manager, Infrastructure Policy Branch, Infrastructure Investment Division

Ms Philippa Power, Executive Director, Policy and Research Division

The Treasury

Mr Bede Fraser, Principal Adviser, Individuals and Indirect Tax Division

Mr Damien White, Chief Adviser, Industries and Infrastructure Division, Fiscal Group

Thursday, 7 April 2016 – Sydney

Private Capacity

Mr Rob Senior

Autodesk Australia

Mr Brett Casson, Digital Infrastructure Leader

Centurion Group

Ms Annie Chatfield, Chief Operating Officer

Mr John Elvy, Non-executive Chairman

Dr Patrick Yu, Chief Executive Officer

Goodman Ltd

Mr Will Dwyer, Head of Strategic Planning

Urban Taskforce Australia

Mr Chris Johnson, Chief Executive Officer

Action for Public Transport New South Wales

Ms Julianna Walton, Convenor

Friday, 8 April 2016 – Brisbane

Griffith University

Associate Professor Matthew Burke, Deputy Director, Urban Research Program

Brisbane City Council

Mr Kerry Doss, Manager, City Planning and Economic Development Branch

Mr Andrew Lintern, Manager, Business Improvement and Transport Strategy

Mr Brendan O’Keeffe, Principal Engineer, Policy and Strategy

Mr Scott Stewart, Divisional Manager, Brisbane Infrastructure

Mr Brett Turville, Branch Manager, Transport Planning and Strategy, Brisbane Infrastructure

Local Government Association of Queensland

Mr Greg Hoffman, PSM, General Manager, Advocacy

Mr Roland McMillan, Principal Adviser, Economics and Finance

Planning Institute of Australia

Mr Brendan Nelson, President

Council of Mayors (SEQ)

Mr Peter Olah, Executive Director

Mr Scott Smith, Projects and Portfolio Director

Tuesday, 18 October 2016 – Canberra*RMIT and CSIRO*

Professor Martyn Hook, Dean, School of Media and Communications, RMIT

Associate Professor Paul Minifie, Associate Professor of Architecture, RMIT

Dr Jan van Schaik, Lecturer, Architecture and Design, RMIT

Ms Emma Jackson, Associate Lecturer, Architecture and Design, RMIT

Dr Steve Hatfield-Dodds, Chief Coordinating Scientist, Integration Science and Public Policy, CSIRO

Dr Simon Toze, Senior Principal Research Scientist, CSIRO

Friday, 28 October 2016 – Sydney

Consolidated Land and Rail Australia (CLARA)

Mr Nick Cleary, Chairman

Mr Theo Scherman, Director, Solutions Architect—Hitachi Consulting Australia

Mr Clayton Davis, Director/Legal Counsel

Mr John Gallaher, Corporate Legal—DLA Piper

Ultraspeed Australia and Hyperloop One

Mr Steve Artis, Director, Ultraspeed

Mr Sean Duggan, Director, Ultraspeed

Dr Alan James, Vice President, Worldwide Business Development Hyperloop One

Bishop Austrans

Mr Michael York OAM, Convenor, Bishop Austrans Consortium

Mr Rob McAuley, Associate

Newhaven Wealth

Mr Jay Grant, Head of Business Strategy

Spacecon Pty Ltd

Mr Raphael Shin, Managing Director, Spacecon Pty Ltd

Ms Kerry Chikarovski, Government Relations Consultant, Spacecon Pty Ltd

Mr Andrew Mounas, Advisor, Spacecon Pty Ltd

Mr John Moore, CEO, Forrester Cohen International Group Limited

Mr Jonathan Doy, Partner—Tax Advisory, Crowe Horwath (Aust) Pty Ltd

Mr Jeremy Harkins, ineni Realtime; Smart Cities Consultant, Spacecon

Associate Professor Chyi Lin Lee, Western Sydney University

Mr Tim Askew, City Revitalisation Coordinator, Newcastle City Council