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Capturing Value

Advice on making value capture
work in Australia

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Executive Summary

Australians rightly expect high-quality infrastructure services. Infrastructure underpins our quality of life, supports our economy and enables every individual to contribute to our collective prosperity. When issues with our infrastructure emerge, Australians expect our governments to step in and fix the problem. What is often missing from discussions about infrastructure is how we pay for the services we use and the improvements we expect.

Australia has grown and changed significantly over recent decades. This growth and change is expected to continue and, as clearly laid out in the *Australian Infrastructure Audit*¹ and *Australian Infrastructure Plan*,² this presents challenges for policy makers. These changes mean we need to think about how to transform our infrastructure so it continues to support Australians' needs in the 21st century. Crucially, we must also decide how we will pay for this transformation.

In the past, Australian governments have typically provided grant funding for infrastructure investments from general taxation, supplemented by user charges. This approach has worked relatively well to deliver the high-quality infrastructure Australians enjoy today.

But as the *Australian Infrastructure Plan* found, the existing model simply is no longer able to provide sufficient funding to meet all of our infrastructure needs. We need to rethink the funding balance between those who directly benefit from infrastructure and broader taxpayers. Users and other beneficiaries will have to take a greater share of the funding burden, releasing taxpayer dollars to meet the needs of a growing and ageing population.

In this search for additional dollars, the concept of value capture is often raised as the solution. Value capture

can provide opportunities to deliver a fairer and more sustainable funding mix for infrastructure, and should play a greater role. However, caution is required. The range of individual value capture mechanisms available each have benefits and costs, risks and rewards. Understanding these opportunities and challenges can help governments to implement these mechanisms effectively and efficiently.

Over time Australian governments should look to introduce a more consistent approach to value capture. Transitioning to a broad-based land tax – alongside the removal of stamp duty – will eliminate many of the challenges posed by individual measures and provide a permanent, more efficient method of value capture which can help fund the infrastructure Australia needs over coming decades.

Value capture can play a role in funding the infrastructure we need

The theory underpinning value capture is relatively straightforward.

Most people value high-quality infrastructure, and are willing to pay more for housing with access to services like high-frequency public transport. This demand for infrastructure services means that where governments



choose to place major infrastructure investments – particularly transport hubs – property prices can spike. Left uncaptured, this value uplift is enjoyed by the fortunate few who own land close to the hub, despite often having done nothing to earn this windfall gain.

Value capture taps into this by capturing some of the uplift around infrastructure investments. In doing so, it can reduce the volume of funds that need to be drawn from the broader tax base to pay for the infrastructure. Effectively, those who benefit from the government’s investment foot more of the bill, while those who live further away and may never use the infrastructure pay less. This also allows governments to stretch its infrastructure funding further by using the value uplift it captures from one project to fund other productive investments.

Making value capture work in Australia

The merits of value capture, its suitable role in the infrastructure funding mix, and its impact on the broader economy are the subject of ongoing policy debate. A fulsome consideration of these topics is useful for decision makers in coming to a position on the appropriate role of value capture in the project funding and policy mix.

Value capture provokes a diversity of opinions within governments, the infrastructure and property sectors, and

the community more broadly. Debate on value capture is often a competed space, with different stakeholders motivated to variously exaggerate or underestimate the benefits and risks of value capture, and the role it can play. Some argue that value capture can deter and distort local investment, while others claim that value capture can provide the sole source of funding for large-scale projects. The truth lies somewhere in between.

Value capture is a worthwhile source of the infrastructure funding, and should be routinely considered by governments in all project development processes. But putting the concept of value capture into practice requires governments to first overcome a number of hurdles, risks and sensitivities. The clearest evidence of the challenge these issues present is that although value capture has been understood in Australia for almost a century, it has only rarely been used to fund infrastructure.

While some of these risks and sensitivities present a challenge for governments, it is important that they are acknowledged and addressed. The key to winning and maintaining support for value capture is for governments to engage at an early stage of each process, and to keep industry and the community informed throughout project delivery.

How value capture is applied makes all the difference

Implementing value capture effectively can be far from straightforward. Predicting the value created by infrastructure is inherently challenging. Designing and timing the method of capture is complex. Engaging the community on the costs and benefits of this approach can be difficult.

While there is clearly a role for value capture in Australia's future infrastructure funding mix, governments must carefully consider how each approach can be used to address specific funding challenges, and be realistic about the expected outcomes.

While specific mechanisms can provide part of the solution, no single project specific approach can provide the full solution. Similarly, value capture cannot change the economic viability of any project, and so should not influence which projects are prioritised or selected. That is why infrastructure priorities should continue to be selected and developed on the basis of the benefits they can deliver to communities, irrespective of value capture opportunities.

Governments should work with businesses and the community to identify and implement mechanisms that benefit all parties. Establishing a transparent and robust governance structure is integral to effective communication on the process, and receiving meaningful feedback throughout the process helps to identify and address issues as they emerge. Where beneficiaries are required to contribute to a project, the government should ensure these stakeholders are still better off than if no project had been built, and are aware of the clear benefits of engaging in the process.

We have used value capture in Australia before, and this experience provides lessons for today

Value capture has been used in Australia for major infrastructure on a handful of occasions. Forms of value capture were used to raise funding for the Sydney Harbour Bridge in the 1920s and early 1930s, as well as for construction of the Melbourne City Loop. In both cases, the value capture mechanisms remained contentious over the course of their deployment, and they provide clear lessons for governments wishing to embark on a renewed push for the use of value capture today.

Various other forms of value capture, such as developer charges, stamp duty and local government property rates, have been in place for many decades. In many cases, revenue raised from these mechanisms flows to each government's general tax base. Governments should evaluate the role these mechanisms play in the

infrastructure funding mix, and how they could be better used or changed to address our funding challenges.

The current funding constraints and broader fiscal conditions facing Australia's governments provide a clear imperative for using value capture to help fund our infrastructure requirements. Furthermore, a number of Australia's major cities are pursuing substantial investments in transformational projects that provide clear opportunities for value capture. These projects represent a significant cost to government budgets but also, left unchecked, would deliver substantial windfall gains to a small number of local beneficiaries.

A key challenge for governments is to articulate the need for these mechanisms, and how they can make infrastructure funding fairer and more sustainable. It is essential governments are transparent in their application, engaging industry and the community about how much is being raised, from whom, and how all parties will benefit.

Opportunities for value capture should be identified through long-term planning

High-quality, detailed and long-term strategic planning is the foundation of effective value capture.

Taking a long-term view of future infrastructure needs can help governments to identify and support the value a future project can create. In doing so, governments enhance the scale of value uplift from which it can capture and then use to fund projects. Where infrastructure solutions emerge outside of a detailed planning process, opportunities to capture a portion of windfall gains are typically reduced or lost entirely.

Similarly, governments can use a combination of long-term planning and value capture to reduce the cost of strategic future investments through corridor preservation.

If a government owns land in a planned future transport corridor, this allows government to capture up to 100% of the value uplift of this land between purchase and eventual delivery of the infrastructure. It also means the government avoids paying a higher cost for the land in future. This cost difference could be substantial, especially in outer urban areas where the transport corridor could be built over by future residential, commercial or industrial developments. In these cases, without corridor preservation the future cost of infrastructure provision would likely include property acquisitions, tunnelling or demolition works that could have been avoided if government had reserved the land when the corridor was first planned.

However, strategic land acquisitions can be limited by restrictions on government property transactions. While these vary across states and territories, existing legislation in some jurisdictions prevents governments from

purchasing land beyond what is immediately required for the delivery of a project. This is an important protection for land owners in developed areas.

Value capture can take various forms, each suited to different contexts

There are a range of value capture mechanisms, each with their own benefits, risks and implications for project funding and the economy more broadly. Understanding how these mechanisms work, and where each works best is critical to governments implementing value capture effectively.

This paper considers five main types of value capture:

1. Betterment levies
2. Developer charges
3. Leveraging government land
4. Taxes on property transactions
5. Taxes on land value.

Each of these is analysed in detail in this paper. By exploring their distinct characteristics, it becomes clear that there are no absolute rules for how and when to use value capture. In different circumstances, each

mechanism will provide different outcomes. Governments should make decisions on a case-by-case basis, and apply mechanisms according to their effectiveness, efficiency and delivery risk in each circumstance.

This list does not preclude the development of ‘new’ forms of value capture in future. However, the mechanisms listed cover the range of stakeholders from which funding can be raised (that is, developers, businesses and the community). Any other form of value capture would still need to draw funding from one of these groups, so the capacity for another approach to unlock a major new source of revenue is limited.

The challenges we face in Australia call for targeted solutions

Some commonly discussed mechanisms do not constitute an appropriate form of value capture in Australia. In particular, tax hypothecation – such as the use of Tax Increment Financing (TIF) in the United States – provides a solution to a problem we do not currently face.

Tax hypothecation is an approach that allows governments to finance infrastructure construction by borrowing against the forecast uplift in property tax and other revenue. As stated in the *Australian Infrastructure Plan*,



providing sufficient *funding* (how we pay for investments over time) for infrastructure is a challenge for Australia's governments. However, there is no shortfall of *financing* (capital in the form of debt and equity to meet the upfront costs of construction).

In the current Australian context, forms of tax hypothecation would not provide additional funding, nor would it shift the funding split between beneficiaries and taxpayers. Rather, it would simply capture revenues that would otherwise have been generated, while adding to the complexity and cost of infrastructure financing. Tax hypothecation would potentially also introduce unnecessary funding and delivery risks for project proponents. By hypothecating general tax revenue for infrastructure funding, mechanisms such as TIF would distort budgetary processes by restricting funding flexibility while delivering no improvement to governments' fiscal positions.

Value capture can form an important part of a broader 'beneficiary pays' framework

The *Australian Infrastructure Plan* was unequivocal on the need for users to bear a greater share of the infrastructure funding burden. The Plan found that where the beneficiaries of infrastructure pay all, or most, of the costs of provision, services are typically higher quality, more financially sustainable and fairer. Value capture does not replace this role, but can support a fairer and more sustainable approach to funding infrastructure underpinned by user charging.

Value capture and user charging target different beneficiaries, and therefore represent distinct revenue opportunities. Charges on users, such as a rail fare, typically apply to all those who access the service, and – as the name implies – they are specifically a charge for use of a service. Conversely, value capture targets a stream of benefits that flow to land owners who gain from the provision of infrastructure, irrespective of whether they use the service.

In an appropriate market structure, user charging provides a strong platform to generate sustainable funding. In mature infrastructure markets, such as telecommunications and aviation, user charges cover the full cost of providing infrastructure services without the need for a taxpayer subsidy. This reflects users' willingness to pay for high-quality services, and the fundamental link markets create between demand and supply.

In the Australian context, value capture will not deliver a comparable funding platform. The significantly smaller funding opportunity available through value capture means it is neither sufficient nor desirable for it to be seen as a substitute for user charging.

Estimating value uplift is a complex task

This paper aims to shed light on the calculation of value uplift, looking at case studies from Australia and overseas of where value capture has been applied.

Analysis of property data around recent Australian infrastructure projects shows that the impact of these investments is difficult to isolate from other factors determining property prices. Broader property market forces typically dominate price trends in the areas around projects, and there is often a high degree of price fluctuation across the period of project delivery.

These property market observations have implications for many forms of value capture that are based on property prices. Mechanisms based on prices at the time of transaction make revenue forecasting difficult and introduce risks to project funding forecasts, since they rely on both the frequency of property sales and the market price at the time of each sale. For mechanisms based on property value uplift forecasts, the issue is that these forecasts could be wrong, making value capture efforts potentially unfair and economically inefficient.

Applications of value capture around the world provide some lessons for governments locally. However, the settings in other countries often vary significantly from Australia, with many factors such as population density, public transport mode share, tax mix and governance largely incomparable with our own environment.

A broad-based land tax can provide an efficient, sustainable and permanent approach to value capture

A range of value capture mechanisms can provide separate solutions to the infrastructure funding challenges faced for each publicly-funded infrastructure project. However, each of these presents challenges and costs to governments, with some mechanisms bringing unavoidable economic inefficiencies in local and broader economies. The challenges in isolating the impact of infrastructure on property prices reinforce the importance of applying value capture on a case-by-case basis.

Moving towards a broad land value-based system of infrastructure funding could alleviate many of these project-specific issues over the longer term. This approach would provide a fairer, more efficient way of raising infrastructure funding, and move away from the many challenges posed by the volatility and unpredictability of property prices.

Reforming state land taxes by removing exemptions to create a broad-based charge represents the most efficient way to capture value over the long term. As recommended

Moving towards a broad land value-based system of infrastructure funding could alleviate many of these project-specific issues over the longer term. This approach would provide a fairer, more efficient way of raising infrastructure funding, and move away from the many challenges posed by the volatility and unpredictability of property prices.

by the *Henry Tax Review*,³ a broad-based land tax could provide governments with a reliable stream of funding that efficiently and fairly reflects the productive value of land.

The impact and administrative burden of this reform could be streamlined by broadening state-based charges and aligning payments with property rates cycles. By introducing this reform alongside the removal of other, less efficient taxes on transactions such as stamp duties, governments have an opportunity to improve how we collect funding for infrastructure, and alleviate the need for implementing project-specific mechanisms in future.

Nevertheless, in the absence of a broad-based land tax, other value capture mechanisms remain an important part of the infrastructure funding mix.

This paper builds on our recommendation in the *Australian Infrastructure Plan*

In the *Australian Infrastructure Plan*, we identified value capture as a ‘potentially useful source of incremental funding alongside user charges and taxpayer allocations’. The corresponding recommendation outlined our expectations for the use of value capture in Australia:

Recommendation 5.10

Governments should routinely consider value capture opportunities in all future public infrastructure investments.

Opportunities for value capture should be identified and implemented early in planning processes, before specific options are developed, to maximise benefits to taxpayers. To encourage the application of value capture models, the Australian Government should impose a mandatory requirement for initiatives and projects seeking Australian Government support to demonstrate a consideration and implementation plan for value capture.

The paper builds on this recommendation by seeking to build a realistic understanding of the concept of value capture from the ground up, from the theoretical basis of land value uplift through to a recommended approach for Australia’s governments to consider when applying value capture in future infrastructure funding processes.

This paper is split into five chapters, each exploring a different aspect of value capture:

- 1. Background:** A definition of value capture and the challenges it addresses
- 2. Mechanisms:** Existing and potential forms of value capture
- 3. Expectations:** The role value capture can play in Australia
- 4. Considerations:** Risks and sensitivities that should be managed
- 5. Next steps:** A framework for advancing and applying value capture.

Each chapter begins with Findings for value capture in the Australian context. Together, these provide direct advice to decision makers engaging in the complex discussion and implementation of value capture. By establishing guidance on value capture in Australia, this paper explores the grey between the frequently cited black and white in this ongoing debate.

The Findings also provide an easily accessible, independent and realistic view on how value capture should be applied by governments across Australia.

Background

A definition of value capture and the challenges it addresses

Findings

1. **Value capture can and should play a greater role in funding Australia’s infrastructure.** As recommended in the *Australian Infrastructure Plan*, governments should routinely consider value capture to address our infrastructure funding challenges, and should apply mechanisms that work in the best interests of the community.
2. **Value capture can work in Australia, but we should be realistic about the role it can play.** Discussion and application of value capture should focus on how it can address Australia’s two key infrastructure funding challenges:
 - Making the funding split fairer between the direct beneficiaries of infrastructure investment and broader taxpayers
 - Increasing available funding for infrastructure and making it more sustainable.

Governments should be clear on the problem they seek to solve and ensure the mechanism that is applied is the most effective and appropriate approach.

3. **Value capture does not change the economic viability of a project.** Long-term planning is essential to determine, first and foremost, the right projects to address infrastructure needs, then determine the scope for value capture in contributing to the project funding mix. Fundamentally, value capture cannot change the economic costs and benefits of the underlying project.

The basis of value capture: Infrastructure investments can deliver value uplift

High-quality infrastructure services can deliver significant benefits. These benefits can be local – neighbourhoods and precincts that enjoy increased accessibility and amenity. Benefits can also be shared more broadly – well-planned and delivered infrastructure investments can improve the efficiency of networks and boost wider economic productivity and growth.

These benefits are well-recognised by Australians, and are reflected in the property market. A government’s

decision to invest taxpayer funding in new or upgraded infrastructure can provide a range of benefits that are attractive, relatively permanent characteristics for residential, commercial or industry land and property. The desirability of well-connected locations means these benefits can increase demand in a local area, raising land and property values.

Land and property values can be impacted by investments in any form of economic infrastructure – energy, telecommunications, water or transport. However, land transport provides the clearest trend of value uplift due to its high visibility and impact in local communities.



Similarly, government investment in public infrastructure has largely focused on land transport as other sectors have shifted to private ownership and operation in many states and territories.

A definition of value capture

Value capture is the act of collecting a portion of the benefits from public infrastructure investments that flow to the value of land.

Value that is captured by governments can then be used to pay for a portion of the corresponding infrastructure investment. The revenue from value capture can reduce the burden on government budgets of funding infrastructure investments. Without value capture, the localised benefits of new infrastructure flow almost exclusively to private entities – households, businesses and property developers.

There are other ways we pay for infrastructure, such as user charges. And the benefits of infrastructure often flow to other parts of the economy, unlocking economic activity that increases government revenues from income and company taxes. However, these benefits do not flow to the value of land – and so are not considered as forms of value capture. This paper also excludes measures that do not address challenges we face in Australia, such as tax hypothecation.

A brief history of value capture in Australia

Value capture has occasionally been used in Australia to raise funding for specific infrastructure investments. A number of factors have restricted wider use of value capture. These include a lack of political and community awareness of value capture and how it can be applied, its

impact on local communities and the broader economy, and the lack of a political or economic imperative.

The Sydney Harbour Bridge provides perhaps the most notable example of where a government has applied targeted value capture to pay for major public infrastructure.

The Sydney Harbour Bridge presented many challenges to infrastructure planners and engineers in the 1920s and early 1930s. One particular challenge was how to pay for the largest project ever undertaken in Australia. Part of the funding solution proposed by John Bradfield, principal project designer and engineer, was to levy a ‘betterment tax’ on local landowners and CBD businesses, whose properties were set to increase in value with the new road and rail link.

This charge, representing 0.2% of the unimproved capital value of the land, was intended to raise a third of the project’s capital costs.⁴ In reality, the charge raised just over £1 million of the total financial cost of £6.25 million. This shortfall owed to a blowout in the cost of the project, and the betterment levy being scrapped in 1932, five years earlier than planned, due to political pressure and the economic strain of the Great Depression.⁵

Value capture was also used to partly fund the City Loop in Melbourne through two separate rate levies. The first, through the Melbourne and Metropolitan Board of Works, was levied across the greater Melbourne area. The other was levied by Melbourne City Council – initially just on CBD properties, then extended to all properties across the municipality.

Numerous sets of funding arrangements for this project were proposed and changed multiple times from the introduction of the *City of Melbourne Underground Railway Construction Act*⁶ in 1960, to 1995 – when the



City of Melbourne's special rates levy was repealed several years earlier than planned.

Melbourne's City Loop provides important context for infrastructure decision makers today. While the theoretical underpinnings of the value capture approach were sound, the communication of the mechanism failed to convince vocal opponents and large parts of the community of its benefits from the outset. As a result, the application of value capture remained contentious from early planning to well beyond project delivery.

The project was completed in 1985 at a total cost of approximately \$650 million (in 1985 dollars).⁷

Momentum for value capture in Australia

Value capture is not a new concept, having first been understood and applied in Australia almost a century ago. However, there has been a recent resurgence in discussion about its capacity to fund 21st century infrastructure. While the fundamental relationship between infrastructure investments and land values has not changed, this recent shift reflects two broad factors:

- Increasingly tight fiscal conditions across Australia's governments
- A growing sense of unfairness as several large-scale projects have delivered substantial windfall gains for some developers and local property owners, compounded by ongoing issues of housing affordability in many Australian cities.

Value capture has been proposed or implemented to some degree across a number of Australian jurisdictions in recent years, with governments seeking to overcome funding shortfalls and address community concerns. This broad approach has a clear role to play in addressing Australia's infrastructure funding challenges. It is up to governments to engage communities on the need for change, and to deliver value capture in a way that is equitable and efficient.

Finding 1

Value capture can and should play a greater role in funding Australia's infrastructure.

As recommended in the *Australian Infrastructure Plan*, governments should routinely consider value capture to address our infrastructure funding challenges, and should apply mechanisms that work in the best interests of the community.

Value capture can provide a solution to specific infrastructure funding challenges

It is important when considering value capture to anchor discussion in the core reasons why governments should use it as part of both a project funding mix and a broader policy agenda.

Value capture seeks to address two of the major challenges for infrastructure today: competition for available funding for infrastructure investment, and an unfair funding split – where those who currently benefit from infrastructure do not necessarily contribute to its costs. These were identified in the *Australian Infrastructure Plan* to guide governments' policy objectives across all economic infrastructure sectors.

While value capture may also deliver broader positive outcomes, such as engagement with communities on the costs and benefits of an investment as part of planning and project delivery processes, these should not overshadow the primary policy objectives of making infrastructure funding fairer and more sustainable. Where value capture cannot be shown to deliver against these two central objectives, it should not be used.

The following sections discuss the motivations for undertaking value capture and the need to keep these in mind throughout infrastructure decision making processes.

1. Making infrastructure funding fairer

Value capture is a tool – alongside user charging – for achieving societal expectations of providing reasonable infrastructure service levels to all Australians, and for those who benefit most to pay their fair share.

Ultimately, infrastructure funding can only come from two sources: beneficiaries and taxpayers. While governments can pay for infrastructure through taxes, this means that the vast majority of people and businesses who pay for a new or upgraded asset will rarely – if ever – use it or directly benefit from it. Value capture seeks a fairer balance where a portion of value uplift, previously captured by local beneficiaries, is used to reduce the call on taxpayer funds.

Beneficiaries include not only those who will use the infrastructure over its life, but also other local property and business owners whose assets may become more valuable if the new infrastructure increases demand for their property, goods or services. Unlike most forms of income, this value uplift provides unearned windfall to these beneficiaries.

Without value capture, the benefits of infrastructure investments could be viewed as bestowing windfall profits on those lucky enough to live in an area where the government decides to improve infrastructure services. In some cases, these 'profits' are substantial.

This may seem like good luck for some. However, the profits enjoyed by local property and business owners are funded by the broader tax base. They are, in effect, a targeted but unintended form of wealth transfer from millions of taxpayers to very small group of lucky individuals. Unless government captures at least some of the value uplift in these properties on behalf of taxpayers, these profits come at the expense of infrastructure investments across the rest of the country, or spending on other government priorities.

While value capture is an important tool for governments in the infrastructure funding mix, it is important to keep its potential role in perspective. Beneficiary pays cannot fund all the infrastructure Australia needs. Even if governments could collect the full value uplift from beneficiaries, this would still not cover the full cost of new or upgraded infrastructure in most cases. This is because infrastructure costs are often beyond the capacity of any one subset of society to pay for. For example, it is unrealistic to expect residents along a new rail corridor to fully fund its multibillion-dollar costs, or for a remote community to meet the costs of highway upgrades that provide them safe and reliable access to regional services.

So while it is unreasonable to expect either taxpayers or these beneficiaries to fully pay for new or upgraded infrastructure, shifting the funding split towards a beneficiary pays approach makes infrastructure funding fairer for all. By redressing this imbalance in the funding split, value capture supports the government's primary aim in infrastructure provision: to ensure all people have access to infrastructure that is efficient, safe and affordable.

2. Increasing available funding for infrastructure and making it more sustainable

Government budgets are under significant constraint, meaning that funding for infrastructure must compete with other, recurrent expenses such as health and education spending. There is an opportunity cost to every dollar a government spends on one priority – they cannot spend that dollar on other priorities.

This lack of funding for infrastructure means that, without value capture, the majority of Australians who do not own property near new infrastructure miss out on more than just the land value uplift caused by investment of their taxes by governments. They are further disadvantaged since the lack of a mechanism to capture these windfall gains means governments have less to spend on improving other services across their jurisdiction.

As outlined in the *Australian Infrastructure Plan*, a key challenge for governments is finding the means to pay for the infrastructure we need. Value capture provides one such mechanism for broadening the overall funding mix, and reducing the burden each infrastructure investment places on general tax revenue.

The Plan notes that the contribution of value capture to this funding mix is likely to be incremental, and there is a practical limit to how much funding value capture can and should raise.

Crucially, however, the potential contribution of value capture to an individual project's or broader government's funding mix is not insignificant. In the case of large-scale infrastructure projects, even a 5-10% contribution to project costs through value capture can represent a saving to the taxpayer in the hundreds of millions of dollars. Money then can be used to fund further economic infrastructure, or other priorities such as hospitals and schools.

Given that the pool of funds available for infrastructure investment is finite, value capture represents a way of building better infrastructure sooner. In situations where governments have identified productive investments in long-term infrastructure and land-use plans but have insufficient funds to commence construction, the funding provided through value capture mechanisms may be the difference between the project proceeding now or being delayed by a number of years.

Finding 2

Value capture can work in Australia, but we should be realistic about the role it can play.

Discussion and application of value capture should focus on how it can address Australia's two key infrastructure funding challenges:

- Making the funding split fairer between the direct beneficiaries of infrastructure investment and broader taxpayers
- Increasing available funding for infrastructure and making it more sustainable.

Governments should be clear on the problem they seek to solve and ensure the mechanism that is applied is the most effective and appropriate approach.

Value capture can also provide broader benefits

Value capture can align the interests of government, businesses and the community. By examining the viability of value capture throughout planning and project development processes, governments are forced to consider the characteristics that will make projects successful. This means determining the land use and transport network settings that most efficiently meet the needs of the community and businesses.

The relationship between service quality and value uplift means governments are incentivised to provide infrastructure that maximises the benefits to the community and businesses. In maximising the benefits of the infrastructure, governments are also maximising the value uplift that can be captured.

The incentive structure introduced by value capture also brings greater reasons for government to engage local households and businesses throughout the planning, project development and delivery processes. For new or upgraded infrastructure, engagement at each stage of the project cycle helps governments to understand community demand and determine the best form of services to deliver to users. This maximises both service quality outcomes and value uplift that can be captured, providing a win-win for government and users.

Clear communication of the benefits to these communities has the added advantage of improving community awareness and instilling a sense of ownership in the new or upgraded infrastructure. Public support for

value capture relies on governments convincing locals of the need for value capture, and what benefits it will deliver. In the case of Crossrail in London, widespread public support for the project made value capture a more politically feasible mechanism for raising funding, and secured the support of businesses across the city, including major support from Canary Wharf, Heathrow Airport and various major property developers.

Furthermore, by making communities aware of how infrastructure investments could improve service quality, governments are also undertaking a form of ‘advertising’ to ensure the benefits of a project are realised. Increasing public awareness encourages uptake once the services are delivered, further maximising the value of the public investment. This additional patronage can further help to fund the infrastructure over time – repayment of the capital costs, as well as ongoing operational and maintenance expenses.

Value capture does not change the economic viability of a project

While value capture may bring benefits to governments, the capacity to apply a value capture mechanism cannot change the underlying economic viability of the project.

In terms of infrastructure, a government’s first responsibility is to provide a fair level of service quality to users. Its priority in providing new or upgraded infrastructure must therefore be to ensure this investment improves user outcomes and, where possible, provides broader network benefits to users beyond the immediate investment.

Opportunities to undertake value capture should not lead a government’s decision making on what to build and where. While value uplift stems from some incidental benefits of infrastructure investments, governments should seek to maximise these through project development, not project selection. Projects should be prioritised and selected for their economic impact and strategic merit. Value capture, alongside other potential funding mechanisms, should be a second order consideration. So while value capture can help to fund a project, it cannot improve its fundamental characteristics. In other words, value capture cannot make a bad project good.

So while value capture can and should be seen as a useful tool in project funding, it is essential that its role is kept in perspective. Where fundamental control of project selection or network design could be unduly influenced by private commercial interests, or the government’s capacity to capture value, this is likely to lead to suboptimal or negative outcomes for direct users of the infrastructure, as well as broader network users.

In short, just because a government finds a way to monetise the benefits of a project, this does not necessarily mean that it should. While revenue opportunities are an important consideration in aligning public and private interests through infrastructure investments, any project that focuses on revenue generation at the expense of user outcomes should be re-considered and re-aligned with the infrastructure problem it seeks to solve.

Finding 3

Value capture does not change the economic viability of a project.

Long-term planning is essential to determine, first and foremost, the right projects to address infrastructure needs, then determine the scope for value capture in contributing to the project funding mix. Fundamentally, value capture cannot change the economic costs and benefits of the underlying project.

Mechanisms

Existing and potential forms of value capture

Findings

4. **Governments should focus on forms of value capture that are most effective in addressing the infrastructure challenges we face in Australia.** While infrastructure investments may bring additional revenues through taxes on economic activity and user charges, these are not forms of value capture and should be considered separately. Similarly, forms of value capture that simply hypothecate tax revenue that would otherwise have been raised do not provide an appropriate solution to our infrastructure funding challenges.
5. **Each value capture mechanism has its own benefits, risks and implications for project funding and the economy more broadly.** Project proponents should develop and apply mechanisms on a case-by-case basis according to their effectiveness and delivery risk in each circumstance – but not just their capacity to raise revenue.
6. **A broad-based land tax – accompanied by the removal of inefficient taxes such as stamp duty – would provide an efficient, sustainable approach to value capture in Australia.** While a number of mechanisms can provide individual solutions for specific projects, reform of land tax presents a clear opportunity for a more sustainable, longer term reform. The impact of this change could be streamlined by broadening existing state-based charges, and aligning payments with local property rates cycles.

Value capture in Australia can be applied in five broad ways

The broad umbrella of value capture encompasses a range of measures at the disposal of governments. The various mechanisms are united by a common purpose: leveraging the positive impacts of infrastructure to support the delivery of projects. Some of these will be more feasible and useful than others in the Australian context.

As illustrated in the previous chapter, there are many variables influencing property values and broader project benefits. These play a critical role in determining how well each mechanism can address Australia's key funding problems: increasing funding for projects and making

the split between taxpayers and beneficiaries fairer. Understanding these variables and determining which value capture mechanisms would be most effective in each case should be a priority for Australian governments in the early stages of project development.

This chapter closely examines five types of value capture:

1. Betterment levies
2. Developer charges
3. Leveraging government land
4. Taxes on property transactions
5. Taxes on land value.



This list covers value capture mechanisms that are in place in Australia in some form, or that could provide useful solutions to Australia's infrastructure funding challenges. This list is not exhaustive, and each form of value capture can be applied in a number of different ways with different labels.

This list also does not preclude the development of 'new' forms of value capture in the future. However, the mechanisms listed cover the range of stakeholders from which funding can be raised (that is, developers, businesses and the community). Any other form of value capture would still need to draw funding from one of these groups, so the capacity for another approach to unlock a major new source of revenue is limited.

Despite the diversity of their forms, value capture mechanisms should seek to achieve a common purpose. That is, identified parties stand to benefit from new or upgraded infrastructure, and by capturing some of that benefit, governments can deepen the project funding mix and reduce the burden on other taxpayers who do not directly benefit from this specific infrastructure.

Only those mechanisms that are most likely to be useful in an Australian context have been analysed in detail. Other mechanisms which are commonly associated with value capture, including taxes on economic activity and tax hypothecation (commonly referred to as Tax Increment Financing or 'TIF'), have been excluded on the basis that they are either not true forms of value capture, or would not help to address the funding challenges faced by Australian governments. Aside from examining the five types of value capture listed above, this chapter also provides reasons for excluding these other mechanisms from consideration in the Australian context.

A framework for understanding value capture

Value capture mechanisms can be complex. They are frequently discussed or applied in different ways, depending on the perspective of the individual or agency. Each mechanism has a number of features that differentiate it from others, though these characteristics can be shared or overlap with those of other mechanisms.

The terminology used by governments for these different mechanisms is far from standardised. Labels are often adopted as a way of communicating the benefits of a mechanism to the community, rather than reflecting the technical definition of the mechanism itself. It is also important to note that within specific types of value capture, mechanisms can be adapted or hybridised with other value capture mechanisms.

This complexity presents a challenge in coming to an intuitive understanding of value capture and its various forms. This chapter seeks to cut through the complexity of value capture by providing simple and intuitive ways to differentiate the various mechanisms by examining:

1. **Benefit flow:** Who benefits from infrastructure investment and how each mechanism captures the resulting value uplift
2. **Directness:** How focused each mechanism is in isolating value to capture – from a specific local area to economy-wide
3. **Transaction type:** How each mechanism collects revenue from value uplift – from a one-off transaction to an annual levy in perpetuity.

Categorising forms of value capture is not an exact science. While there may be some debate over how these mechanisms should be labelled or differentiated, what matters most is how each type of value capture addresses the infrastructure funding challenges we face in Australia.

Understanding the infrastructure investment benefit flow

Exploring how benefits from infrastructure investment flow to different parts of the economy is fundamental to understanding how each value capture mechanism works. **Figure 1** provides a high-level illustration of how the benefits of infrastructure investment are distributed within the economy, and what mechanisms can be used to capture the value uplift these benefits bring to fund the infrastructure itself.

Figure 1 shows that the benefits of public infrastructure flow to a range of stakeholders in various ways. Only some of these benefits flow to the value of land and property. So only those mechanisms that capture an uplift in the value of land or property are forms value capture.

Taxes on economic activity, such as income tax and GST, may increase due to the economic value and productivity an infrastructure investment unlocks. However, these benefits are realised in the increased volume or value of economic activity, materialised in increased earnings for individuals and businesses.

User charges are also not a form of value capture. Rather, they are a fee for the use of an infrastructure service. While user charges can play an important role

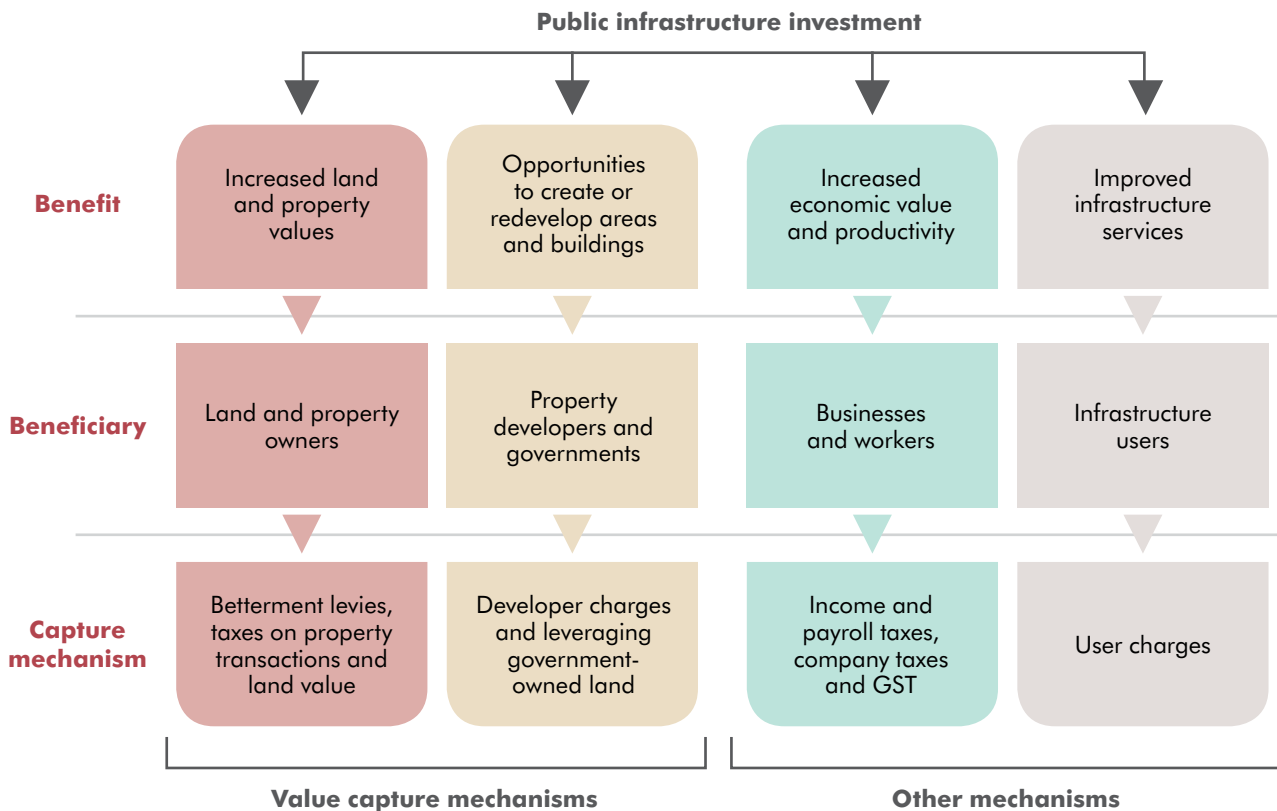
in mechanisms that capture other benefits arising from infrastructure investments should be considered as separate to value capture.

A hypothetical example can help to illustrate the importance of keeping these benefit flows separate.

Take an owner-occupier who lives near a new train station and takes the train to work each day. They pay a user charge each time they use the service, at the same price as another person who rents property in the area or owns property further away. If the new infrastructure makes it possible for them to access a higher paying job, a portion of that increased wage will also be captured by taxes on their income. While these mechanisms allow government to capture revenue from increased economic activity, they bear no relation to the value of the land owned by this individual.

The increased value of this person’s land is caused by an increase in demand from others who wish to live close to the new station and reap the other benefits this provides. The government could only capture some of this owner’s land value uplift through a betterment levy, a tax on a transfer of that property to a new owner, or a tax on the value of the land.

Figure 1: How benefits from infrastructure investment are captured



So the owner-occupier may benefit as a worker, an infrastructure user and a land owner simultaneously, with each role providing opportunities for the government to capture some of the benefits they enjoy. However, it is only the flow of benefits to the value of land and the individual's role as a land owner that are captured through value capture mechanisms. Their benefits as a user are captured by user charges, and as a worker by income and company taxes.

The economic efficiency of value capture relies on its capacity to separate land value uplift from other forms of benefits. It is not fair or efficient to charge for infrastructure use through a tax on property sales, nor should governments set transport fares to capture land value uplift. Each capture mechanism serves its own purpose, and should be kept separate to ensure government can control the outcomes it seeks through each measure.

Sorting value capture mechanisms by directness

Another way of differentiating between value capture mechanisms is to examine how they are put in place by a government. Each mechanism occupies a place on a spectrum between those that are targeted: highly specific to an area; and those that are broad: set in place to capture value across the economy.

Targeted mechanisms generally attempt to capture the value uplift that occurs within a local area when a government announces and delivers additional infrastructure services. These mechanisms actively target specific beneficiaries within a set radius or area, such as a local government area.

Broad forms of value capture operate across the economy, indirectly capturing uplift in land value from infrastructure investments. Some of these mechanisms have existed for centuries, such as stamp duty, but have not been used to fund specific projects. This is largely because, under these forms of value capture, the specific value uplift triggered by an infrastructure investment can be difficult to identify and isolate. Instead, all revenues from these taxes flow to general taxation revenue.

Some mechanisms fit neatly into one of these categories. For example, developer contributions are a very targeted form of value capture. The government levies a one-off charge on developers of properties around a new or upgraded piece of infrastructure to reflect the uplift in property value they enjoy because of the infrastructure investment. In greenfield areas, this revenue is typically used to fund infrastructure investments that connect

developments to broader networks. In these cases, value capture can be expected to cover a greater portion of the total cost than in infill environments, where benefits may be shared across existing and new developments.

Notably, a reformed, broad-based land value tax would reflect a balance between these two categories. Under this approach, payments would reflect both the general value of a property and the specific portion of this property value arising from an infrastructure investment in the local area. This means it could play a significant, long-term role in raising revenue from all property owners, but also permit government to identify value uplift and use its forward revenue stream to partly fund a specific project.

As shown by **Figure 2**, other forms of value capture are on a scale between targeted and broad, and can vary in where they fit on this spectrum depending on how they are applied in each instance.

Sorting value capture mechanisms by transaction type

It is also possible to differentiate between mechanisms by how they collect revenue. Mechanisms range from those that are transactional (or one-off) to those that are recurrent or ongoing and levied over a long period – or in perpetuity.

Transactional mechanisms attempt to capture the value uplift 'spikes' that occur when government announces and delivers additional infrastructure services to a local area. These mechanisms target specific local beneficiaries within a set radius or area through such measures as betterment levies and developer charges. Governments can also put in place broader transactional mechanisms to capture value uplift across the housing market, for example through stamp duty and capital gains tax.

Recurrent forms of value capture seek to raise revenue from positive changes in economic value over the long term. These may be put in place to spread the impost of a value capture mechanism over a number of years, or because value uplift is expected to materialise over a longer period.

In the case of a tax on land value, the periodic charges levied in perpetuity play a further role in the economy. A broad-based land tax reflects a charge for the ongoing productive capacity of the land, incentivising owners of the land to use it efficiently – or else transfer ownership to somebody else who will use it efficiently.

As with the directness of mechanisms, the type of transaction can also be represented on a spectrum – as shown in **Figure 3**. Developer charges are typically only levied as a one-off tax at the point of development

approval. Betterment levies can be levied as a one-off charge or spread over a number of years.

Notably, leveraging government land sits in the middle of the spectrum. Although a sale or lease of government land occurs in one instance, governments can maximise the benefits from uplift by reserving or acquiring strategic lands and corridors many years in advance of delivery of a project, and the sale or lease of corresponding lands.

Tax hypothecation does not provide an effective solution to our current infrastructure funding challenges

It is important to remember the fundamental challenges value capture seeks to solve when considering the various mechanisms. One commonly discussed approach, tax hypothecation, has not been included in the list of value capture mechanisms. Frequently referred to as Tax Increment Financing, or TIF, this mechanism has been

excluded from consideration because it is not viable or useful for funding Australian infrastructure at this time.

Tax hypothecation allows governments to finance infrastructure construction by borrowing against the forecast uplift in property tax and other revenue. The theoretical foundation of tax hypothecation as a form of value capture is that well-scoped and delivered infrastructure investments can deliver uplift in economic activity in the areas around the project. The government seeks to identify and isolate the increase in tax receipts from this uplift in economic activity as a separate future revenue stream. By tying the infrastructure investment to this revenue stream, in theory governments could then access finance that would otherwise not have been available.

The key issue with tax hypothecation is that it provides a financing solution, not a funding mechanism. As stated in the *Australian Infrastructure Plan*, providing sufficient *funding* (how we pay for investments over time) for

Figure 2: Value capture mechanisms by directness

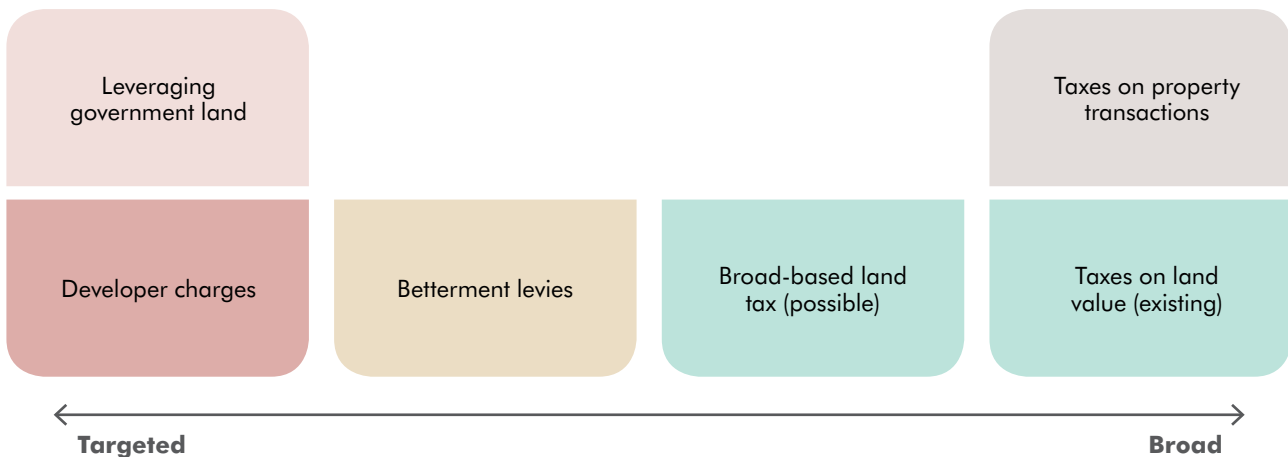
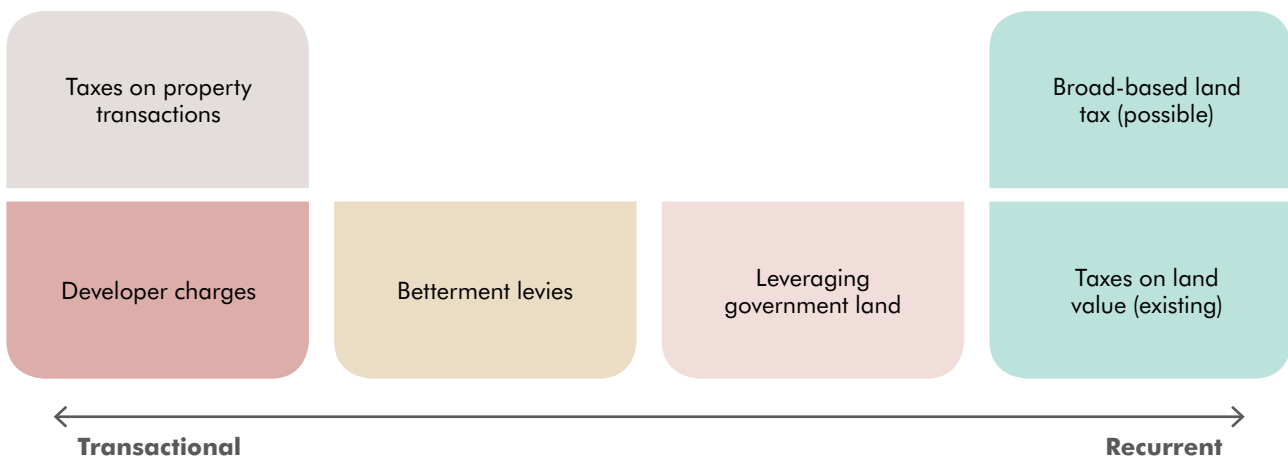


Figure 3: Value capture mechanisms by transaction type



infrastructure is a challenge for Australia's governments. However, there is no shortfall of *financing* (capital in the form of debt and equity to meet the upfront costs of construction).

In Australia, TIF would not provide additional funding, nor would it shift the funding split between beneficiaries and taxpayers. Rather, TIF would simply hypothecate tax revenues that would have otherwise occurred and flowed to the general tax base. This would have the effect of securing additional funds for infrastructure at the expense of other government spending priorities – leading to no improvement in a government's fiscal position, while inflating financing costs relative to more conventional project finance models.

TIF has been applied with variable success in other countries – predominantly the United States, where a number of local governments have used the mechanism to secure project financing and bring forward construction of infrastructure projects and undertake urban renewal. Unlike the United States jurisdictions in which TIF has been used, Australian governments enjoy relatively strong credit ratings, and so should have no problem raising finance for well-considered infrastructure projects.

The methodology of TIF can also be problematic. Hypothecation of tax receipts assumes all tax receipts above a pre-project baseline emanated from infrastructure investment. This theoretical approach can create serious issues, since growth in tax receipts can be influenced by various factors outside the original baseline forecast. A poorly forecast baseline can result in TIF capturing far more, or far less, than a fair portion of value uplift from the infrastructure investment.

The longer the period of capture under a TIF mechanism, the more likely (and further) the original forecast can deviate from reality. In doing so, tax hypothecation shifts a considerable share of risk onto governments. If a project fails to deliver the forecast uplift in tax revenue, the government would likely be required to meet the ongoing debt obligations through the broader revenue base.

This approach also ignores unforeseeable circumstances that would influence the tax receipts in an area, such as natural events or commercial investments that are unrelated to the infrastructure. This uncertainty contributes to an increased risk profile and, without additional government guarantees, would raise the return required by private lenders on the upfront finance. In turn, this increases the cost of capital and undermines part of the case for private finance. Private finance can play an important role in providing incentives for greater efficiency in infrastructure delivery, but TIF is not an appropriate means of achieving this outcome.

Finding 4

Governments should focus on forms of value capture that are most effective in addressing the infrastructure challenges we face in Australia.

While infrastructure investments may bring additional revenues through taxes on economic activity and user charges, these are not forms of value capture and should be considered separately. Similarly, forms of value capture that simply hypothecate tax revenue that would otherwise have been raised do not provide an appropriate solution to our infrastructure funding challenges.

Assessing the effectiveness of value capture mechanisms

Each form of value capture comes with distinct benefits, challenges and other characteristics. Some forms of value capture will be more effective with certain types of infrastructure. Value capture should be applied on a case-by-case basis, so that the mechanism or combination of mechanisms used best achieve their intended outcomes.

Applied appropriately, each form of value capture has the potential to deliver benefits at the local and broader economic level. Each also comes with hurdles that must be overcome to make it most effective in providing a solution to Australia's infrastructure funding challenges. Some provide a more immediate solution to project-specific funding issues, whereas others deliver long-term streams of incremental revenue with greater economic efficiency.

A range of different characteristics should be considered when deciding how, when and where to apply value capture. Each can be briefly defined as:

1. **Betterment levies:** Captures a portion of the estimated value uplift on land (residential, commercial or both) around an infrastructure investment
2. **Developer charges:** Payments by a property developer to contribute to the shared infrastructure and services in the area surrounding their development
3. **Leveraging government land:** A government sells or leases land or air rights around an infrastructure investment to fund its construction and capture the corresponding value uplift
4. **Taxes on property transactions:** Taxes levied at the point of property transaction as a portion of the sale price, charged to the seller or the buyer

5. Taxes on land value:

- a. Taxes on land value (existing):** Existing state, territory and local government taxes levy a recurrent charge on land or property owners to pay for service delivery. The method of calculation varies by jurisdiction, and a number of exemptions are applied – most commonly for the primary place of residence
- b. Broad-based land tax (possible):** A broad-based land tax would involve removing many exemptions to existing taxes on land value, streamlining charging processes and phasing out other charges such as stamp duties.

These are considered in greater detail in **Appendix A**, with each mechanism considered against key characteristics.

Table 1 provides a summary of this analysis, with a traffic light assessment of each mechanism against high-level measures of effectiveness. These measures are broadly defined as:

- **Economic efficiency:** How the mechanism is likely to impact infrastructure and property markets, and the broader economy

- **Funding capacity:** The effectiveness of the mechanism in raising revenue for a specific investment

- **Fairness:** The effectiveness of the mechanism in improving the fairness of the funding split between taxpayers and beneficiaries.























This provides a guide to the theoretical merits and limitations of each type of mechanism. However, the actual impact will vary depending on how the mechanism is specifically applied in each case, as well as the respective legislative, economic and geographical settings.




The capacity of mechanisms to raise funding varies greatly

The first question governments should ask when considering value capture is: what role can this play in the infrastructure funding mix? Value capture is primarily a funding tool, so a mechanism should at its core be designed to capture revenue to pay for infrastructure.

A mechanism’s funding capacity depends on how, when and where it is applied. There is no rule for the potential funding that can be raised through each approach. It is the project proponent’s role in each case to ensure funding capacity is maximised, while balancing other objectives such as economic efficiency and fairness.

Table 1: High-level ('traffic light') assessment of value capture mechanisms

Mechanism	Funding capacity	Fairness	Economic efficiency
Betterment levies	 	 	
Developer charges			
Leveraging government land			
Taxes on property transactions		 	
Taxes on land value (existing)			
Broad-based land tax (possible)	 		

 Effective  Partially effective  Ineffective

Some mechanisms may be better suited to specific types of infrastructure, depending on how the benefits from infrastructure investment flow in each case. For example, developer charges that are tied to the provision of local infrastructure could provide a substantial portion (or 100%) of the total cost, since there is a clear link between the benefits of the infrastructure and a clearly defined set of local beneficiaries. Similarly, a transformational project, such as a major city metro network, is likely to raise substantially more through value capture than an incremental increase to infrastructure capacity, such as the construction of an additional lane on a highway. Each project calls for different expectations, and a different approach to capturing value uplift.

It is also important to consider the timing and reliability of revenue in each case. One-off mechanisms such as developer charges or the sale of government land will deliver funding in a lump sum upfront. Recurrent mechanisms, such as taxes on land value, will provide an ongoing, reliable stream of funding over time. Taxes on property transactions will deliver lump sums whenever properties change hands, though the timing and total funding received depend on the market, not the government.

Because different mechanisms can draw from separate stakeholders and different streams of revenue, multiple forms of value capture can be used for each project. This can help to increase the total funding available for each project. However, proponents should consider the total impost of these mechanisms on each stakeholder, and their broader impact on economic efficiency. This is especially important when various mechanisms are put in place by different governments or agencies. Communication and coordination between these agencies and the community is key to their support. The risk of ‘over-capturing’ is discussed in more detail in **Chapter 4**.

Equity impacts should be a primary consideration for governments

Under a beneficiary pays system, a well-designed value capture mechanism will capture a greater portion of revenue from those who benefit most from new infrastructure. As outlined in **Chapter 1**, value capture is a powerful tool for governments to establish a fairer balance of funding for Australia’s infrastructure needs. However, transitioning to a beneficiary pays approach is not simply about making locals pay the full costs of new or upgraded infrastructure. This would not be fair or practical.

Applying value capture fairly means governments must balance two primary outcomes:

1. Capturing a portion of value uplift from local land and property owners, and so reducing the burden on the broader tax base
2. Ensuring the burden placed on locals is reasonable, and leaves them better off than if no project was delivered.

Some value capture mechanisms inherently deliver more equitable outcomes than others. For example, the sale or lease of government-owned land allows the community to share in up to 100% of the uplift caused by a public investment. The cost is paid by developers who benefit from higher sale prices for the properties they construct around the infrastructure. The cost of land is passed on to the eventual owners of the property, but this cost should be no more or less than would have been paid had the land been privately held. As a result, there is no excess burden placed on local beneficiaries, while broader taxpayers benefit from the reduced public cost of providing the infrastructure.

On the other hand, taxes on property transactions are more likely to have adverse equity impacts on local and broader communities. Stamp duties and Capital Gains Tax are not used to pay for infrastructure provision, and so do not shift the balance of funding towards a beneficiary pays approach. Also, stamp duty can be seen to reduce equity. Stamp duty represents a larger impost for first home-buyers, recent migrants and poorer workers seeking to move close to employment opportunities. That is because these groupings cannot pay for stamp duty through the proceeds of a previous sale of property or other accumulated wealth.

Achieving a balance of fairness requires careful consideration of the impacts of each value capture mechanism prior to its application. These specific impacts are discussed in greater detail in **Appendix A**.

Some mechanisms can have distortive market and economic impacts

An infrastructure investment should support productivity by enabling businesses and the community to operate more efficiently. It is therefore important that value capture supports the delivery of infrastructure without reducing economic efficiency.

The economic efficiency of a value capture mechanism is largely determined by the accuracy with which it isolates and captures infrastructure-related uplift from a set of beneficiaries.

Mechanisms that apply charges based on forecast value uplift could reduce economic efficiency if this estimated uplift is not realised. As shown in **Chapter 3**, the measurement of uplift is a complex task. This means there is a real risk of inadvertently introducing economic inefficiency through mechanisms with forward-looking estimates of uplift, such as developer charges or betterment levies. If the estimated uplift is not realised in each case, local land and property owners could be left worse-off. These mechanisms are generally not designed to compensate owners whose land or property does not enjoy anticipated uplift, or whose properties decline in value.

By the same logic, mechanisms that do not estimate uplift are more likely to be economically efficient. When a government sells or leases government land, this transaction should occur after any value uplift. The windfall is determined by the market. Similarly, land taxes can apply charges based on actual changes in value each year. In instances where land values decline, owners would effectively be compensated through a reduced annual charge.

Even though they are based on actual market prices and not estimated values, taxes on property transactions are the least economically efficient form of value capture. This is because these taxes do not capture any value uplift from a large number of properties and are not levied on the relative value of land. Value uplift caused by an infrastructure investment goes entirely uncaptured if a property does not change hands. Meanwhile, a property located far from any recent infrastructure investments that is sold multiple times could generate significant revenue for governments.

These taxes, such as stamp duties and capital gains tax, can also reduce the liquidity of property markets and act as a barrier to land being used most productively. Owners can be discouraged from seeking the most suitable housing for their needs, since there is an impost on moving – whether that is to live closer to employment, or to downsize and move out of inner urban environments after retirement. This can lead to perverse outcomes in the housing market, where large numbers of people are living in housing that does not suit their needs because they are clear financial disincentives for moving. This also increases total demand for transport services in cities, adding to congestion and the costs of infrastructure provision.

High-quality, detailed and long-term strategic planning is the foundation of effective value capture

Taking a long-term view of future infrastructure needs can help governments to identify and support the value a future project can create. In doing so, governments enhance the scale of value uplift from which it can capture and then use to fund projects. Where infrastructure solutions emerge outside of a detailed planning process, opportunities to capture a portion of windfall gains are typically reduced or lost entirely.

Similarly, governments can use a combination of long-term planning and value capture to reduce the cost of strategic future investments through corridor preservation.

This approach can be used in any area where the government holds land and intends to deliver value-enhancing infrastructure. Areas around or above transport hubs can provide significant windfalls to government, given the potential scale of demand for residential, commercial and retail property in well-connected precincts. The redevelopments of Chatswood Station in Sydney and Southern Cross Station in Melbourne provide two recent examples of where this approach has been successfully applied.

While this form of value capture generally relies on the government's historic ownership of a site, it can also be deployed in a more strategic way through corridor preservation.

If a government owns land in a planned future transport corridor,⁸ this allows government to capture up to 100% of the value uplift in this land between purchase and eventual delivery of the infrastructure. It also means the government avoids paying a higher cost for the land in future. This cost difference could be substantial, especially in outer urban areas where the transport corridor could be built over. In these cases, without corridor preservation the future cost of infrastructure provision would likely include property acquisitions, tunnelling or demolition works that could have been avoided if government had reserved the land when the corridor was first planned.

However, strategic land acquisitions can be limited by restrictions on government property transactions. While these vary across states and territories, existing legislation in some jurisdictions prevents governments from purchasing land beyond what is immediately required for the delivery of a project. This is an important protection for land owners in developed areas. However, this legislation could in some cases prevent governments

from acquiring undeveloped land for strategic purposes in outer urban and other greenfield areas. This could impede some governments seeking to undertake effective long-term planning, and potentially increase the eventual costs of building infrastructure in these areas.

Finding 5

Each value capture mechanism has its own benefits, risks and implications for project funding and the economy more broadly.

Project proponents should develop and apply mechanisms on a case-by-case basis according to their effectiveness and delivery risk in each circumstance – but not just their capacity to raise revenue.

A broad-based land tax is an efficient and sustainable approach to value capture over the long term

Applied appropriately, the various value capture mechanisms can each play a role in addressing Australian governments' short to medium term infrastructure funding challenges. However, each mechanism presents challenges and costs to governments, with some mechanisms bringing unavoidable economic inefficiencies in local and broader economies.

As a more sustainable solution, moving towards a land value-based system of infrastructure funding could alleviate many of these project-specific issues over the longer term. This approach would provide a fairer, more efficient way of raising infrastructure funding, and move away from the many challenges posed by the volatility and unpredictability of property prices. This is supported by the Bureau of Infrastructure, Transport and Regional Economics, who suggest that a tax on the unimproved capital value of land would solve many of the challenges involved in assessing and capturing value uplift.⁹



Reforming state land taxes by removing exemptions to create a broad-based charge represents the most efficient way to capture value over the long term. As recommended by the *Henry Tax Review*,¹⁰ a broad-based land tax could provide governments with a reliable stream of funding that efficiently and fairly reflects the productive value of land.

The impact and administrative burden of this reform could be streamlined by broadening state-based charges and aligning payments with property rates cycles. By introducing this reform alongside the removal of other, less efficient taxes on transactions such as stamp duties, governments have an opportunity to improve how we collect funding for infrastructure, and alleviate the need for implementing project-specific mechanisms in future.

A broad-based land tax could be phased in over a number of years or decades, while existing charges such as stamp duties are phased out. A phased, gradual implementation would allow governments to diffuse any property or broader economic impacts as the markets adjust to the reform over time. This could help to minimise any distortionary effects and ensure a broad-based land tax provides a long-term sustainable source of infrastructure funding.

Taking lessons from land tax reform in the ACT

This approach has broadly been undertaken the Australian Capital Territory Government over recent years. In 2012, the ACT Government commenced a 20-year period of phasing out taxes on residential property transactions (referred to as conveyancing duty in the ACT). A broad-based land tax is being simultaneously phased in to create a more stable and sustainable revenue base for the government, while also providing greater incentives for private investment in buildings, improving property market liquidity and reducing barriers to mobility.

The approach taken by the ACT Government has a number of key features:

- The process is being undertaken in four separate five-year stages, allowing the government to progressively monitor and address the impacts of reform as it is rolled out
- Insurance duty is being simultaneously abolished, forming a broader taxation reform program for the government
- The revenue foregone through conveyancing duty and insurance duty is being replaced at the same rate through an increase to general land tax rates, ensuring the reform remains revenue neutral.¹¹

The effect of land tax reform in the ACT has been to reduce the volatility of government revenues from duties to a more reliable and stable land tax revenue stream.¹² This allows the government to plan infrastructure investments over a longer term, based on a dependable source of funding.

Tax reform also appears to have taken some pressure off property price growth. Between 2012 and 2016, ACT property prices rose on average by 9%, compared to the national average of 19%. This is likely to have been triggered in part by the market adjusting to future tax obligations, which also has acted as a deterrent to speculative residential property investors. This has led to an approximate annual saving on mortgage costs of between \$1000 and \$2,200 for first home buyers.¹³

While the reform process may have been made easier by the ACT having a single territorial government, as well as the highest median income of any jurisdiction, the experience of the ACT can provide guidance for other jurisdictions as they consider a similar process of land tax reform.

Finding 6

A broad-based land tax – accompanied by the removal of inefficient taxes such as stamp duty – would provide an efficient, sustainable approach to value capture in Australia.

While a number of mechanisms can provide individual solutions for specific projects, reform of land tax presents a clear opportunity for a more sustainable, longer term reform. The impact of this change could be streamlined by broadening existing state-based charges, and aligning payments with local property rates cycles.



Expectations

The role value capture can play in Australia

Findings

7. **The timing of a value capture mechanism is a key determinant of its effectiveness.** Land and property values change on the basis of expectations, so if value capture is implemented after an announcement, governments may miss the opportunity to capture some value uplift.
8. **Estimating value uplift is a complex task.** The specific impact of infrastructure investments on property values can be difficult to separate from the many other variables influencing market prices, even after project delivery.
9. **Property prices provide an unreliable basis for value capture.** Forms of value capture that are based on either forecasts of property prices or property transactions can be an unstable source of funding. Capturing value using property prices could lead governments to take more or less than what is fair or efficient from properties around an infrastructure investment.
10. **The settings in Australia vary greatly from many overseas markets where value capture has been introduced.** Applications of value capture around the world provide some lessons for governments locally. However, many factors such as population density, public transport mode share, tax mix and governance differ from our own circumstances and dramatically alter the potential success of applying the same measure in the Australian context.

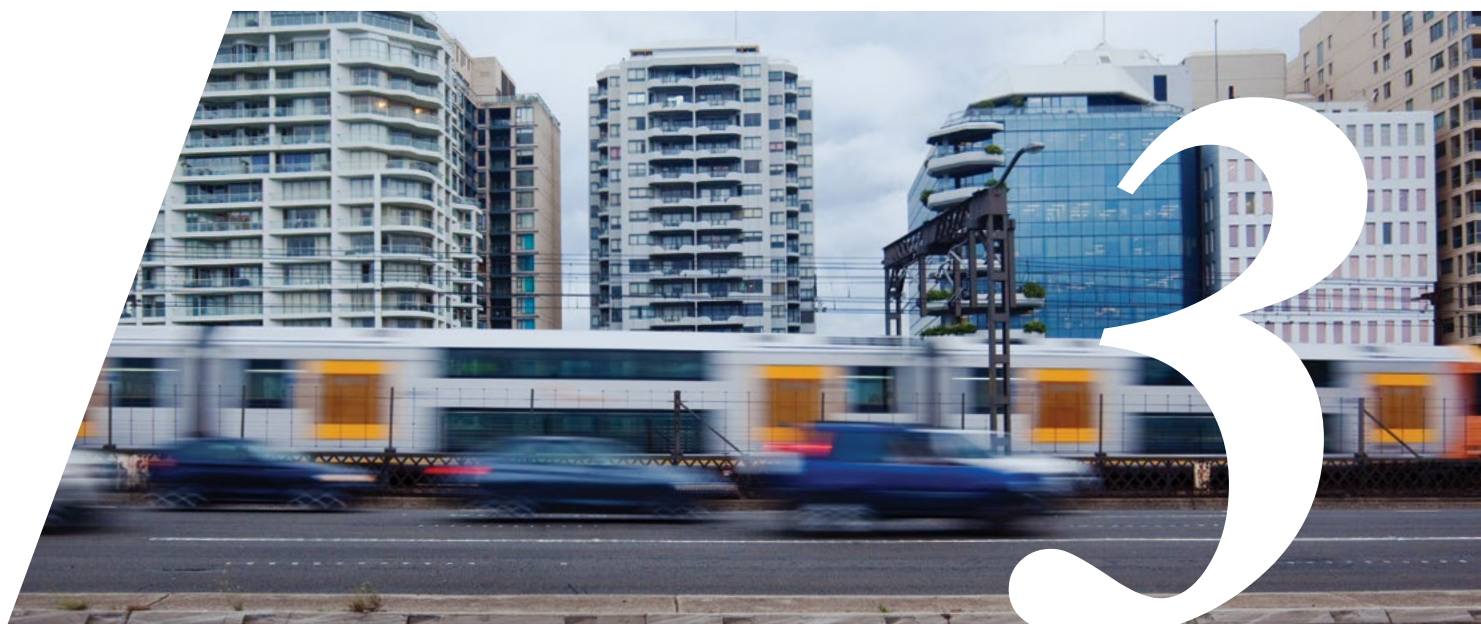
An evidence-based approach to understanding the potential of value capture

Land value is influenced by various factors in the economy, and the relationship between land values and infrastructure investments is far from simple.

In many cases, infrastructure investments can have a profound positive impact on land values and property prices in a local area. On the other hand, in some cases infrastructure brings negative impacts such as noise, pollution or additional traffic. These factors can cause a decrease in property values, especially where these

properties do not have full access to the new or upgraded infrastructure.

Understanding the true impact of various types of infrastructure investments on different locations is an important step in implementing value capture. Without having at the very least a realistic expectation of how much can be raised, governments cannot accurately forecast funding potential. These realistic expectations, combined with long-term planning processes allows governments to plan future infrastructure requirements, and implement the right value capture mechanisms to help meet our infrastructure requirements.



Drawing on evidence and data from cases where it has been used – both in Australia and overseas – this chapter provides a clear and independent perspective on the role value capture can play in helping to fund future infrastructure projects in Australia.

Understanding the components of value and the drivers of change

The specific impact of infrastructure investment varies in each case depending on a range of local characteristics, the form of infrastructure, and how it is delivered.

Understanding the impact of these drivers helps to inform decisions on how to make value capture most effective in each specific project.

The value of a property reflects a range of relative factors influencing demand. These include:

- The site's local and natural characteristics
- Its direct proximity to amenities, such as green space, schools, shops and employment opportunities
- Its accessibility to wider services, such as high-frequency public transport that links to employment, schools or hospitals
- Rights to develop the site or nearby sites in future
- On-site improvements, including buildings, landscaping and other facilities.

Any change in the above factors will likely result in a change in the value of land. Positive changes, such as the delivery of a park nearby, increase demand for a site and, in doing so, increase its value. Other changes, such as the rezoning of nearby land to allow industrial development, may have the opposite effect.

Population and economic growth can also have a considerable impact on demand for land. The scarcity of land in cities means land values close to CBDs are often much higher than equivalent outer urban or regional land values. This effect is enhanced as the population and economy grow, with increasing demand for land close to services and employment opportunities.

Mechanisms should be in place before project announcements in order to capture the full uplift

The delivery of infrastructure projects can often trigger changes in land value at specific moments. Land and property values change on the basis of expectations that a government will deliver a promised investment, meaning values can spike (or fall) when a project is first announced. Depending on the expected impact of a project, the full change in land value may not be realised until the project is delivered and the full impacts of the investment are known.¹⁴

For this reason, governments should routinely consider and identify opportunities for value capture as part of planning and project development processes. Governments should then design and set in place project-specific value capture mechanisms prior to the announcement of a project. If value capture is considered late in the project development process, or a government is too slow to implement a mechanism, the opportunity to capture full value uplift is likely to be missed.

Broader mechanisms, such as land taxes, will passively capture value uplift (or falls in value) over time and reflect these changes in value through incremental increases or reductions in the recurrent charges that are levied.

Finding 7

The timing of a value capture mechanism is a key determinant of its effectiveness.

Land and property values change on the basis of expectations, so if value capture is implemented after an announcement, governments may miss the opportunity to capture some value uplift.

Accessibility is a complex concept, impacted by a range of factors

Accessibility is a key component of how land is valued, and how properties are priced by the market. People typically desire access to employment, education, health and other services, and will pay more for a home that saves them time and effort in getting where they need to go.

However, the relationship between accessibility and land value is far from simple. In communities that are already well-served by multiple transport options, or otherwise have high levels of accessibility to jobs and services, new investments may deliver little improvement to accessibility and, consequently, little value uplift.

Similarly, the construction of a new transport link that delivers additional services, but which fails to compete with existing modes in terms of cost, comfort, convenience or efficiency may have little impact on land values. It is the level of perceived accessibility that ultimately influences property prices, not simply the decision to make an infrastructure investment.

For example, a government may invest in the extension of a train line to the outskirts of a city in an effort to improve accessibility for local residents and encourage mode shift from car to public transport. However, if services on the line are slow, crowded or do not run when residents wish to travel, perceived accessibility may not increase. Consequently, local residents may choose to continue to drive their cars, and the impact on property values will be limited. In this case, levies or other charges on local residents and businesses may be unfair, or serve to compound the problem by adding a further impediment to property demand or business growth in the local area.

Studying the impact of selected Australian infrastructure investments on property values

To investigate the relationship between infrastructure investments and property values, Infrastructure Australia examined residential data for properties near 10 recent, nationally significant projects across the country. These projects were selected to reflect a range of property markets and project types in diverse local environments. Each project had a total cost in excess of \$250 million, and for some the cost was many multiples of this. Their relative size means their impact on local property markets should be pronounced.

The projects were not selected on the basis of whether value capture mechanisms were implemented (or otherwise). Equally, the analysis is not intended as a comment on the individual merits of each project, given the basis of investment in each case was to solve or meet a specific transport challenge or opportunity. A summary of the projects selected is provided in **Table 2**.

To identify the impact of these projects within broader market trends, residential property sales data was collected over the period from two years before each project's announcement, through construction, to one year after its delivery. This aimed to capture the period in which markets would adjust – whether positively or negatively – across this period. This includes any adjustments relating to expectations of investment in a project prior to its official announcement, as well as adjustments to reflect the actual impact of the project during the early years of operation. Future analysis could measure a longer timescale after the completion of the project to provide more time for amenity benefits to be reflected in property prices.

Two zones were identified for each project, though this was modified between road and rail projects to reflect the relative characteristics of each mode.

For rail, the first zone covers properties within 500 metres of the infrastructure, with the second zone covering the next 500 metres to one kilometre. These distances were chosen because the majority of rail passengers, particularly in cities, live in close proximity to the station.

The methodology was altered for roads, given the different beneficiary profiles. It is assumed the main beneficiaries of new roads are motorists, who are less inconvenienced by living further from infrastructure than rail users. That is, rail users are more likely to walk or use a connecting transport service to access a station, whereas motorists would simply drive further to use a new or upgraded road. Consequently, the first zone used for roads was 500 metres to one kilometre, with the second zone covering one to two kilometres from the infrastructure.

Table 2: Details of selected infrastructure projects

Project	Committed ¹⁵	Completed ¹⁶	Description
Epping to Chatswood Rail Line (NSW)	1998	2009	15 km underground railway; 3 new stations; 2 upgraded
M2 Motorway (NSW)	1993	1997	21 km tolled motorway
M7 Motorway (NSW)	2002	2005	41 km tolled motorway
Peninsula Link (Vic)	2010	2013	27 km freeway
Regional Rail Link (Vic)	2010	2015	47.5 km railway (27 km of new track); 2 new stations; 5 station upgrades and 5 existing stations unchanged
Springfield Rail Line (Qld)	2007	2014	14 km railway; three railway stations
Gold Coast Light Rail (Qld)	2009	2014	13 km light railway; 16 stops (Stage one)
Mandurah Railway (WA)	2002	2007	70.1 km railway; 10 new stations
Seaford Rail Extension (SA)	2008	2014	5.5 km railway; 2 new stations
North-South Motorway (SA) ¹⁷	2010	2014	4.8 km freeway (stage 2 of the North South corridor upgrade)

These specific zones were then compared to property sales across each project's broader metropolitan area over the same period. All prices are expressed in 2015 dollars, and the median priced property was taken for each zone in each year. This helped to remove some of the 'noise' from the data – outliers and market trends that would have applied even if the infrastructure was not delivered – from the specific impact in local communities.

It is important to note the limitations of this analysis. Firstly, the study measured only residential property sales data. This means properties that were not sold over this period were not included in the data, and some properties could have been included more than once. Similarly, this means the data does not account for changes in housing type. If a site was rezoned to allow more properties that were individually of lesser value than the original property, this could have led to a negative impact on median housing prices – despite a potential increase in floor space.

The geographic zones used for this analysis will not capture all beneficiaries of an infrastructure investment, nor all those potentially negatively impacted. For example, the Mandurah Railway in Perth includes large park-and-ride facilities, meaning beneficiaries may drive to the railway and live beyond the radius used for this analysis. Equally, by not measuring within 500 metres for road

projects, the full impact of noise and pollution from infrastructure may not have been captured.

The data should not be interpreted as a definitive guide to whether property prices will increase or decrease following delivery of an infrastructure project. Rather, this data provides an indication of the complexity in determining the specific impacts of an infrastructure investment on nearby property prices.

Crucially, this data does not reflect the economic viability or success of these projects, nor of the decision on whether or not to apply value capture in each case. The analysis explores the property value impacts of these projects, as distinct from the economic costs and benefits. A project that may not have delivered material value uplift to surrounding properties may still have been a well-planned and delivered project.

Infrastructure's effect on property markets may not be as clear or simple as many expect

The property market data across these 10 projects shows a high degree of variability. While this sample of data is relatively narrow, it clearly shows that there is no simple algorithm for predicting or defining the property price impacts of infrastructure investments.

To allow for comparison between projects with different construction periods, these figures are expressed in terms of the real average annual growth of the median property in each zone. **Table 3** provides a summary of this data for rail and road projects.

Comparing the change in residential property prices in the zones around projects to the city-wide average provides some context for our analysis. **Figure 4** removes the impact of city-wide trends from the zones around rail infrastructure. It does this by providing the difference between the growth rates for each zone in **Table 3** and the city-wide average growth rate in each case. **Figure 5** presents the same analysis for the road projects.

A number of observations can be drawn from this data:

- Proximity to infrastructure does not necessarily deliver residential property value uplift
- Property prices depend on a number of other factors
- Measuring and forecasting value uplift is not an exact science
- Land values and property prices are different, and should be treated differently
- There are serious challenges for any form of value capture based on property prices, rather than underlying land values.

Proximity to infrastructure may not necessarily deliver residential property value uplift

Perhaps the clearest observation that can be made from this data is that the relationship between the proximity and value of properties around infrastructure project is not clear-cut.

Property value growth in both proximity zones outperformed the corresponding city-wide average for only two projects – the Seaford Rail Extension in Adelaide and the M7 Motorway in Sydney. For four projects – the Mandurah Railway in Perth, the M2 Motorway in Sydney, the Peninsula Link south of Melbourne, and the North-South Motorway in the northern suburbs of Adelaide – both proximity zones grew slower than the city-wide average over the studied period.

Similarly, the data brings into question the assumption that the closer a property is to infrastructure, the greater the boost to its value. While this assumption seems logical – that is, greater proximity to infrastructure brings greater accessibility to services, which increases demand for property – the evidence suggests that the relationship is not that simple in every case.

In half of the projects studied, properties in the outer zone (500 metres to one kilometre for rail; one to two kilometres for roads) experienced stronger property growth than those in the inner zone. This indicates

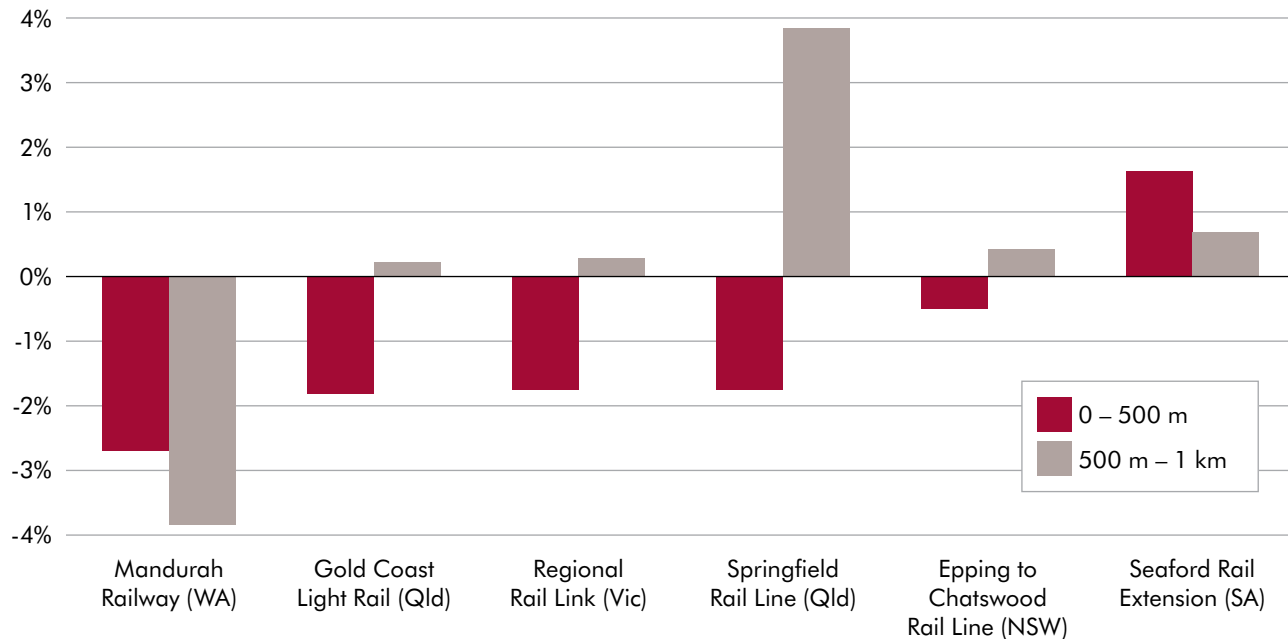
Table 3: Real average growth rates (per cent) of residential property prices around selected projects¹⁸

Rail project	0 – 500 m	500 m – 1 km	City-wide
Mandurah Railway (WA)	8.5	7.3	11.2
Gold Coast Light Rail (Qld)	-4.1	-2.0	-2.3
Regional Rail Link (Vic)	0.7	2.8	2.6
Epping to Chatswood Rail Line (NSW)	4.1	5.0	4.6
Seaford Rail Extension (SA)	3.2	2.3	1.6
Springfield Rail Line (Qld)	-0.2	5.5	1.6

Road project	500 m – 1 km	1 km – 2 km	City-wide
M2 Motorway (NSW)	3.2	2.2	3.6
Peninsula Link (Vic)	2.3	1.6	2.7
North-South Motorway (SA)	-1.3	0.0	0.1
M7 Motorway (NSW)	7.5	6.5	4.9

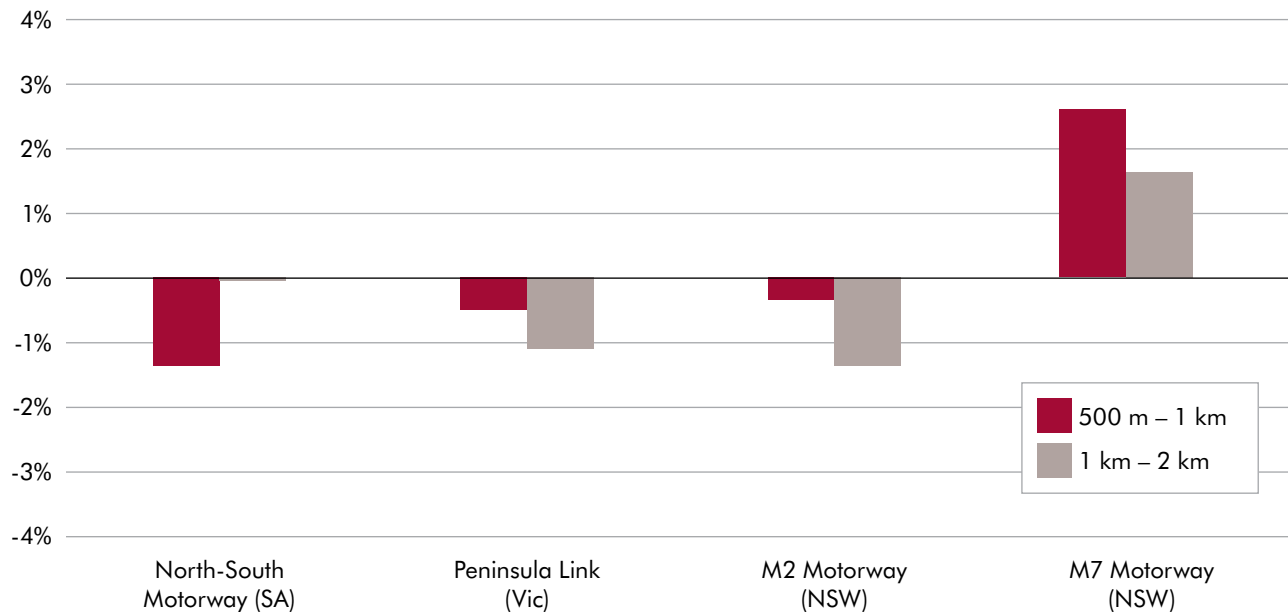
Source: Infrastructure Australia analysis of SQM Research data

Figure 4: Difference between real average growth rates of residential properties around rail projects and the city-wide average



Source: Infrastructure Australia analysis of SQM Research data

Figure 5: Difference between real average growth rates of residential properties around road projects and the city-wide average



Source: Infrastructure Australia analysis of SQM Research data

that local factors play a large role in determining the relationship between proximity, accessibility and value.

In the case of the Epping to Chatswood Rail Line, over the period from 1996 to 2010, values in the inner zone grew by an average of 4.1%, while the outer zone grew by 5%. This differential may have been caused by the location of stations along this extension near major roads, meaning many of the properties within 500 metres of the new extension could have been subjected to more noise and pollution than properties in the 500 metre to 1 kilometre range. A changing housing mix around the stations may also have contributed to these results.

In other cases, local features (such as a freeway, rail line, a hill or river) may prevent some properties that are close to a new transport link from enjoying an increase in their accessibility. For this reason, value capture mechanisms that use distance as a proxy for benefit level (such as betterment levies with graduated benefited areas) may be unfair on some owners.

Property prices depend on a number of factors other than infrastructure

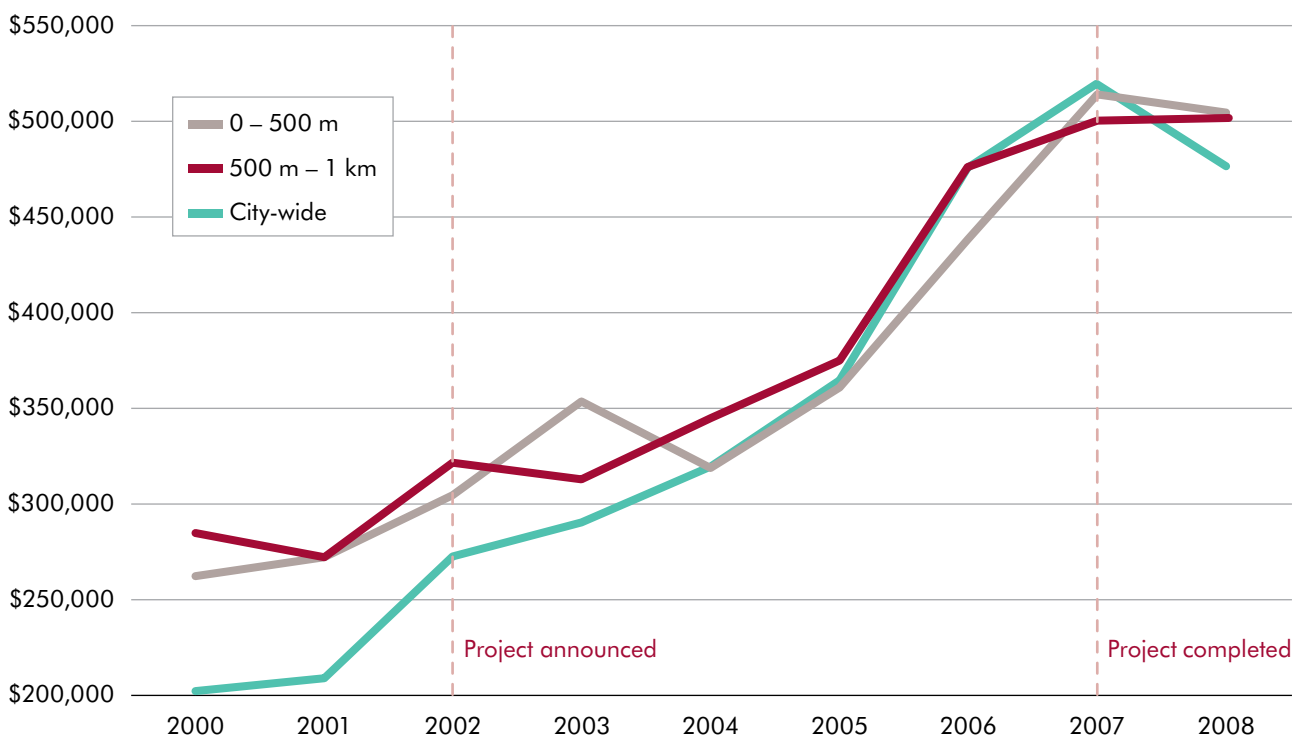
While the sample of projects and property data in this analysis are narrow, this evidence suggests that the delivery of infrastructure does not in itself ensure value gains for property owners around projects. Rather, it is necessary to consider a range of other variables when analysing the impact of investments on property prices.

In some cases, the impact of a new infrastructure investment may be entirely indiscernible due to a number of local or broader events that influenced property prices. Even in cases where property prices increased following delivery of a project, this boost could have been at least in part due to other factors. In other words, the infrastructure may have had an effect on the local property market – even a substantial effect – but this effect is inseparable from other factors through relatively simple analysis. In many cases, broader market trends will have a significant impact.

Take, for example, the Mandurah Railway in Western Australia. The price of properties around this project grew on average annually by 8.5% and 7.3% for the inner and outer zones respectively between 2000 and 2008. This data in its own right would appear to show the strong impact of improved accessibility on local communities along the train line. However, over this period, the Perth property market grew at an average annual rate of 11.2%. **Figure 6** shows this extraordinary growth in property prices across these three areas.

This growth was largely driven by Perth’s role in the rapid expansion in mining sector operations over this period. The effect of this strong economic and population growth would likely have overshadowed any local impacts of infrastructure provision. Furthermore, changing housing stock along the new rail line to accommodate the increase in demand for housing may have resulted in a shift in the local property mix towards higher density. The sale of

Figure 6: Property prices around the Mandurah Railway project (\$2015)



Source: Infrastructure Australia analysis of SQM Research data

proportionally more apartments could have seen a slowing in the growth of property prices relative to the rest of Perth.

This does not suggest that the Mandurah Railway had a negative impact on local property prices. This project delivered substantial connectivity improvements and broader economic benefits to communities along the corridor. Local property owners have undoubtedly benefited from the infrastructure investment.

This data simply illustrates the importance of considering non-infrastructure factors when forecasting property price changes around infrastructure investments. As was the case in Perth, many of these factors could be largely unforeseeable at the time of project planning but could nonetheless have a substantial impact on local and wider property prices.

Measuring and forecasting value uplift is not an exact science

The volatility and unpredictability of property price data has implications for how project proponents should develop value uplift predictions. Given infrastructure is one of many factors influencing property prices, the use of any value capture mechanism that levies charges on the basis of forecast value uplift faces the risk of getting these calculations wrong. This could result in an unfair charge on some properties or lower than expected revenue for project funding.

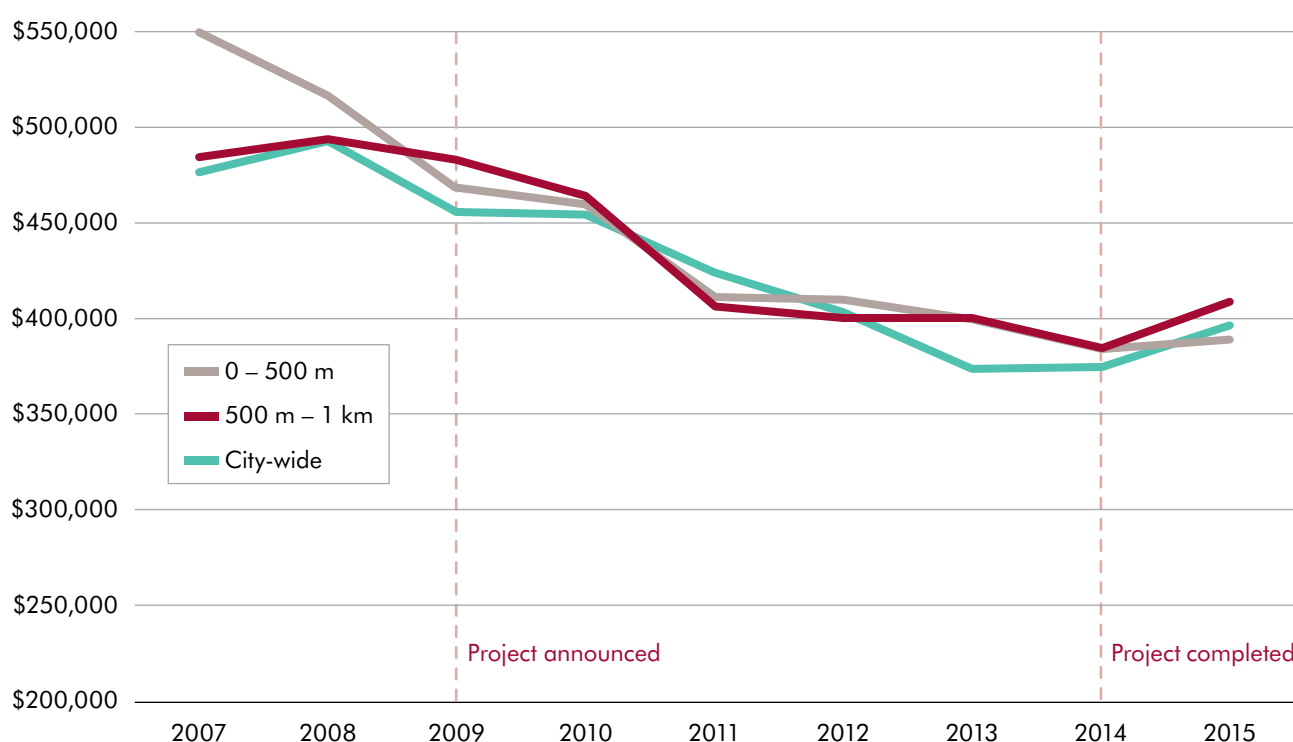
Property data around the period of delivering the Gold Coast Light Rail clearly illustrates the issues with market volatility. In real terms, Gold Coast property prices fell over the period between 2007 and 2015 by an annual average of -2.3% each year. Property prices in the area within 500 metres of the project fell by -4.1% each year.

Figure 7 shows the trend in property prices over this time.

It is not possible to tell whether prices would have been even lower if the public investment was not delivered over this period. There is no baseline of a ‘no project’ situation to compare this data against. Even with the benefit of hindsight, there is no way to know the precise role Gold Coast Light Rail played in influencing market prices over this period relative to broader property market trends. This analysis does not detract from the merits of the decision to develop the Gold Coast Light Rail which continues to address a specific transport opportunity. However, the correlation between property prices inside and outside the area around the project suggests that city-wide factors dominated market trends rather than the direct impact of a specific infrastructure investment.

Gold Coast Light Rail is also a useful case study because of how it was funded. Gold Coast City Council levied a separate transport improvement charge for Gold Coast rate payers in addition to existing rates and charges¹⁹ to help pay for the council’s \$120 million²⁰ share of the \$1.2 billion total capital cost of the project. The remainder of the project cost was met by taxpayers, via the Australian and Queensland Governments.

Figure 7: Property prices around the Gold Coast Light Rail project (\$2015)



Source: Infrastructure Australia analysis of SQM Research data

The Gold Coast Light Rail funding mechanism can be viewed as a broader charge on rate payers rather than a genuine form of value capture. By levying the charge on all properties equally, the revenue stream was not specifically linked to value uplift on properties that may have benefited from the project.

However, this data suggests that even a more targeted betterment levy, based on forecast value uplift of surrounding properties, may have captured more than what was fair from local owners. These owners did not see uplift in their land and properties in the years following announcement of the project. Although this uplift may have materialised over a longer timeframe than the study period, owners would not have been able to recoup the benefit through sale of their land or property in the interim.

A broad-based land tax could have provided a more equitable and economically efficient form of funding than either the city-wide levy or a targeted betterment levy.

Finding 8

Estimating value uplift is a complex task.

The specific impact of infrastructure investments on property values can be difficult to separate from the many other variables influencing market prices, even after project delivery.

Land values and property prices are different, and should be treated differently

It is important to distinguish between the value of land, and the market price of a property.

The value of land can be estimated with some accuracy through the combination of specific characteristics and drivers listed earlier in this chapter. While there are numerous ways to measure land value, these reflect a calculation based on rational assumptions about the land, its productive capacity and its value relative to other land. Changes in these factors generally occur over some time, and can be reflected through updates to land value estimates.

A number of studies, including those by Urbis²¹ and LUTI Consulting,²² have illustrated that land values generally improve in the areas surrounding many infrastructure investments. These impacts depend on project and location-specific factors, including opportunities for rezoning and corresponding investments in wider infrastructure networks. The Australian Government's Bureau of Infrastructure, Transport and Regional Economics reviewed over 100 papers on value uplift and

found that the average value uplift in areas surrounding transport infrastructure investments was 6.9% for heavy rail projects, 9.5% for light rail, and 9.7% for bus rapid transit.²³

As opposed to the theoretical calculation of land value, the price of a property is determined by what an individual or business will pay for that property on a given day. A property's price takes into account a range of specific site characteristics that may not be reflected in land value. These include the type, quality and state of buildings on the land, as well as other diverse characteristics such as land slope, aspect, and the state of neighbouring properties.

A property's price at the time of sale is typically guided by a range of economic, financial and personal factors, many of which may be unpredictable or irrational, leading to the market volatility illustrated in the examples in this chapter. This means property prices may temporarily deviate from their long-term values – sometimes quite substantially. The changes in land value resulting from an infrastructure may be overshadowed in the nearer term by market forces, and property prices may take some time to readjust to a fair reflection of their value.

This reinforces the need for governments to view this topic through the eyes of a local land or property owner. These individuals are primarily interested in the price of their asset when they are considering selling it. While the concept of land value presents a fairer and more stable means of measuring changes in value over time, property prices may be a more immediate consideration for those looking to sell.

Governments should therefore make every effort to ensure the calculation of land values represents a fair reflection of a saleable price at any point in time, and does not become disconnected from property price trends. This will ensure any value capture mechanism based on land value capture takes a fair portion of uplift over time, and does not disadvantage owners who wish to sell in the short term.

There are serious challenges for any form of value capture based on property prices

The challenges in isolating the impact of infrastructure on property prices highlight the importance of moving towards a land value-based system for value capture.

A number of the mechanisms discussed in **Chapter 2** levy a charge based on property prices. These can be based on a transaction price, as is the case with stamp duty and Capital Gains Tax, or based on an estimate of property or land value uplift, as with a betterment levy or developer charge. All forms of value capture based on property prices present challenges when used as part of the funding mix for an infrastructure project.

Mechanisms based on prices at the time of transaction make revenue forecasting difficult. Both the frequency of property sales and the market price at the time of each sale determine how much these mechanisms can raise. Together, these two factors introduce real risks for government. A slow or weak property market could substantially reduce the value that could be captured from local properties.

For mechanisms based on property value uplift forecasts, the issue is that these forecasts could be wrong. Inaccuracy in forecasting could lead governments to capture more than what is fair or efficient from properties around infrastructure developments. While experience from similar past projects may help to inform forecasts for future investments, this approach is still problematic. The data in this chapter shows that the property price impacts of different projects are not directly comparable, and are influenced by a range of broader factors.

Finding 9

Property prices alone provide an unreliable basis for value capture.

Forms of value capture that are based on either forecasts of property prices or property transactions can be an unstable source of funding. Capturing value using property prices could lead governments to take more or less than what is fair or efficient from properties around an infrastructure investment.

Lessons from the use of value capture overseas

Value capture has been used in a number of countries across the world. In each case, the concept of value capture has been adapted to provide a solution to a distinct infrastructure challenge in the local regulatory, economic and financial frameworks.

Variations in mechanisms used in other countries can provide some guidance for Australian governments. However, it remains highly unlikely that an additional substantial source of previously unexploited funding is available through application of an overseas approach – at least without significant risks and costs to the community.

Overseas examples provide limited guidance on the extent of project capital costs that value capture may cover. However, as these examples show, there is substantial variation in the funding contribution of value capture mechanisms. This is largely due to differences in the existing taxation and user charging systems, as well as a range of factors including population density, housing composition, existing infrastructure alternatives and countless other project and country-specific variables.

Crossrail, London: a successful model for a unique set of circumstances

One of the most cited recent examples of value capture is the Crossrail in London. This project, with an estimated £14.8 billion capital cost, will provide a 42-kilometre railway between the east and west of the city, through Heathrow Airport, Canary Wharf and the West End. The project will provide:

- Substantial accessibility, amenity and other social benefits to households and businesses along the route, including around the 10 new stations
- Accessibility benefits to surrounding ‘catchment’ areas
- Benefits for users of the wider network, since Crossrail will improve service efficiency and reliability of services on other lines by helping to spread demand.

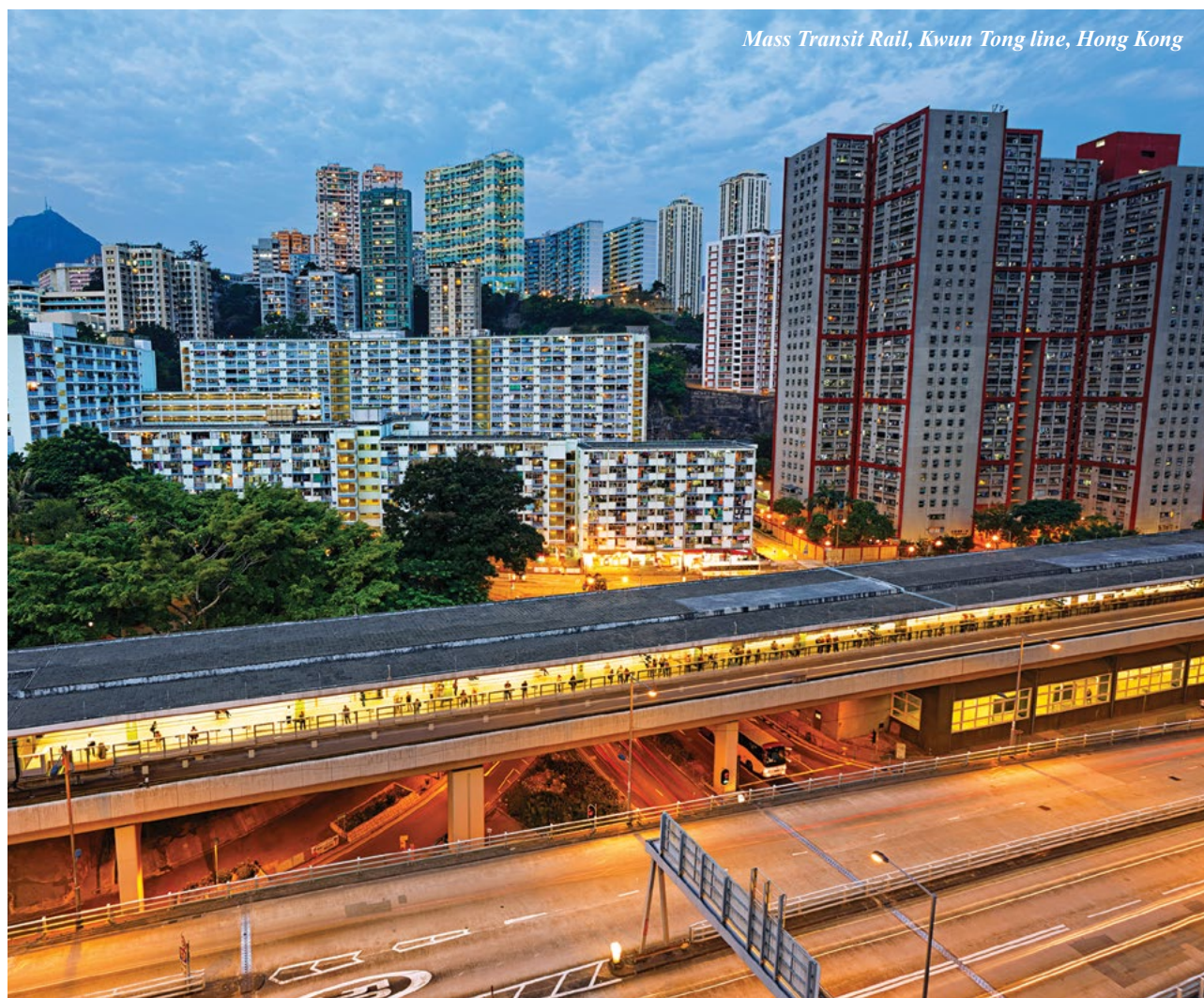
A number of mechanisms related to value uplift are being used to fund Crossrail:

- Crossrail Business Rate Supplement across the local authority area
- Community Infrastructure Levy on new developments
- Sale of surplus land and property around stations
- Direct contributions from Heathrow Airport, Canary Wharf Group and various London businesses and property developers.

In total, London businesses will contribute estimated £4.1 billion, or approximately 30% of the total capital cost of the project. There is little doubt that it was these mechanisms that bridged a considerable funding gap and made construction of the project feasible.

Communication of a strong narrative about the need for the project was a key tool used by the Crossrail project office and the various government authorities involved in the project delivery. By engaging businesses and communities about the project’s costs, benefits, and impacts, coupled with a high degree of transparency regarding project decisions, the project proponents were able to build and maintain strong support for the project. This support was enhanced by the work of organisations such as London First, who were able to tap into business support and catalyse the construction of a project that had been proposed in some form for decades.

However, it is important to note that a number of the mechanisms used were only loosely based on value uplift, and may not be replicable in other settings. For example, the Community Infrastructure Levy, charged to developers in addition to existing developer charges used a graduated levy on floor space across the city. The level of charge applied (£20 - £50 per square metre of floor space in new developments) was not based on a forecast of value



Mass Transit Rail, Kwun Tong line, Hong Kong

uplift but the relative prosperity of each local area across the metropolitan area. While this may have been equitable, and it was ultimately successful in raising substantial revenues, it was not a ‘pure’ form of value capture. This is because value uplift was only one of the factors used to calculate the levy. For some businesses, the charge may have exceeded the direct benefit received. For others, the charge may have been far less than the benefits they receive through access to the new infrastructure.

The success of these funding mechanisms was driven by a number of factors that were unique to London at the time. Given the density of population and business activity in London, this scale of contribution is likely to be unachievable for most projects in Australia. Rather, this project provides an effect ‘high water mark’ for project proponents to aspire to locally. City-wide or ‘transformative’ projects should look to the Crossrail experience for lessons on how to leverage enthusiasm in business and residential communities for construction of the project to unlock additional funding from these stakeholders.

Mass Transit Rail (MTR), Hong Kong: turbo-charged value capture

The Hong Kong metro network is one of the only urban public transport networks in the world to make a profit in its operations. Its capital, operational and maintenance costs are covered by a combination of user charges and an advanced form of centrally-controlled value capture.

This is driven by one of the world’s highest levels of population density (6,700 people per square kilometre on average²⁴ and up to 45,000 people per square kilometre on average in Kowloon²⁵) and rates of public transport mode share (approximately 90%²⁶). By comparison, Sydney’s average population density is 400 people per square kilometre and its public transport mode share is approximately 11%.²⁷ While there are pockets of density across Sydney, Melbourne and Brisbane in particular, these are still substantially less dense than Hong Kong.

The Hong Kong Government grants MTR Corporation, which owns and operates the metro, exclusive developer rights for land around new stations at the ‘before-rail’

market value. MTR Corporation then partners with developers at the ‘after-rail’ land price. Under this arrangement, the government retains a higher degree of control over land use than under a simple land sale. Partnership agreements also mean that MTR Corporation can retain a share of future developer profits for reinvestment in new or upgraded infrastructure.

The Hong Kong example provides an interesting case study for one form of very direct and controlled value capture. The government, through its control of land rights and planning settings, can establish rolling, artificial arbitrage to generate guaranteed revenue for capital investment.

This model is unlikely to be feasible in Australia, for a number of reasons:

- The population density and public transport mode share are beyond the scale achievable in even the most concentrated parts of Australian cities, let alone across entire urban networks
- The MTR network is based on a number of transport nodes, around which intense centres of economic activity are based, compared to the traditionally radial networks of Australian cities which have been designed to move passengers over a far more dispersed urban area into a central CBD. This provides fewer centres of potential commercial development
- Hong Kong’s centralised governance structure provides a single source of policy development, planning strategy and project selection, providing a ‘one stop shop’ for interaction between government and developers. By contrast, Australia’s various levels of government each hold various responsibilities across each of these functions. This provides a less streamlined or cohesive front for controlling transport and land use settings to maximise profits from developers
- Almost all land in Hong Kong is leased by the Government of the Hong Kong Special Administrative Region.²⁸ There are few restrictions on how and when it may compulsorily acquire land required to facilitate construction of an expanded MTR network, or for redevelopment to fund this network expansion.²⁹ This provides the government with greater control over MTR network planning.
- Hong Kong’s levels of general taxation are far lower than Australia’s, providing greater capacity in the overall taxation pool for leveraging the private profits of developers to fund new infrastructure than would be possible in this country.

As these factors illustrate, the Hong Kong model is an impressive, large-scale value capture operation, but is largely incongruous with the Australian context.

Finding 10

The settings in Australia vary greatly from many overseas markets where value capture has been introduced.

Applications of value capture around the world provide some lessons for governments locally. However, many factors such as population density, public transport mode share, tax mix and governance differ from our own circumstances and dramatically alter the potential success of applying the same measure in the Australian context.

Considerations

Risks and sensitivities that should be managed

Findings

- 11. Governments should engage in detailed community and industry engagement when considering value capture.** While every value capture mechanism comes with its own risks and sensitivities, these can and should be addressed directly with all relevant stakeholders. Community engagement at each step of the process is essential to winning and maintaining support for both the value capture and the overall project.

Addressing the risks and sensitivities of value capture head-on

Putting the concept of value capture into practice requires governments to first overcome a number of hurdles, risks and sensitivities. The clearest evidence of the challenge these issues present is that although the value capture has been understood in Australia for almost a century, it has only rarely been used to fund infrastructure.

The key for governments is to engage communities early and often throughout the process. Governments should make it clear why value capture is necessary, what portion of value uplift they will seek to capture, and how local communities will still benefit from the infrastructure delivery.

Governments should acknowledge the challenges of estimating value uplift

Measuring precise value uplift can be a challenge for governments. While various mechanisms take differing approaches to capturing value uplift, the core complexity is that property values are primarily priced by the market at the point of transaction. That is, a property is worth whatever somebody is prepared to pay for it at any given time. Market price can therefore be influenced by a wide

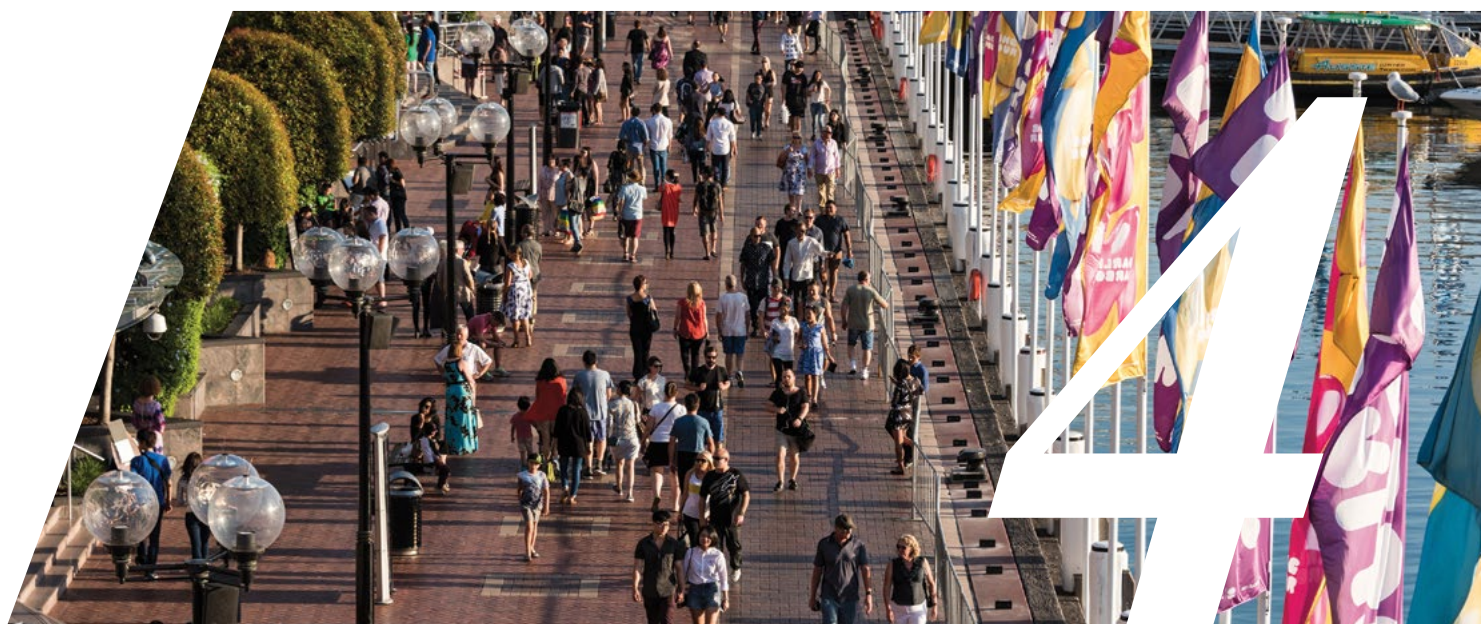
range of variables, a number of which can be difficult to measure or forecast.

Governments must therefore be transparent in any valuation and uplift measurement techniques used, and apply the same methodology across all properties. Local governments already use property values to levy local rates on properties using relatively straightforward approaches to determine unimproved land value. Governments using value capture should build on these techniques and draw from past cases of value uplift around infrastructure investments to provide the community with clear evidence for the approach they use.

Capturing too much from projects is a real risk that should be avoided

By their nature, some forms of value capture impact local and wider economies. Shifting the burden of funding towards local beneficiaries from the broader tax base can deliver greater overall economic efficiency and stretch government's infrastructure budgets further.

However, given the diversity of forms of value capture, including existing mechanisms, such as stamp duties and capital gains tax, there is a risk that governments could 'over-capture' value uplift on some properties – or at least



been seen to do so. Indeed, where value creation relies on owners taking advantage of newly available development opportunities (for example, rezoning and increasing density), perceived over-recovery may serve to retard development. This would result in opportunities for both development and value capture foregone.

Depending on the forms of overlapping value capture used by government, some property owners, individuals and businesses could have value uplift captured in three or four ways simultaneously. So long as the total captured is less than the total uplift, the property owner still sees a net benefit from the infrastructure investment. The opacity of some of these mechanisms means that it may not be apparent to either property owner or government precisely how much value has been captured, and whether this is indeed less than the total value uplift.

Taking too much from local beneficiaries could distort private investment in local housing or businesses. Levying an excessive cost on one specific area – especially where this charge is based on value uplift projections – could drive that investment to other areas in Australia or overseas. Property developers may seek to move their investment to other areas without a levy, while businesses may choose not to invest in local businesses altogether. These situations could have serious consequences for planning, growth and employment.

The introduction of a broad-based land value tax would alleviate this issue by introducing a single form of measuring uplift and capturing value. The impost is spread over a number of years and the components of the charge related to local infrastructure provision can be made transparent.

In lieu of this reform, governments must ensure full transparency of how much property owners are being charged, including the portion of value being captured through each mechanism. While this may represent a challenge given the various overlapping layers of value capture, perceived fairness relies on full visibility of the charging framework by local property owners.

This challenge reinforces the need for governments to apply an integrated methodology when applying various forms of value capture to a location area. Effective communication between governments ensures the local and broader impacts of value capture can be measured and managed. An integrated approach will also help to gain the confidence of local property owners and businesses that governments are not taking more than what is fair or efficient – and that all parties will still be better off than if there was no project delivered.

Convincing businesses and communities of the fairness of value capture is essential

A primary challenge for governments is achieving a balance of perceived fairness in how much value is captured, and from whom. While value capture may deliver greater fairness by shifting more of the funding burden to beneficiaries, in reality these local beneficiaries are unlikely to welcome this impost. From the perspective of these locals, the introduction of value capture to fund a specific project can be seen as unfair because it has not been applied for other projects. While the infrastructure investment may deliver value uplift, the money captured must still come from someone, and that someone is unlikely to readily give it up.

Figure 8: Local opposition to the Sydney Harbour Bridge betterment levy (Sydney Morning Herald, 24 February 1932)

BRIDGE TOLL AND LEVY.

COUNCILS TO PROTEST.

Property owners on the northern side of the harbour will have considerable interest in the forthcoming conference of representatives of North Shore councils which are contributors to the Sydney Harbour Bridge levy. The conference has been called by the North Sydney Council for March 3, in the North Sydney Town Hall. Although there appears to be general agreement among the councils that have to pay the levy that some revision of the method of finance is necessary, there has in the past been some lack of agreement as to how the matter could be equitably adjusted. Some have favoured a toll and some have been against it, but there has been general accord that the burden should be more widely distributed. The councils contend that, as the bridge is by no means for the exclusive use of business people and residents within their areas, everybody using the structure should help to contribute towards its cost and maintenance.

The conference on March 3 will discuss various aspects of the situation. It will undoubtedly protest against any proposal for a high toll, and it will be argued that if there is to be a toll at all the bridge levy should either be wiped out or considerably reduced. Protest will also be made about councils having to pay on the basis of the present cost of the structure. It is pointed out that the councils agreed to the levy on the understanding that the cost of the bridge would be the original estimate—about £5,500,000. Now that the cost has gone up to £10,000,000, they consider that they are being unfairly treated in being asked to pay on that basis.

Another matter to be considered by the conference will be the control of the bridge. Under the new finance arrangement the Railway Commissioners will no longer be responsible for two-thirds of the cost, but will be compelled to pay a definite charge in respect of every passenger carried over the bridge. The levy on the municipal councils and shires, which are expected to find one-third of the cost, will, however, continue till 1939, by which date, the Premier (Mr. Lang) optimistically predicts, the bridge will be self-supporting. The control of the bridge will now pass into the hands of the Transport Co-ordination Board. The councils consider the new arrangement a move to rid the railways of their financial responsibility and pass it on to the councils and the public. They also contend that, as representative of the property owners and the public, they should have representation on the board of control.

Matters of serious concern to property owners and residents on the North Shore are the proposed imposition of the toll and the newly-fixed railway fares. The latter add to the cost of transport to the city from the North Shore line compared with the combined train and ferry service. The toll has not yet been fixed for motor vehicles, but the train fares are definitely dearer. For instance, first-class fares from Chatswood will cost £2/6/5 a year more and from Pymble £4/0/8. Corresponding increases apply for other stations. Second-class fares are similarly affected. Many people who now travel first-class are considering travelling second-class to escape the effects of the increased fares. These factors must, of course, affect rental values on the North Shore line, as the cost of travel is generally included as a rental cost. This is increased in the case of families, several of whom travel to the city daily. Against that is the increased speed of the service, and the fact that passengers are landed nearer the centre of the city.

Overcoming this hurdle requires governments to communicate early and often throughout the project identification, development and delivery phases. It is essential that those locals who are subject to value capture mechanisms understand how much they will pay, why they will pay that much, and what benefits – not just economic and social benefits, but also residual financial windfall – they will receive from delivery of the project.

Managing false perceptions of double counting is also important. Where the new or upgraded infrastructure involves a user charge once operational, value capture does not represent a form of payment for future ownership or use of the infrastructure by locals. This is a common misconception, and was raised during construction of the Sydney Harbour Bridge (see Figure 8). Governments must clearly articulate where value capture mechanisms relate to property value uplift, and user charges relate to actual use of the infrastructure.

Maintaining a clear link between value uplift and infrastructure investment

There is also a risk that, as value capture mechanisms evolve from theory to practice, their underlying premise and objectives could be weakened.

The process of implementing value capture can be challenging for governments, and this can lead to compromises in the design and application of mechanisms. Mechanisms can also be adapted through a desire to raise more funding than would have been otherwise possible, or because of difficulties in measuring value uplift.

In some cases, value capture mechanisms may bear only vague relation to actual value uplift once they are implemented. The revenue raised can be disconnected from the flow of benefits it seeks to capture from, meaning that the mechanism is not so much value capture as a simple tax on land or property owners, or businesses. Such a tax may constitute an effective and equitable means of raising revenue for infrastructure investment, but it should not be confused with genuine value capture.

For example, a betterment levy should improve both fairness and economic efficiency by shifting a greater portion of the funding burden on identified local beneficiaries. The charge could be graduated to reflect higher degrees of value uplift in set zones. In some cases, however, charges are applied as a flat rate across a large area. Consequently, the charge becomes a very blunt and imprecise form of beneficiary pays funding, bearing very little relation to estimated or realised value uplift.

It is therefore important that governments prioritise transparency in their use of revenue raising mechanisms. Governments should be clear on the specific mechanisms

they use, why they are necessary, where revenue comes from, who pays most, and what the revenue will be used to pay for.

Managing any hardship caused by value capture

For property owners, value uplift can be monetised through sale. In greenfield areas, value capture can be relatively straightforward to implement, since all newly built properties will need to be sold from a developer to a first owner. This provides a clear opportunity to capture value by levying a charge on the developer (which can then choose to pass the cost on through sale price) or first owner as part of the transaction.

In brownfield areas, the process is not so simple. Where a property is not sold, the value uplift remains unrealised. Governments seeking funding for a project cannot rely on a property being sold to capture value, since it may be many years before the property changes hands – and this decision obviously is at the discretion of the owner. Transactional charges provide an unreliable form of revenue in brownfield areas.

However, value capture mechanisms that seek payment from property owners for ‘on paper’ value uplift – whether levied in total or in quarterly or annual instalments – can place these owners in a position of hardship. Depending on their personal circumstances, the property owner may not be in a position to pay – especially where the property has been inherited or owned for many years – and may feel forced to sell their property to meet the financial impost.

Again, the fairest and most effective form of managing this issue is to use a broad-based land value tax. Under this system, there would be no need for transactional forms of value capture, and property owners would have value uplift reflected through an increase in the land tax they pay.

Under other forms of value capture, governments should ensure mechanisms minimise hardship on property owners. Instances where some locals lack the financial capacity to pay should not be a reason to avoid undertaking value capture altogether. Rather, cases of hardship should be identified and managed appropriately by governments. This may include exempting some households from one-off charges. In the case of ongoing charges, governments should use existing welfare systems to provide an effective and efficient ‘safety net’ for those who need it. Project proponents should routinely anticipate these factors in their project planning and revenue projections.

Finding 11

Governments should engage in detailed community and industry engagement when considering value capture.

While every value capture mechanism comes with its own risks and sensitivities, these can and should be addressed directly with all relevant stakeholders. Community engagement at each step of the process is essential to winning and maintaining support for both the value capture and the overall project.

Next steps

A framework for advancing and applying value capture

Findings

- 12. Each state and territory government should deliver policy strategies for implementing value capture.** These plans should reflect the appropriate approach to value capture in their jurisdiction, integrate with long-term planning, streamline with local government processes and build in community engagement at each step.

A need for further discussion

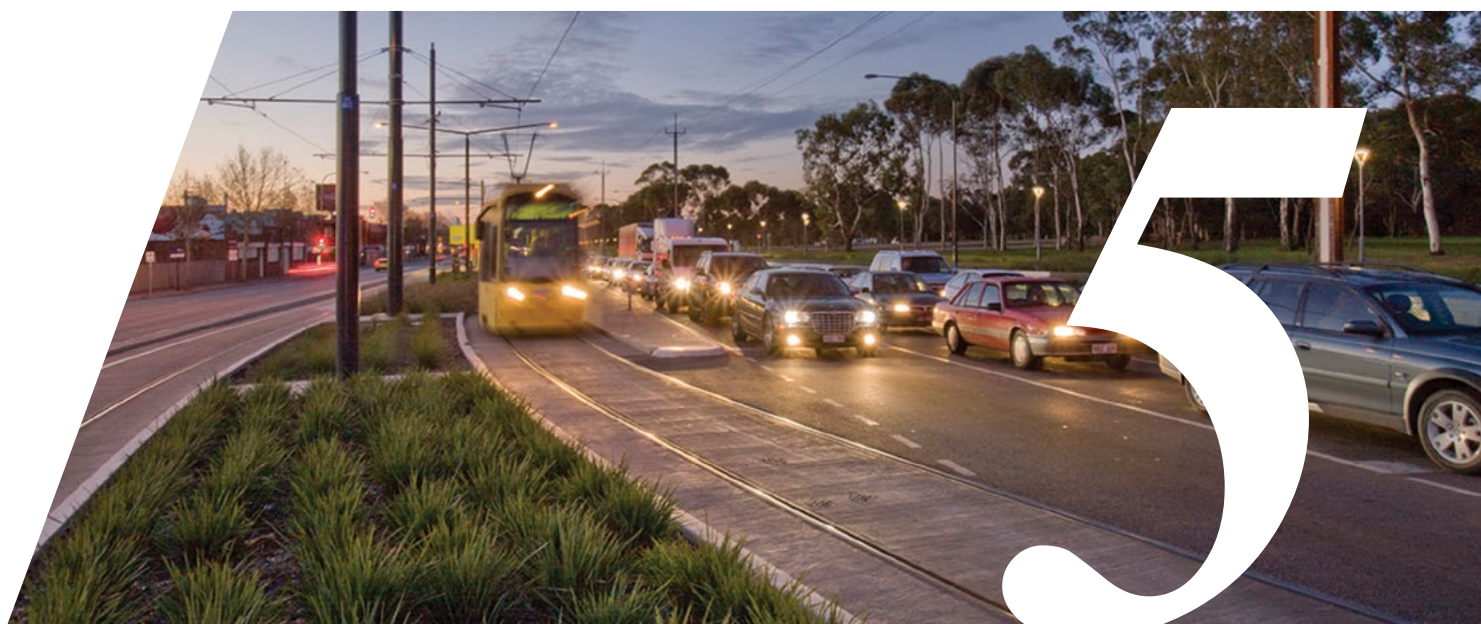
This paper provides an overview of value capture, and its potential applications in a 21st century Australian context. It seeks to add some clarity to a complex ongoing debate among a range of stakeholders across governments, businesses and the community. It will be essential for further discussion about value capture to be informed by this diversity of perspectives to ensure policy positions and project-specific decisions work in the best long-term interests of Australian taxpayers, infrastructure users, owners of land and property.

Building evidence on value capture

This paper makes clear that value capture mechanisms must be considered and applied on a case-by-case basis. However, the infrastructure challenges faced by each government in Australia are not unique. There are a number of lessons that can be applied across jurisdictions. Distilling what worked well and what could have been improved through past value capture applications will provide an invaluable context for future applications.

Similarly, data that is generated on how much revenue a particular mechanism raises in each case and how it is applied to the project funding mix is particularly useful to share. This allows a more objective comparison of how value capture has worked in various contexts, and what settings should be applied from the outset. This can lead to the development of a best practice guidebook for governments to apply when seeking to capture value uplift. It remains insufficient to use only overseas examples to definitively inform domestic decisions, meaning a community of knowledge on the Australian experience will be a crucial platform for continuous improvement.

Infrastructure Australia will engage government agencies at federal, jurisdictional and local levels to progress this debate, provide advice and, where feasible, to assist in harmonising approaches to applying value capture for Australian projects. By sharing knowledge and experience across governments, Infrastructure Australia can increase the effectiveness and economic efficiency of value capture across the country.



Routine consideration of value capture

Infrastructure Australia will seek to make sure value capture mechanisms are routinely considered as part of the planning and development of all appropriate future public infrastructure investments. This was a recommendation of the *Australian Infrastructure Plan*.

As part of the 2017 update of the Assessment Framework, Infrastructure Australia will consider including a requirement for project proponents to provide evidence value capture has been considered for all appropriate proposals submitted for inclusion on the Infrastructure Priority List.

City Deals represent an opportunity to incentivise value capture

In April 2016 the Australian Government released the *Smart Cities Plan*, which included a concept proposal for City Deals. The City Deals concept would see Australian Government investment in projects used to leverage broader community outcomes. Applied appropriately, City Deals could provide a strong opportunity for the Australian Government to encourage value capture at the state, territory and local level.

Alongside state and territory governments, the Australian Government should explore, on a case-by-case basis, whether value capture is appropriate under each City Deal as an opportunity to increase overall funding.

On a broader horizon, the Australian Government could use its funding role in infrastructure and other investment areas to leverage land tax reform outcomes at the state level and achieve a more permanent platform for value capture. This approach would be consistent with the Infrastructure Reform Incentive structure proposed in the *Australian Infrastructure Plan* and supported by the Australian Government in their response to the Plan.

The Australian Government should work with state, territory and local governments

Discussion of value capture should be progressed through discussion across all levels of government.

While the Australian Government may incentivise the use of value capture through project-specific funding, City Deals or another mechanism, the ultimate decisions on value capture in project planning and development processes lie with the project proponent. These proponents are typically state, territory and local governments, who carry the responsibility for delivering most infrastructure projects, and operating infrastructure networks. This means these levels of government carry the bulk of responsibility for applying value capture on projects in their respective jurisdiction.

To guide policy and project decisions on value capture, and to engage communities in these decision making processes, each jurisdiction should develop policy strategies for implementing value capture, and should consult widely throughout their development.

Finding 12

Each state and territory government should deliver policy strategies for implementing value capture.

These plans should reflect the appropriate approach to value capture in their jurisdiction, integrate with long-term planning, streamline with local government processes and build in community engagement at each step.

List of findings

1. **Value capture can and should play a greater role in funding Australia’s infrastructure.** As recommended in the *Australian Infrastructure Plan*, governments should routinely consider value capture to address our infrastructure funding challenges, and should apply mechanisms that work in the best interests of the community.
2. **Value capture can work in Australia, but we should be realistic about the role it can play.** Discussion and application of value capture should focus on how it can address Australia’s two key infrastructure funding challenges:
 - Making the funding split fairer between the direct beneficiaries of infrastructure investment and broader taxpayers
 - Increasing available funding for infrastructure and making it more sustainable.

Governments should be clear on the problem they seek to solve and ensure the mechanism that is applied is the most effective and appropriate approach.
3. **Value capture does not change the economic viability of a project.** Long-term planning is essential to determine, first and foremost, the right projects to address infrastructure needs, then determine the scope for value capture in contributing to the project funding mix. Fundamentally, value capture cannot change the economic costs and benefits of the underlying project.
4. **Governments should focus on forms of value capture that are most effective in addressing the infrastructure challenges we face in Australia.** While infrastructure investments may bring additional revenues through taxes on economic activity and user charges, these are not forms of value capture and should be considered separately. Similarly, forms of value capture that simply hypothecate tax revenue that would otherwise have been raised do not provide an appropriate solution to our infrastructure funding challenges.
5. **Each value capture mechanism has its own benefits, risks and implications for project funding and the economy more broadly.** Project proponents should develop and apply mechanisms on a case-by-case basis according to their effectiveness and delivery risk in each circumstance – but not just their capacity to raise revenue.
6. **A broad-based land tax – accompanied by the removal of inefficient taxes such as stamp duty – would provide an efficient, sustainable approach to value capture in Australia.** While a number of mechanisms can provide individual solutions for specific projects, reform of land tax presents a clear opportunity for a more sustainable, longer term reform. The impact of this change could be streamlined by broadening existing state-based charges, and aligning payments with local property rates cycles.



7. **The timing of a value capture mechanism is a key determinant of its effectiveness.** Land and property values change on the basis of expectations, so if value capture is implemented after an announcement, governments may miss the opportunity to capture some value uplift.
8. **Estimating value uplift is a complex task.** The specific impact of infrastructure investments on property values can be difficult to separate from the many other variables influencing market prices, even after project delivery.
9. **Property prices provide an unreliable basis for value capture.** Forms of value capture that are based on either forecasts of property prices or property transactions can be an unstable source of funding. Capturing value using property prices could lead governments to take more or less than what is fair or efficient from properties around an infrastructure investment.
10. **The settings in Australia vary greatly from many overseas markets where value capture has been introduced.** Applications of value capture around the world provide some lessons for governments locally. However, many factors such as population density, public transport mode share, tax mix and governance differ from our own circumstances and dramatically alter the potential success of applying the same measure in the Australian context.
11. **Governments should engage in detailed community and industry engagement when considering value capture.** While every value capture mechanism comes with its own risks and sensitivities, these can and should be addressed directly with all relevant stakeholders. Community engagement at each step of the process is essential to winning and maintaining support for both the value capture and the overall project.
12. **Each state and territory government should deliver policy strategies for implementing value capture.** These plans should reflect the appropriate approach to value capture in their jurisdiction, integrate with long-term planning, streamline with local government processes and build in community engagement at each step.

Appendix A

Analysis of value capture mechanisms

This Appendix builds on the detail provided in **Chapter 2**.

Each of the five broad types of value capture has been examined according to the following features:

1. **Description:** definition of the mechanism, common labels and variations, and how it fits into the broad categories of value capture
2. **How it is applied:** an explanation of the methodology, how easily it can be put in place and the types of projects for which it can be most suitably applied
3. **Where the money comes from:** whether it is a one-off or recurrent charge, and the discrete groupings of stakeholders from whom funding is raised
4. **Risks and sensitivities:** likely issues and concerns to be managed when applying the mechanism
5. **Economic efficiency:** how the mechanism is likely to impact infrastructure and property markets, and the broader economy
6. **Funding capacity:** the effectiveness of the mechanism in raising revenue for a specific investment
7. **Fairness:** the effectiveness of the mechanism in improving the fairness of the funding split between taxpayers and beneficiaries.

1. Betterment levies

1.1 Description

A betterment levy is used to capture value uplift from a set of identified beneficiaries in the local area surrounding a specific infrastructure investment.

This is a targeted form of value capture, though it is up to the government to determine which beneficiaries should contribute to the funding of a specific project. The charge can be graduated to reflect higher levels of benefit in a local area. Sometimes referred to as a ‘benefitted area levy,’ this approach was used to contribute funding to the Sydney Harbour Bridge.

1.2 How it is applied

A betterment levy can be applied for any transport project that delivers clear and direct benefits to a local catchment.

Betterment levies seek to identify the specific value uplift attributable to an infrastructure investment and capture a portion of this value from land or property owners. Construction of a new or extended rail line, for example, often provides local households and businesses with significant improvements in accessibility and amenity. These benefits flow to the value of land and property, providing an opportunity for governments to capture some uplift while still leaving owners better off than before – both financially and through infrastructure services.

Charges can be levied on land, existing properties or new developments. The degree of uplift can generally be increased if governments capture value uplift alongside changes in planning permissions. Rezoning areas around new infrastructure investments can deliver significant value uplift by opening up new development opportunities.



Governments generally estimate value uplift in a specific area and levy a fair portion of this uplift, either as an upfront payment or more commonly as a recurrent charge over a number of years.

1.3 Where the money comes from

Value uplift can be captured from local property owners and businesses. Governments may decide that it is fairer or more economically efficient to only apply the levy on either businesses or households, depending on the local settings.

In theory, money comes from the uplift in value of land and property. However, this uplift can only be accessed if the land or property is sold. So in practice, a betterment levy asks owners to pay in advance for future earnings. This impact can be moderated by spreading the impost over a number of years.

1.4 Risks, sensitivities and broader impact

The theory underpinning value capture is relatively straightforward. In practice however, determining the degree of value uplift, how much of it to capture and which properties to charge the levy can be contentious among some stakeholders.

The major challenge in applying a betterment levy is ensuring the charge does not capture, or is not perceived by property owners to capture, more than a fair portion of value uplift. Determining the portion of value uplift attributable to an infrastructure investment, as distinct from other factors influencing property values, is difficult.

Some may feel that the betterment levy captures more than a fair share of value uplift on their property, or that those outside the betterment area are receiving a benefit that they are not being charged for. In cases where a graduated betterment levy is used, some property owners

either side of section boundary may feel that they are paying too much relative to others within close proximity of their property.

In response, governments must ensure that a betterment levy uses conservative calculations of value uplift, allowing room for error. Governments must also take into account other, potentially overlapping forms of value capture to ensure the betterment levy only takes what is fair. These may include capital gains tax, stamp duty, local property rates or developer charges.

Crucially, this form of value capture requires a high degree of community engagement throughout the project delivery process. Beneficiaries are expected to contribute, so it is in the government's interests to build support by clearly communicating the benefits of the project.

1.5 Economic efficiency

So long as the value captured by a betterment levy is within the range of actual uplift experienced in the set area (that is, the government does not take too much), the measure should not deter local property investment or reduce economic activity. Because the levy is relatively broad, the impost on each property should be relatively modest, whether as an upfront or a recurrent charge. Applied appropriately, local properties and businesses should still be better off than if there had been no infrastructure investment. However, because it must base the charge on projected value uplift, there is a risk that it could collect too much if anticipated uplift is not realised.

The economic efficiency of the mechanism is somewhat reduced by the costs of its administration. While a betterment levy can be relatively simply applied by a state, territory or local government to an identified set of properties and businesses, this produces potentially thousands of separate stakeholders to engage with and

collect payment from. The costs of managing this could be significant, especially for smaller local governments, and may make the use of a betterment levy less feasible for smaller forms of infrastructure investment.

1.6 Funding capacity

A betterment levy can prove relatively effective in providing additional funding for a specific project, since a government has full control over how much it takes, and from whom. Revenue can be maximised if government synchronises the betterment levy with appropriate rezoning in the local catchment, since the value uplift can be increased.

The primary constraint on the effectiveness of a betterment levy is the necessarily conservative estimates of government on value uplift and how much can be captured without taking an unfair portion, or without having other adverse economic impacts.

1.7 Fairness

A betterment levy improves fairness by requiring those who benefit from an infrastructure investment to pay a greater share of its capital costs than taxpayers outside the area, who may see little or no benefit from the project. The extent of the fairness will correspond to the funding capacity of the project, since every dollar raised from local beneficiaries is a dollar that will not be required from another source.

The fairness of a betterment levy relies largely on how it is applied. In theory, those who receive a greater benefit from the infrastructure should pay more. However, betterment levies may be applied to capture more from those who can afford to pay, or flat charges are applied across a broad area. In these cases, the revenue that is raised can become detached from the estimated value uplift. Consequently, fairness can be compromised for the sake of simplicity, ease of implementation or increasing funding capacity.

2. Developer charges

2.1 Description

Developer charges are payments made by a property developer to governments to contribute to the shared infrastructure and services in the area surrounding their development. The charges, which are ingrained in various forms of planning legislation and approval processes across Australia, are generally levied as a one-off payment at a specific decision point of the planning approval process.

Sometimes referred to as developer contributions, many state, territory and local governments have used this mechanism as a form of value capture over recent decades. The charges are generally divided between those

collected by local councils to pay for local infrastructure and amenities, and state government charges, which contribute to state provided infrastructure such roads, public transport, hospitals and schools.

2.2 How it is applied

Generally included as part of planning processes, developer charges are relatively straightforward for governments to put in place. When appropriately designed, a government levies a charge based on the infrastructure it must pay for, and collects payment from developers through their corresponding approval processes.

The charges raised can generally only be used to fund specified infrastructure where a nexus between the development and the infrastructure in question can be shown. Direct communication with communities, as well as transparency in how charges are applied, and what infrastructure this funds, are therefore crucial to building and maintaining the confidence of local land and property owners, businesses and developers.

2.3 Where the money comes from

Developer charges are generally a one-off charge paid by property developers either at the point of application submission or approval. In some instances, this charge can be split across different stages of the approval and development process.

It is likely that developers will effectively pass the cost of these charges on to property owners through the sale price once developments are constructed. This represents a logical flow of cost to the eventual beneficiaries of infrastructure investments in the local area. In this sense, developer charges can be seen as a form of interim betterment levy.

2.4 Risks and sensitivities

The primary challenge with developer charges is the perceived lack of clarity on the part of developers regarding which infrastructure their charges fund. In many jurisdictions, property developers must navigate a sometimes complex system of approvals and charges. Within this framework, a lack of transparency means it can be difficult to identify where the revenue raised from each charge flows, and how it will be used to fund the infrastructure that will benefit property developers – and the eventual property owners and residents.

Ongoing reform of developer charging regimes has sought to address this by injecting greater transparency and accountability. For example, in New South Wales, local governments are required to prepare contribution plans, which outline what the charges will be used for and how they will be administered.

2.5 Economic efficiency

In a local context, correctly designed and implemented developer charges are a relatively efficient means of funding the capital costs of infrastructure investments. The charges are levied on the interim beneficiaries of a public investment until the cost can be passed to the eventual beneficiaries, the property owners. Governments can charge developers their fair share of known infrastructure costs, and reduce the burden on the broader tax and ratepayer base.

While the charge is generally passed on through property prices, this cost should be absorbed within the increased value of a property that benefits from the increased accessibility and amenity the corresponding infrastructure investment provides. The impact on local property markets would only be distortive if the infrastructure provided fails to deliver benefits that exceed the costs levied on developers, or if the developer charges are not reinvested in specific local infrastructure.

2.6 Funding capacity

Developer charges remain one of the most reliable and effective forms of value capture in Australia.

The potential role of developer charges in the funding mix will depend on a range of factors in each case, including the type and scale of the project. For local government projects, such as local roads, footpaths and green spaces, developers may be expected to pay for the bulk of the costs of providing this infrastructure. State level contributions generally only recoup a fraction of the total cost through developer charges.

However, with caps and limits to schemes being introduced in New South Wales, Queensland and Victoria for example, the yield potential of infrastructure charge systems is being constrained, with councils or state government having to ‘make up the difference’ as a subsidy to development.

The revenue potential of some state and territory developer charges, such as the Special Infrastructure Contributions in NSW and the Growth Area Infrastructure Contributions in Victoria, is also limited by their current restriction to greenfield areas. Extending the capacity of these or other forms of developer charges to capture from infill and other brownfield developments could improve their capacity to fund a broader range of projects in cities.

Developer charges rely on developments proceeding to construction, meaning there is a revenue risk to governments in each case if the development does not go ahead. Governments can mitigate this risk for local infrastructure by proceeding with the delivery of local projects once developer charges have been received. This is particularly important in greenfield and growth areas,

where a development not proceeding could leave the local government with effectively stranded and useless local assets until a new developer steps in. For large-scale infrastructure that may need to precede property developments in local catchments, the risk is more difficult to mitigate, but should be factored into project proponents’ revenue forecasts.

2.7 Fairness

Developer charges are a relatively equitable form of value capture, since they typically offer an efficient means of capturing value from local beneficiaries. However, the equity of the local government charges may be challenged by the prevalence of ‘top up’ subsidies for greenfield developments in some jurisdictions where governments are looking to reduce the barriers to development and increase housing supply.

3. Leveraging government land

3.1 Description

This form of value capture is where government uses its ownership of land or air rights near or above an infrastructure investment to help fund the project. While this approach relies on a government owning land or rights that it can sell or lease for residential, retail or commercial purposes, it can provide a relatively lucrative and easily implementable funding source in cases where it is available.

This approach allows governments to not only monetise the value of their underlying asset for reinvestment in infrastructure, but also to maximise its value through the corresponding infrastructure investment. So long as the project is delivered alongside an integrated land-use plan for the surrounding area, and the sale or lease is timed appropriately, the government can capture up to 100% of the value uplift from the infrastructure investment. In areas around major transport hubs, this uplift can be considerable.

This approach has been used over recent decades in Australia. However, governments have often failed to extract maximum public benefit from these processes due to their structure, timing and corresponding transport and land-use strategies. Better linking the sale or lease to the delivery of infrastructure project can enable governments to maximise the uplift in value they can capture from public investments.

3.2 How it is applied

This form of value capture is, in theory, relatively straightforward. If a government owns land, or can provide rights to develop above public land, it can sell or lease these rights. By timing the sale or lease after the announcement of a value-enhancing infrastructure investment in the area,

the government can maximise any uplift in value and use this to pay for the infrastructure. The same concept can be applied for advertising concessions in or around transport hubs, highways or rail lines, although the funds raised through this approach are likely to be a fraction of the value of property sales or leases.

This approach can be used in any area where the government holds land and intends to deliver value-enhancing infrastructure. Areas around or above transport hubs can provide significant windfalls to government, given the potential scale of demand for residential, commercial and retail property in well-connected precincts. The redevelopments of Chatswood Station in Sydney and Southern Cross Station in Melbourne provide two recent examples of where this approach has been successfully applied.

While this form of value capture generally relies on the government's historic ownership of a site, it can also be deployed in a more strategic way through corridor preservation.

If a government owns land in a planned future transport corridor, this allows government to capture up to 100% of the value uplift in this land between purchase and eventual delivery of the infrastructure. It also means the government avoids paying a higher cost for the land in future. This cost difference could be substantial, especially in outer urban areas where the transport corridor could be built over. In these cases, without corridor preservation, the future cost of infrastructure provision would likely include property acquisitions, tunnelling or demolition works that could have been avoided if government had reserved the land when the corridor was first planned.

However, strategic land acquisitions can be limited by restrictions on government property transactions. While these vary across states and territories, existing legislation in some jurisdictions prevents governments from purchasing land beyond what is immediately required for the delivery of a project. This is an important protection for land owners in developed areas. However, this legislation could in some cases prevent governments from acquiring undeveloped land for strategic purposes in outer urban and other greenfield areas. This could impede some governments seeking to undertake effective long-term planning, and potentially increase the eventual costs of building infrastructure in these areas.

Joint ventures are a variation on leases of government land. Through this approach, a government partners with the private sector to develop publicly-owned land and uses the proceeds to partly fund a corresponding infrastructure development. The private partner makes a return on their investment, while government captures up to 100% of the uplift in value arising from the development.

3.3 Where the money comes from

This approach generally involves a one-off sale or long-term lease of government land. The government only gets one chance to sell or lease their land in each case (although future leases could be timed to coincide with planned redevelopments). This means the timing of the transaction is of utmost importance. Selling or leasing too soon could result in governments missing out on a portion of the value uplift; too late and it may not be useful for project-specific funding requirements.

Funding is raised directly from sales or leases of land, property or air rights. The most likely direct source of funds will come from property developers, who then pass costs on to the eventual owners of the residential, commercial or retail spaces they create. Under a joint venture, the revenue may be raised from access payments by a private partner, or just through the eventual sale of the underlying asset once it has been developed.

3.4 Risks and sensitivities

Because this approach relies on a government decision to sell or lease land, the principal risk is that the transaction fails to maximise value. This would result in some value being captured by private entities, and a corresponding increase in the call on public funds for delivery of the infrastructure.

Governments can misjudge the timing of the sale or lease of their land, missing out on significant value uplift that is instead transferred to private beneficiaries. There can also be difficulties in acquiring land for strategic infrastructure purposes from other government departments. This resistance can trigger 'sales' between departments at higher than market prices, causing an inefficient redistribution of public funds outside government budgetary processes, and increasing the cost of delivering the infrastructure. Similarly, transactions can be limited by restrictions on government property transactions across each state and territory.

There is also a risk that the change from government land to privately-controlled developments could result in a loss of utility or amenity for the local community. While many public properties do not provide public access for a number of reasons (for example, safety or security), others provide some use of green spaces or other facilities.

Any process of transferring land from public to private control should put the interests of infrastructure users and the local community first. The challenge for governments is that public outcomes may come at the expense of additional value it can extract from each site. This reinforces the importance of planning controls in each case. The development of a precinct should be in keeping with community expectations of access to green space and

community facilities, guided by a vision for the local area which prioritises the long-term interests of the community.

Similarly, governments should ensure that any privatisation or commercialisation of spaces above or around infrastructure does not negatively impact the infrastructure outcomes. If the government uses land sales or leases to fund a transport project, it remains at its core a transport project. Funding mechanisms should not be allowed to change the scope or outcomes of the core project.

Joint ventures have an added risk of the private sector partner deciding to end the arrangement before development has been completed. While the government cannot fully mitigate this risk, it should look for examples of where similar arrangements have succeeded and failed in the past for lessons on how to structure the partnership. If the development is well-planned and provides exclusive access to a desirable site (for example, above a major train station), the government should be confident that there will be sufficient demand for a second partnership should the first not succeed.

3.5 Economic efficiency

This mechanism can be especially useful in supporting growth in areas around transport hubs, which are generally in high demand across Australia's major cities. Governments can unlock opportunities for housing, shopping and employment developments close to new or existing public transport links.

Creating hubs boosts transport network efficiency by focusing transport demand on existing high-frequency, high-capacity corridors. This can reduce private vehicle use, demand for parking and the need for more complex multimodal transport systems for many transport users

and commuters. Over time, this can lead to a reduction in congestion and demand for less efficient and costlier public transport services.

Governments should ensure that land sales and leases do not adversely impact the housing market. This can be achieved by signalling an intention to release development opportunities and staging their release. A considered approach will avoid flooding property markets with too much supply at once, ensuring the government extracts maximum value from its sales or leases and does not distort broader market prices.

3.6 Funding capacity

The scale of the funding raised through this approach is largely contingent on the way in which land is released to market, the type of corresponding infrastructure investment, and the local market settings that determine the price of sales or leases. The revenue yield will also obviously depend on the availability of government land that can be released for sale or lease.

Given the desirability of residential, commercial and retail properties in highly accessible locations, the release of land around major transport hubs can provide substantial windfalls to governments. This means that governments can boost the value of their own assets simply through good long-term planning. By creating desirable local precincts that are well-connected, they will generate considerably greater funding to support future infrastructure developments in the area.

Governments should remember when structuring project revenue forecasts that this mechanism is directly influenced by fluctuations in market price. Market volatility should be mitigated as a key revenue risk.



3.7 Fairness

Selling land or development rights improves equity by increasing the share of infrastructure funding derived from local beneficiaries and reducing the burden on the broader tax base. Assuming governments time their sales or leases appropriately, the full value uplift from the corresponding public investment will be captured by the government – and the broader tax base will benefit to the same extent.

4. Taxes on property transactions

4.1 Description

The federal Capital Gains Tax (CGT) and state and territory-based stamp duties – alternatively referred to as transfer duty – are two mechanisms for capturing a portion of property value uplift. Taxes on property transactions are a very broad form of value capture, since they apply to all eligible properties in perpetuity, regardless of any nearby infrastructure investment. At present, no Australian government uses taxes on property transactions to directly fund corresponding infrastructure investments.

Of the two mechanisms, CGT represents a more targeted form of value capture. This is because CGT captures a portion of the difference between the price at which a property is originally purchased, and the price at which it is in then sold. Any uplift in value arising from local infrastructure developments would be included in this change in value, alongside other factors such as improvements undertaken on the property, inflation and broader property market growth.

On the other hand, stamp duties are a relatively blunt form of value capture, applying to the full sale price of a property at the point of each transaction. Since it applies to the purchaser of the property, it charges any past uplift in the property's value to the new owner and does not take account of the net change from the previous purchase price.

CGT is a relatively well-established tax, having been introduced in the 1980s. But on the other hand, stamp duties are some of the oldest taxes across a number of states. For example, a form of legislation enforcing stamp duties was passed in New South Wales in 1865,³⁰ Queensland in 1866,³¹ and Victoria in 1879.³²

4.2 How it is applied

Both CGT and stamp duty apply to the market price of a property at the point of sale, though each functions differently.

CGT applies to an individual selling a property, with the difference between the purchase and sale prices taxed at the seller's marginal tax rate. Most individuals and small businesses can discount a capital gain by 50% if they have held the asset for longer than one year. The family home is exempted from the CGT, as well as any properties purchased prior to 1985. Any capital losses can be deducted against other gains in that financial year, or future years.

CGT is collected by the Australian Taxation Office alongside personal income tax, with investments in property classified in the same way as shares, artwork or other assets. CGT is complex in its application, with a number of concessions for individuals and small businesses, exemptions and grandfathering arrangements. The *Henry Tax Review* recommended reviewing and simplifying CGT.³³

A stamp duty applies a one-off charge to the purchaser of a property at the time of sale, and is collected by the government in each state and territory. Each jurisdiction sets their own stamp duty rates, with most ranging between 2 and 6 per cent of the sale price. In some jurisdictions, the rate applied depends on the sale price of the property, with higher rates for more expensive properties. New South Wales, Victoria and Queensland also apply an additional duty on foreign property investors.

4.3 Where the money comes from

Although both forms of taxes are based on the transaction of property from one owner to another, each draws revenue from different sources.

CGT applies to the seller, or vendor, of a property. Because CGT is incurred at the event of the transaction, the revenue can be raised through the sale itself. This revenue is then collected by the Australian Taxation Office when the individual pays their income tax, generally in the financial year following the transaction. Given the revenue comes from the sale, CGT can be funded through a portion of any value uplift on the property. In some cases, this could be due to a nearby infrastructure investment, but this portion of value uplift cannot be isolated from other capital gains on the property.

Stamp duties apply to the purchaser. Payment of the charge is required at the time of purchase, meaning that it must be funded from the savings of the purchaser. This means that while a small portion of the duty paid could reflect value uplift of the property, the revenue does not come from this source. In cases where the property purchase is not funded by the sale of another property, or it is the purchaser's first property, the stamp duty must be paid for from earnings in the broader economy.

4.4 Risks and sensitivities

These mechanisms already exist across Australian jurisdictions, and are well-established in property markets. Any changes to the way either mechanism is applied, including lifting exemptions or grandfathering arrangements, would likely be met with opposition from parts of the community. Similarly, efforts to streamline these taxes or integrate them with taxes on land value are likely to draw a diversity of support and opposition across the economic spectrum.

Industry and the community should be meaningfully engaged and kept informed of any proposed alterations to either mechanism.

Another major challenge in altering either mechanism is the fiscal impact on each level of government. Governments are likely to resist any reforms or changes to these charges that they fear may reduce the revenue – and corresponding autonomy – they provide. Any proposed changes to these taxes must consider their relative budgetary impacts. Proponents of reform should clearly articulate how a more efficient system could work to the long-term benefit of all parties.

4.5 Economic efficiency

Both stamp duty and CGT are transactional charges, and so are generally inefficient forms of taxation with some distortionary impacts on property markets.

Taxes on property transactions are distortionary to property markets because they effectively discourage property owners from selling property and represent a significant impost for those seeking to enter the property market. This reduces the liquidity of property markets and the general level of mobility in cities.

Neither mechanism reflects the relative productivity of land. While the revenue raised from each property is derived from its market price, which is influenced by factors including infrastructure service provision, the multiplier is the number of times the property is bought and sold. If a property is never sold, no revenue can be raised through CGT or stamp duty.

The effect of property transaction taxes in reducing mobility also affects the efficiency of the labour market. These taxes act to make the property market ‘sticky’ as many property owners hold on to their assets longer than they otherwise would. This serves as an additional barrier to workers finding homes near employment opportunities, and effectively reduces the pool of appropriate talent from which companies can draw employees – especially when their company is located in a CBD or otherwise in-demand area.

This issue can be best illustrated through a simple example. Take a recently retired couple living in a large house near a major city CBD. This couple may have benefited from proximity to employment and education opportunities for their children – who have moved out of home. The couple wish to downsize and move further from the CBD. Another younger family could benefit from moving to this house, and all the benefits it provides. This would represent a more efficient outcome for both families. However, the retired couple are discouraged from downsizing because they would need to pay stamp duty on a new home. Similarly, even if the younger family can find a suitable property close to the services they desire, the upfront impost of stamp duty may be more than they could afford, regardless of the future benefits they could receive in the new home.

CGT represents less of a barrier to market liquidity than stamp duty. This is because the primary place of residence is exempt from paying CGT after a property transaction. However, CGT still effectively discourages investors from making their properties available for purchase by prospective owner-occupiers.

4.6 Funding capacity

There is little doubt that taxes on property raise substantial revenue for government budgets, with CGT and stamp duties collectively raising tens of billions of dollars across Australian governments each year.

As a form of value capture, however, neither measure is particularly effective. As they currently exist, both mechanisms remain in place across each jurisdiction and are not used to fund specific infrastructure.

It would be possible to shift these mechanisms to a targeted model where revenue from geographically-identified properties in local catchments around infrastructure investments. However, this would come with a number of challenges.

Firstly, it is not possible to accurately and confidently isolate a value uplift component arising from an infrastructure investment. While it is theoretically possible to estimate some component of value uplift in identified properties, this process is complex and challenging for governments – as illustrated in **Chapter 3**.

Furthermore, the revenue raised from these mechanisms depends on the number and frequency of property transactions. A highly valuable property which is never sold raises no revenue, even though the residents may enjoy the benefits of nearby infrastructure investments. By contrast, a relatively low value house situated far from adequate infrastructure services can raise substantial revenue for governments if it is sold multiple times.

Funding streams from property transaction taxes are also unreliable. A government has no control over when a property is sold, so it cannot rely on location-specific funding from either stamp duty or CGT to fund a project. If there are few property sales in an identified catchment around an infrastructure investment, the funding contribution could be lower than the government requires, and more funding would have to be drawn from the general tax base. It is also likely that local residents would ‘game’ any transaction-based localised system by timing sales outside of the collection period. This would lead to further distortions in the property market.

Finally, and perhaps most importantly, targeted property transaction taxes would not increase the pool of funding available to governments. All this approach would achieve would be the hypothecation of revenues within a local area – at the expense of funding for other areas.

4.7 Fairness

Since neither CGT nor stamp duty is used as a form of value capture, they cannot shift the balance of infrastructure funding from taxpayers to local beneficiaries. A targeted form of either tax could be employed but, as illustrated in the section above, this would likely be problematic to introduce.

Stamp duty is paid when a property is purchased, so households that move more often will pay more than those who remain in the same house. The frequency of moving house is not a fair determinant of impost, and bears no relation to the benefits derived by that household from local infrastructure provision.

In a broader sense, stamp duty can be seen to reduce equity. Because it is paid by the purchaser of a property, stamp duty represents a larger impost for first home-buyers, recent migrants and workers seeking to move close to employment opportunities. That is because these groupings cannot pay for stamp duty through the proceeds of a previous sale of property or other accumulated wealth.

5. Taxes on land value

5.1 Description

These taxes capture a portion of the value of land from its owners. At present, land tax is levied at the state and territory level by all jurisdictions except the Northern Territory. Council or property rates are a similar tax levied by local governments across Australia.

Under these mechanisms, value uplift from infrastructure investments would result in increased revenue from land taxes or property rates. This means

a portion of the value captured through these taxes could be used to fund part of the project. At present, this approach is seldom used by government to fund specific projects.

In their current form, with a number of exemptions and inconsistent application across governments, taxes on land value provide a limited, partially efficient form of value capture. Removing exemptions, streamlining charging processes and simplifying the system of land taxes, alongside the removal of other inefficient charges such as stamp duty, could create a much more effective, fairer and economically efficient form of value capture. This could provide a more reliable and sustainable source of funding for Australia’s future infrastructure requirements.

5.2 How it is applied

In their current form, state and territory land taxes are a relatively limited and indiscriminate form of revenue collection. Although tax rates, thresholds and conditions vary across jurisdictions, each calculates a charge based on the value of land that is owned. The value of each plot of land is calculated based on a progressive rate scale that is generally updated at regular intervals.

Existing land taxes also provide an incomplete form of value capture, because of a number of exemptions based on how the land is used. These include owner-occupied residential, primary production, child care, aged care, leasehold, government and land owned and used by charities and non-profit organisations.

The exemption of owner-occupied residential land alone reduces the total value of the land tax base by 60%. The exemption for primary production reduces this value by a further 10%.³⁴ In effect, existing land taxes only apply to residential land owned by investors, and various forms of commercial land – a small portion of the land value base.

Property rates work in a similar manner to the land taxes levied by state and territory governments. However, there is greater variation in the way property rates are calculated across local governments. Some are based on the underlying value of land, while others reflect the market price of a property including improvements such as drainage, houses and buildings. Other methods employed by local governments include levying a charge based on the estimated sum of all rental payments on a property paid to the landlord, or which would be paid if the property was rented.

On the whole, property rates are more broad-based than state and territory land taxes. This is because local governments typically allow fewer exemptions than

the states and territories, and generally apply the same valuation methodology across almost all properties in a local government area.

Neither mechanism is typically used by governments to raise funds for specific projects. Instead, revenues flow to governments' general revenue bases, from which future infrastructure needs can be funded. Some local governments set property rates according to the total cost of providing services. However, this is typically not tied to specific projects, or to the realised uplift in value of each project.

5.3 Where the money comes from

Both forms of taxes are levied as recurrent charges – generally each year or quarter – on all eligible land parcels in each jurisdiction. The funds are raised from land owners, who must fund the cost through their income, savings or cash flows.

Taxes on land value provide stable revenue streams for governments. As opposed to taxes on property transactions, which are exposed to fluctuations in property market values and liquidity, land taxes are based on a long-run valuation of land. This more reliable revenue stream is better suited to planning for and funding infrastructure investments over the long term.

In theory, taxes on land value are based on the estimated productive value of each parcel of land, so they assume the owner can fund the charge through the utility they derive from the land. In the case of residential property, this includes the proximity to employment opportunities that living in this location provides. For commercial, industrial and agricultural land, it includes the potential economic activity undertaken on the land.

In practice, many land categories are exempt from these charges – at least at state and territory level. Also, the methodology employed by some local governments does not fairly represent the productive economic value of the land, but the financial returns that could be received. These factors reduce the efficiency of land tax and can distort investment to land uses that pay less or no taxes.

Because this approach is based on land values, as opposed to property prices, revenues can be more easily forecast, measured and captured than for mechanisms based on property transaction prices. It is also easier to separate specific land value uplift through this mechanism, meaning the charge can be more efficiently applied to fund infrastructure.

5.4 Risks and sensitivities

Any reform of the system of taxes on land value is likely to prove contentious. Removing the exemptions to make land tax a broad-based charge would be likely to raise some fears in the community that it will not be applied appropriately, or that it would be in addition to existing taxes on land and property.

As with any major reform process, it would be essential to genuinely engage with industry and the community at every stage. Governments would need to provide a compelling narrative for change by showing how the existing system is broken, and illustrating the role a broad-based land tax could play in better supporting Australia's economy in future. The potential role of value capture in funding improvements to infrastructure services over the long term would be a key benefit of land tax reform.

Inefficient taxes such as stamp duty would no longer be required under a broad-based land tax, and so should be phased out as any land tax reforms are introduced. One approach would be for government to provide a period of transition where land and property owners could choose which system to apply to their assets.

There are also likely to be difficulties in introducing reform across governments, which may fear losing some revenue in the process. There may be a role for the Australian Government to support reform processes by providing incentives or underwriting any potential shortfalls in government revenues over the transition period.

5.5 Economic efficiency

As recommended in the *Henry Tax Review*, a broad-based land tax provides one of the most significant opportunities to improve the efficiency of our economy.

Reforming the land tax system would encourage the most productive use of land, and enable governments to remove inefficient transactional charges such as stamp duty. The current exemptions promote investment in untaxed activities at the expense of other forms of investment, while transactional taxes discourage households and businesses from moving to the land and property that works best for them and the broader economy.

Land taxes that are based on the total improved value of land may discourage investment, because any improvements to a parcel of land increase the corresponding land tax bill. A reformed land tax system should be based on the underlying value of land in order to avoid this constraint on growth and investment. Owners of land should be encouraged to maximise the productive capacity of their land, and support growth in the wider economy through demand for services in construction, manufacturing and other sectors in the process.

The introduction of a broad-based land tax may cause a one-off fall in the value of all properties as the market adjusts to the new system.³⁵ For this reason, land tax reforms could and should be gradually introduced to stagger this impact and allow it to be absorbed by markets over time.

5.6 Funding capacity

Taxes on land value provide a reliable ongoing revenue stream for governments. Unlike transactional taxes, which provide inconsistent and unpredictable revenues due to their exposure to market conditions and price fluctuations, taxes on land value provide a mechanism through which governments can confidently forecast future revenue streams.

The revenue raised by existing land taxes is limited by the number of exemptions currently in place. Removing these exemptions, alongside the removal of other forms of less efficient taxes such as stamp duty, could help to grow the volume of funds raised by land tax and provide a deeper pool of funds from which to invest in infrastructure.

Because land tax and any additional charges relating to infrastructure investments can be charged by governments in one transaction, governments lose less revenue through the costs of administering the charge. Similarly, as opposed to one-off measures such as betterment levies and developer charges, governments would not need to undertake rigorous consultation to convince locals of the merits of the mechanism in each case. From the perspective of the land owner, a broad-based tax on land value provides a simpler, more streamlined system where value capture components are supplementary and incremental – rather than separate and substantial.

5.7 Fairness

Broad-based taxes on land value provide an efficient and fair means of levying a charge based on the productive capacity of land. Fairness is enhanced by the fact that everybody must pay, including foreign owners who cannot shift their liabilities offshore. In an infrastructure context, a broad-based land value tax provides an effective mechanism for capturing value uplift from properties near a public investment and shifting the balance of funding from taxpayers to local beneficiaries.

At present, the fairness of existing land taxes is limited by the number of exemptions applied. Land taxes capture no value from local beneficiaries of infrastructure investments who are owner-occupiers, or who fit any other fields of exemption. As a result, value uplift must either be captured by less efficient, often controversial forms

of value capture or – as is often the case – no value uplift is captured in any meaningful way. Property rates are somewhat fairer than existing land taxes due to the fewer exemptions on payment.

One challenge in introducing a broad-based land value tax is managing owners who may be land rich but income poor. Some may have inherited land through families, or have invested in land with the hopes of investing in future to improve its productive capacity. These situations have arisen from the historic legacy of an inefficient system that has not always incentivised land owners to make productive use of their land.

Managing cases where individuals have large land holdings but small cash flows under a broad-based land value tax should be a priority for governments during any reform processes. By and large, however, cases of hardship should be managed through welfare systems, not exemptions. Exemptions serve to distort the market and undercut the efficiency benefits of land tax.

In situations of hardship, governments can and should offer flexible payment terms or the option to defer payments until sale in cases where hardship can be proven. Beyond these measures, the existing welfare systems provide an effective safety net for individuals experiencing hardship, and would not reduce the efficiency and effectiveness of a broad-based land value tax.



Appendix B

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- ¹⁷ Project was formerly referred to as the South Road Superway.
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