

TTF TRANSPORT POSITION PAPER

The Benefits of Transit Oriented Development



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In short

1. Urban sprawl and congestion in Australian cities have significant economic, social and environmental costs including lost productivity, social exclusion, vulnerability to peak oil, health problems, increased carbon emissions and fewer green spaces.
2. Transit oriented development around public transport hubs can help alleviate urban sprawl and congestion.
3. While transit oriented development is well-established globally, it has not been widely adopted in Australia.
4. It is imperative that federal and state governments bring transit oriented development to the centre of urban policy.

Introduction

Urban sprawl in Australian cities is increasing car dependency and having negative economic, social and environmental consequences. There is an urgent need for Australian governments to alleviate congestion through more sustainable public transport-focused planning policies.

Transit oriented development (TOD) – development around transport hubs including medium to high density residential housing and key services such as health, education, government, retail and associated employment opportunities, designed to encourage public transport use – is one such policy. If planned effectively, TODs can achieve substantial mode shift from private vehicles to public transport, as well as improve liveability for residents.

In Australia, where urban population concentration is among the highest in the world, and is forecast to increase further, the case for transit oriented development is particularly strong. Despite many examples of successful frameworks internationally, development around transport hubs has not yet been widely adopted in Australia - there are isolated instances but too few to make a significant difference to productivity, liveability and sustainability.

The challenges of demographic growth, economic competition – both within Australia and internationally – social equity and climate change mean that a cultural shift in government approaches to planning and transport, backed by adequate funding, is required to bring transit oriented development to the forefront of the urban policy agenda.

The benefits of TOD

The concentration of the Australian population in cities is among the highest of anywhere in the world - with 60 per cent of our total population residing in our five largest cities.¹ In the context of a population set to reach 35 million by 2049, and with the proportion of the population above 65 years set to increase from 15.3 per cent to 22.5 per cent by 2030, a paradigm shift away from urban sprawl is required.²

The most effective response to urban sprawl is to increase urban densities and plan for growth along transport corridors (particularly public transport corridors). Transit oriented development is a key component of such a strategy. By creating pedestrian-oriented medium to high-density mixed-use spaces around public transport hubs, this type of development simultaneously constrains urban sprawl and encourages public transport use. However, adequate transport infrastructure – and good services – are a prerequisite for this kind of development.

The basic principles of transit oriented development are simple - develop medium to high density residential housing, key services and associated employment opportunities around key transport hubs. It creates strong links between residential and commercial spaces, removing the need to travel long distances for work or leisure.

By ensuring that residents live within a short walk of regular services – principally rail lines, but also bus and light rail - this type of development makes public transport a more convenient option. The mix of uses not only creates more interesting neighbourhoods, it is necessary to facilitate more public transport-compatible households. It enables commuters to avoid congested roads by transferring to a readily available public transport alternative. Public transport is an integral rather than incidental part of transit oriented suburbs.

Best-practice TOD suburbs integrate different modes of transport. In this way, it helps create a ‘critical mass’ of public transport in concentrated centres, providing focal points for government funding and attracting private sector investment.

Economic benefits

Reduced congestion

The key economic benefit of mixed use medium to high density development around transport hubs is reduced congestion. According to federal government estimates, congestion will cost Australia \$12.1 billion in 2009, rising to \$20.4 billion in 2020.³

Because it brings together public transport users with regular services – ideally across more than one mode – transit oriented development directly fosters patronage growth. In doing so it maximises the efficiency and carrying capacity of the transport network,

¹ Australian Bureau of Statistics, *Australian Demographic Statistics, March 2009 pp15-16.*

² Australian Bureau of Statistics, *Population Projections 2006 to 2101, September 2008, Table 1.*

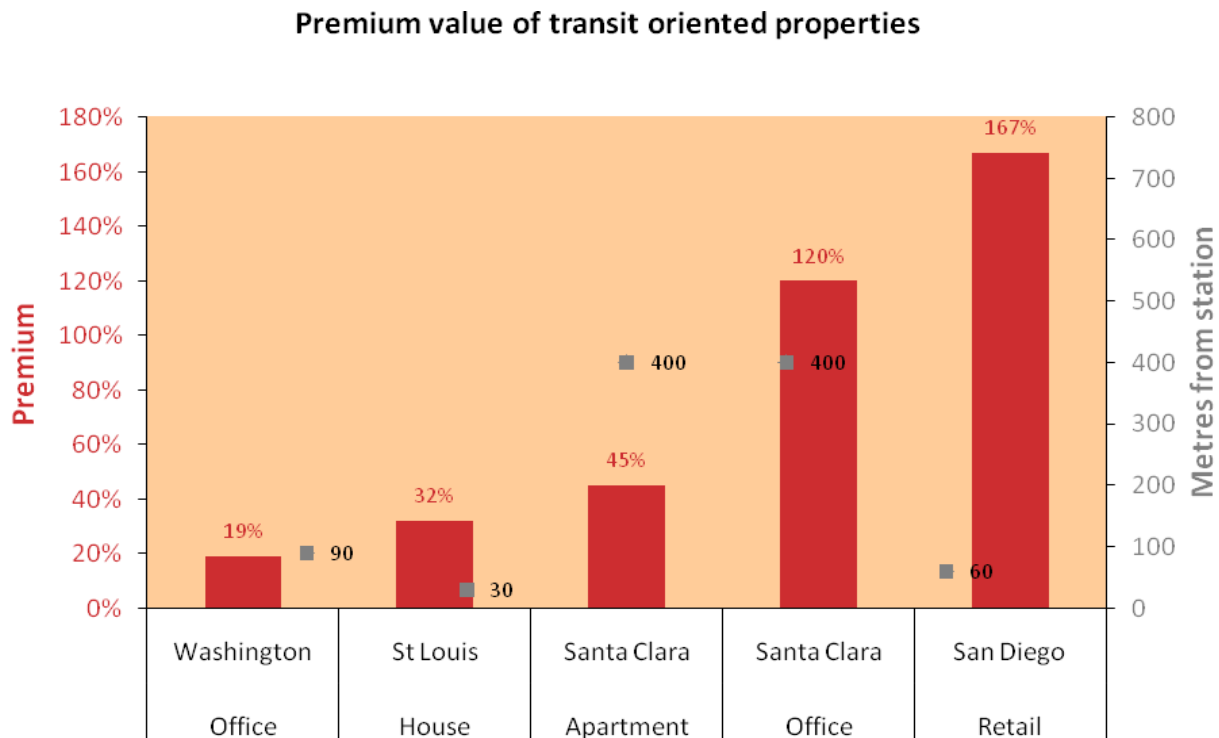
³ Bureau of Infrastructure, Transport and Regional Economics, “Estimating urban traffic and congestion cost trends for Australian cities,” Working Paper No 71 (2007), p109.

getting increasing numbers of employees to work quicker and driving business productivity gains. These gains are multiplied if TODs are located strategically along transport corridors, rather than in isolation from one another.

Increased tax yields

In Australia, research undertaken by Curtin University in association with the Planning and Transport Research Centre found 61 per cent of households surveyed would consider living in a transit oriented development. In addition, income is a key factor in whether households are interested in this style of living, with the wealthiest households demonstrating the highest level of interest.⁴

Research into property prices in the United States found properties located near a transit station experienced higher values than comparable properties without transit access. The graph below shows the premium percentage increase⁵ and distance from respective public transport stations of a range of property types in different US cities.⁶



It clearly demonstrates that a concentration of residential, office, and retail space near transport hubs (within 800 metres), facilitates increases in the value of those properties. This demand and associated higher premium values in turn provides government with increased tax yields when these properties are bought and sold.

⁴ Housing and Urban Research Institute WA, Curtin University, *Housing in Railway Station Precincts: Some Empirical Evidence of Consumer Demand for Transit Oriented Housing in Perth Western Australia*, February 2007, p2.

⁵ premium defined as increases above the value increase of similar properties in the area without close access to the public transport system

⁶ Center for Transit Oriented Development, *Capturing the Value of Transit*, prepared for the United States Department of Transportation, November 2008, pp6-9.

Reduced costs and efficient investment

The willingness of people to pay a price premium for these transit oriented properties paves the way for governments to use land values to help meet the cost of new infrastructure or the maintenance and upgrade of existing infrastructure. Options such as infrastructure levies, tax-increment financing and public private partnerships are finance mechanisms used widely internationally.

Directly addressing urban sprawl, high density mixed development around transport hubs focuses population growth in brownfield areas reducing the pressure on government finances created by infrastructure expansion into an ever-extending urban fringe. It also assists retrospective investment in areas currently without transport infrastructure, through the numerous finance mechanisms available to government.

Transit oriented development further helps to optimise existing transport infrastructure. An interim review of the development strategy employed in the Bay Area, California in 2006 found that residents in these developments were five times as likely to use public transport as non-residents – and that TOD employees are also more likely to use public transport than non-TOD employees (although supply of parking is a factor in this trend). Similar research by the Metropolitan Transportation Commission showed that Bay Area residents living within 0.5 miles (approximately 800 metres) of a rail station or ferry terminal were more than twice as likely to take public transport to work as those living outside this distance. This style of development therefore facilitates greater public transport use and increases farebox revenue for transport operators.

As well as addressing congestion, increasing tax yields, and reducing infrastructure costs, developments around transport hubs generate business, investment and employment opportunities, grow and diversify the housing stock (particularly for first home buyers and low income earners) and reduce the economic costs of greenhouse gas emissions.

Social benefits

Housing affordability and public transport are key drivers of social inclusion: the ability to access health, education and other services, employment opportunities and cultural and sporting activities. Building around transport hubs mitigates against the emergence of disadvantaged ‘fringe suburbs’, where low-density housing is isolated from urban and suburban economic centres and residents are vulnerable to higher oil prices and interest rates.

At the same time, TODs provide higher residential densities outside the CBD leading to the decentralisation of public and private services - bringing them closer to suburban population centres. A mix of residential and commercial development and essential services – such as health and education – removes pressure from existing centres. Thus, this type of development assists in breaking the pattern of ‘hub and spoke’ development in cities, creating a network of ‘alternative CBDs’ served by cross-city as well as arterial transport corridors.

Well-planned transit oriented developments can also help remake the urban form, building communities around retail and entertainment options and shared green spaces – and ultimately improving liveability. In placing a focus on compact suburban centres, and catering for walking and cycling, TODs also foster active lifestyles, working against the health risks of excessive car-dependency.

Other benefits include a faster, more efficient commute to and from work (and therefore more time spent with family); increased urban mobility for non-work purposes; and social inclusion, in the sense of access to public services and opportunities outside of the immediate vicinity.

Furthermore, TOD suburbs are better-equipped to respond to the demographic changes facing Australia than the low-density suburbs which arise from urban sprawl. Compact, multi-purpose developments can help ensure that public transport provision, social inclusion and housing affordability keep pace with population growth, as well as catering to the needs of an ageing population.

Environmental benefits

At a time when climate change is a major focus of government policy and public concern, prioritisation of public transport makes it an important mechanism for reducing greenhouse gas emissions.

Rising fuel costs and a carbon price under an Australian emissions trading scheme will not in themselves be enough to achieve the significant transport mode shift required to bring down Australia's greenhouse gas emissions. Complementary measures, including the development of integrated public transport networks, are essential. During peak periods, public transport (bus and rail) is up to six times less emissions intensive per passenger kilometre than private vehicles.

In this context, the most successful policy approach will be a combination of investment in public transport infrastructure; service improvements and ticketing incentives to drive patronage increases; and increased urban density to grow the catchment area for public transport. Facilitating greater public transport use and reducing journey times can play an important role in achieving substantial mode shift - enabling governments to manage growth in ways that ease the associated pressure on transport infrastructure and natural resources.⁷

At a local level, transit oriented developments encourage sustainable living by emphasising self-sufficiency within suburbs and prioritising walking and cycling. High-density suburbs can also be far more energy-efficient than low-density suburbs, through efficiencies of scale and sustainable building techniques. As governments adopt stricter oversight of environmental construction standards, TODs should become the focus of private sector innovation in green design and building.

⁷ John L. Renne, *Evaluating Transit-Oriented Development Using a Sustainability Framework: Lessons from Perth's Network City*, pp115-117. http://www.vtpi.org/renne_tod.pdf

Transit oriented developments internationally

There are many international examples of successful transit oriented developments, particularly among cities in Europe and North America, as well as some in Asia. The hallmarks of these developments are good planning and effective coordination between land use and transport policy.

Denmark

The City of Copenhagen's objective is to locate the facilities that generate the most traffic (office buildings, shopping centres and hotels) within close proximity to public transport stations to maximise public transport use.⁸ National planning guidelines also prioritise sustainability in transport and development, as well as safeguarding Copenhagen's culture of walking and cycling. Copenhagen is famous for its *Five Finger Plan*, originally developed in 1947 and regularly updated, which guides development alongside five city rail corridors and dictates urban density levels. It is clearly based on TOD principles.

United Kingdom

In the United Kingdom, policy planning guidance; designed to *"integrate planning and transport at the national, regional, strategic and local level and to promote more sustainable transport choices"* has existed since 2001.⁹ The London Plan is built on this principle and provides a framework for increased development in brownfield areas, integrated with the capacity and accessibility of the public transport system.¹⁰

Kings Cross redevelopment

The Kings Cross redevelopment covers 67 acres of brownfield land incorporating Kings Cross station, St. Pancras International station (offering direct services throughout the UK and Europe) and King's Cross St. Pancras underground station - the biggest interchange station on the London Underground network, serviced by six tube lines. The stations are also serviced by 12 bus routes.

In addition to the redevelopment of all three stations, including an 800 space bicycle interchange located between the two above ground rail termini, concurrent development of the adjoining site will host 2,000 new homes and serviced apartments, 500,000 square feet of new retail space, 4.9 million square feet of office space, a new university and a primary school. Moreover, 40% of the development site will be open space with 10 new parks and squares, 20 new streets, urban 'home zones', three new bridges and more than 400 mature trees.

The primary focus of the development is to provide a walkable, open space environment enabling residents, students and employees to interact in various activities while being directly linked to one of the key transport hubs in the UK.

⁸ Nordhavnen Ideas Competition, *Article 1: Trends in Urban Development in Copenhagen*, p8.

⁹ UK Department of Communities and Local Governments, Policy Planning Guidance 13: Transport <http://www.communities.gov.uk/publications/planningandbuilding/ppg13>.

¹⁰ Greater London Authority, *The London Plan: Spatial Development Strategy for Greater London*, February 2004, p3.

United States

California

In the Bay Area, California, the Metropolitan Transportation Commission (MTC) adopted a TOD strategy in the Regional Transit Expansion Program in 2001. This enables the MTC to set minimum levels of development around transit stations and ensures transport funding is conditional on supportive land use. The MTC funds 'station area plans' based on unique circumstances and community character, while corridor working groups bring together government and other stakeholders to guide development, giving the community a stake in TOD.¹¹

Oregon

In Portland, Oregon, the city's *2040 Growth Concept*, originally implemented in 1990, is also based on TOD principles. An urban growth boundary contains sprawl, while a Transportation Planning Rule requires links between local land use and transportation planning processes. The 2040 Growth Concept plan specifically calls for growth to occur in medium to high density mixed-use, walkable urban centres and corridors linked by high quality transit services. Metropolitan areas are required to implement land use changes promoting compact, mixed-use pedestrian-friendly development. In 1998, Metro's Transit-Oriented Development Program was the first in the US to use federal transportation funding specifically to acquire land for redevelopment adjacent to a light rail station.¹²

TOD in Australia

The federal Better Cities Program of the early 1990s gave some impetus to transit oriented development in Australia, channelling Commonwealth funding into high-density suburbs. However, since 1996 urban development has been entirely the preserve of state and local governments. Where this has taken place it has not always been part of a comprehensive, city-wide plan.

Victoria

In 2002 the Victorian government introduced the *Melbourne 2030* strategy, which aligned growth with TOD principles. The plan envisaged a network of Central Activities Districts, combining high levels of economic activity with housing opportunities and good access to the transport system.¹³ It was updated in 2008 in line with proposed changes to the urban growth boundary. The new plan, *Melbourne @ 5 Million*, builds on the original strategy and identifies tram corridors as key areas for development.¹⁴ It is closely aligned with the Victorian Transport Plan, which is overseen by an Inter-Departmental Committee.

¹¹ Metro Transportation Commission, Transit Oriented Development, sighted at http://www.mtc.ca.gov/planning/smart_growth/tod/index.htm, 11 November 2009.

¹² Metro, *The Nature of 2040: The region's 50 year plan for managing growth*, June 2000 and *Transit Oriented Development*, sighted at <http://www.oregonmetro.gov/index.cfm/go/by.web/id=140>, 11 November 2009.

¹³ Department of Infrastructure, *Melbourne 2030: Planning for sustainable growth*, October 2002.

¹⁴ Department of Planning and Community Development, *Melbourne @ 5 Million*, December 2008.

Queensland

The Queensland government's South East Queensland Regional Plan encourages more compact development, with half of planned new dwellings by 2031 to come from infill development. A parallel South East Queensland Regional Infrastructure Plan and Program sets out the infrastructure requirements – including public transport – necessary to accommodate this population growth. A particular focus is development along transport corridors. The *Connecting SEQ: 2031* transport plan will identify key corridors along which associated development must take place within 400-800 metres of public transport stops or station. Job creation will be linked to accessibility, and centred on activity centres and high-frequency public transport hubs, in order to maximise the return on government investment in transport.¹⁵

South Australia

The South Australian government's Plan for Greater Adelaide, currently being finalised, seeks to integrate land-use priorities with Adelaide's existing transport networks and long-term transport and infrastructure plans. Under the draft plan, the government intends to locate the majority of new developments in existing urban areas and close to public transport – and to ensure that new developments are 'mixed use' and of relatively high density. It intends to create 13 new transit oriented developments, and more than 20 sites with TOD characteristics.¹⁶

Western Australia

WA's *State Sustainability Strategy* was developed using TOD principles and seeks to maximise residential, employment, retail, community and entertainment activity around key transport nodes and in major centres.¹⁷ The *Network City: Community Planning Strategy for Perth and Peel*, builds on this plan and calls for 60 per cent of future development to occur in existing urban areas, including prioritising TOD opportunities linked to Perth's rail and bus networks.¹⁸ TOD is facilitated in Perth through the state's Transit Oriented Development Coordinating Committee (TODCC), a cross-agency partnership incorporating the Planning, Infrastructure, Transport, Housing and Roads departments and other government agencies.

New South Wales

The NSW government's Sydney Metropolitan Strategy shapes land use planning in the city's subregions, and calls for the clustering of jobs, housing and services around transport nodes in targeted growth centres and corridors.¹⁹ This plan encourages transit oriented developments like those at St Leonards, Parramatta, and Rhodes. These suburbs are all important commercial and/or residential hubs that are well-served by public transport, in particular heavy rail services. However, the long term integration of

¹⁵ Department of Infrastructure and Planning, *South East Queensland Regional Plan 2009–2031*, July 2009, p96.

¹⁶ Department of Planning and Local Government, *Planning the Adelaide we all want: Progressing the 30-year Plan for Greater Adelaide*, July 2009.

¹⁷ Department of Environment and Conservation, *State Sustainability Strategy*, September 2003, p187.

¹⁸ Western Australian Planning Commission, *Network City: Community Planning Strategy for Perth and Peel*, September 2004, pp6 & 77.

¹⁹ Department of Planning, *Metropolitan Strategy*, December 2005, p98

the Metropolitan Strategy with a comprehensive transport plan and a lack of interdepartmental co-ordination means NSW lags behind its neighbours.

Specific ongoing issues with a lack of an effective delivery authority that engages local government involvement in developments, strata title laws that require 100% concurrence with owners in strata schemes for redevelopment, and limitations of compulsory land acquisition laws, hampers progress. That said, the consolidation of government departments last year and the government's commitment to a long term NSW Transport Blueprint are positive signs.

Commonwealth

Significantly, the federal government is also now reengaging with cities policy. To date this engagement has been mostly through the Infrastructure Australia agenda, with the Commonwealth prioritising and investing in major urban infrastructure projects. As it develops its National Urban Policy through the Major Cities Unit, there is an opportunity for the federal government to take a leadership role in encouraging the growth of TOD in Australia.

While it is evident that there are signs that governments around Australia are planning to use transit oriented development strategies in the future, there are still very few real examples of TOD in practice in our cities - they have been the exceptions rather than the rule.

TTF Position

It is clear that there is momentum behind transit-oriented development in a number of Australian states, and that the current federal government is well-positioned to help accelerate this trend. To date in Australia, successful TODs have been few in number and geographically dispersed.

In order to achieve widespread development around transport hubs in Australian cities, governments must both demonstrate political commitment and develop comprehensive policy frameworks. Better coordination between ministers and departments of transport, infrastructure and planning is essential if TODs are to be fully integrated into urban transport systems. They have the potential to contribute substantially to government policy objectives across a range of portfolios, but only if they can be established on a scale sufficient to encourage public transport use and constrain urban sprawl.

Coordinated planning and delivery arrangements will be essential to ensure transport not only responds to past and present use patterns but is an active contributor to the shaping of the urban form.

At a federal level, the National Urban Policy should establish guidelines for housing density and transport access, with specific reference to TOD – and Infrastructure Australia should seek to fund urban public transport projects that are conducive to TOD.

At a state level, jurisdictions that have not yet fully aligned land use and transport planning should do so, while those that have must press on with implementing these strategies, backed by adequate funding. Partnership with the private sector in delivering transport infrastructure and operations, and in housing, retail and other development, will be crucial in this regard.

There must also be clear and unambiguous communication by governments about the benefits of transit oriented development, given that the concept is vulnerable to criticism if not explained properly to the electorate. This must be framed in terms of its social, economic and environmental benefits.

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