Transport Strategy | 2012

PLANNING FOR FUTURE GROWTH
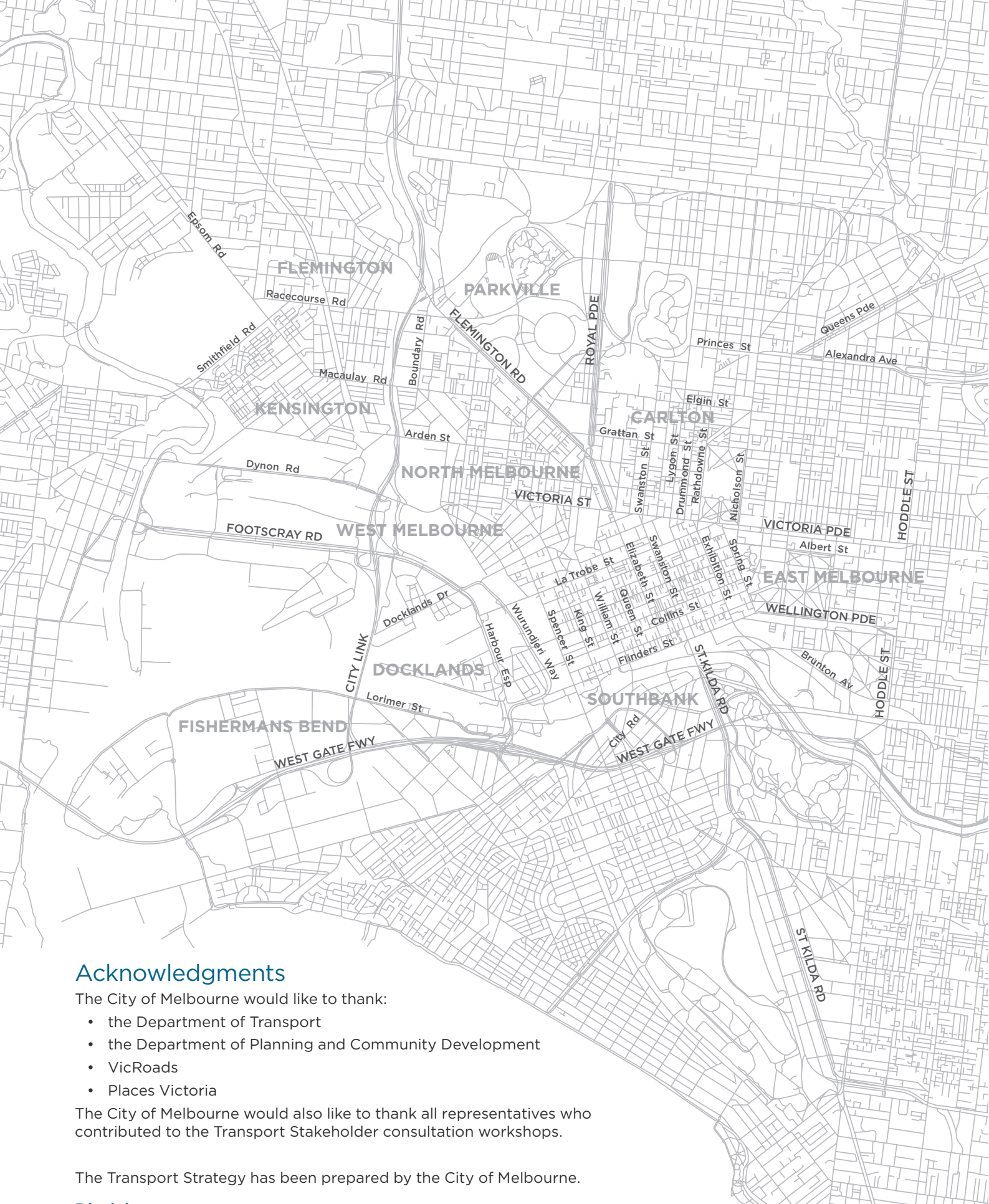
CITY OF MELBOURNE

Acknowledgments

The City of Melbourne would like to thank:

- the Department of Transport
- the Department of Planning and Community Development
- VicRoads
- Places Victoria

The City of Melbourne would also like to thank all representatives who contributed to the Transport Stakeholder consultation workshops.

The Transport Strategy has been prepared by the City of Melbourne.

Disclaimer

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ⓘ Foreword

Melbourne is the heart of Victoria's prosperous economy and enjoys a vibrant social and cultural life. Almost 800,000 people pass through our city daily. This is likely to rise to one million by 2030.

The City of Melbourne is responding to the rapid growth rate with well-thought out strategies for transport, land use and community services. The City of Melbourne Transport Strategy 2012-2030 is an important part of this. We consulted widely during the strategy's draft stage and have incorporated many suggestions.

Significantly, the strategy promotes a much more integrated approach, linking all modes of transport and coordinating this with city development and urban renewal. This requires close collaboration between all partners.

Melbourne is a 24-hour city. We are a walking and cycling city, and Council provides infrastructure to improve the safety and convenience of cyclists and pedestrians. Public transport use is growing very strongly and Council is working with the Victorian Government and our partners to support improvements to public transport.

Our vision for Melbourne as a connected city means a place for people, a city with great streets linked by a well-designed transport system. This strategy provides an important foundation for Melbourne's future.

Lord Mayor Robert Doyle and Cr Kevin Louey, Chair of Council's Connected City Portfolio.

Pedestrians cross Spencer Street from
Southern Cross station

ii Executive summary

This strategy sets new key directions and policy targets and plans for strong growth in the City of Melbourne to 2030. It takes into account the significant changes in transport policy and strong growth in public transport use, cycling and walking since the 2006 transport strategy, Moving People and Freight.

The key directions are:

- Integrate transport and land use planning.
- Go anywhere, anytime public transport for inner Melbourne.
- Support public transport, walking and cycling as the dominant modes of transport in inner Melbourne.
- Develop high-mobility pedestrian and public transport streets in the central city.
- Make Melbourne a cycling city.
- Foster innovative, low-impact freight and delivery in central Melbourne.

This strategy will be coordinated with the State Government to ensure that projects such as new tram stops and rail tunnels also contribute to creating great streets.

An annual report will be presented to the City of Melbourne to track the strategy's achievements. The strategy will be reviewed again in 2016.

Purpose of the strategy

The strategy has five goals:

- To coordinate the City of Melbourne's transport initiatives: plans, programs, research and five-year capital works program.
- To coordinate the City of Melbourne's strategic land use development policy.
- To advocate the City of Melbourne's position on transport and related land use policy to State Government.
- To enable alignment between City of Melbourne and State Government investment in transport infrastructure, service improvements, programs and research.
- To enable alignment between the City of Melbourne and its many stakeholders including traders, businesses, universities and neighbours.

Reason for the update

This transport strategy has been updated due to:

- significant change in the state of transport activity and policy
- changes in the City of Melbourne's position on various aspects of transport policy
- changes in the City of Melbourne's strategic land use policy
- the need to coordinate with the State Government's new metropolitan strategy on transport and land use
- the need to refresh the priorities for the next four years.

Process for the update

This strategy update aligns the City of Melbourne's transport policy with its review of the Melbourne Planning Scheme. It complements the City of Melbourne's new Municipal Strategic Statement (MSS) and together they provide an integration of land use and transport policy. It maintains the general direction of Moving People and Freight 2006-2030 but incorporates the many advances in transport and land use development that have occurred since 2006.

Extensive community and stakeholder engagement has informed the update. This has included various stakeholder, industry and community workshops and briefings. A draft strategy was published in May 2011, with public input shaping the final strategy. This final version was approved by Council on 8 May 2012.

The major actions for 2012-2016

The actions identified in the strategy are listed at the end of the document in Section 16. Various actions contribute to the following six lead activities which the City of Melbourne will work towards in 2012-2016.
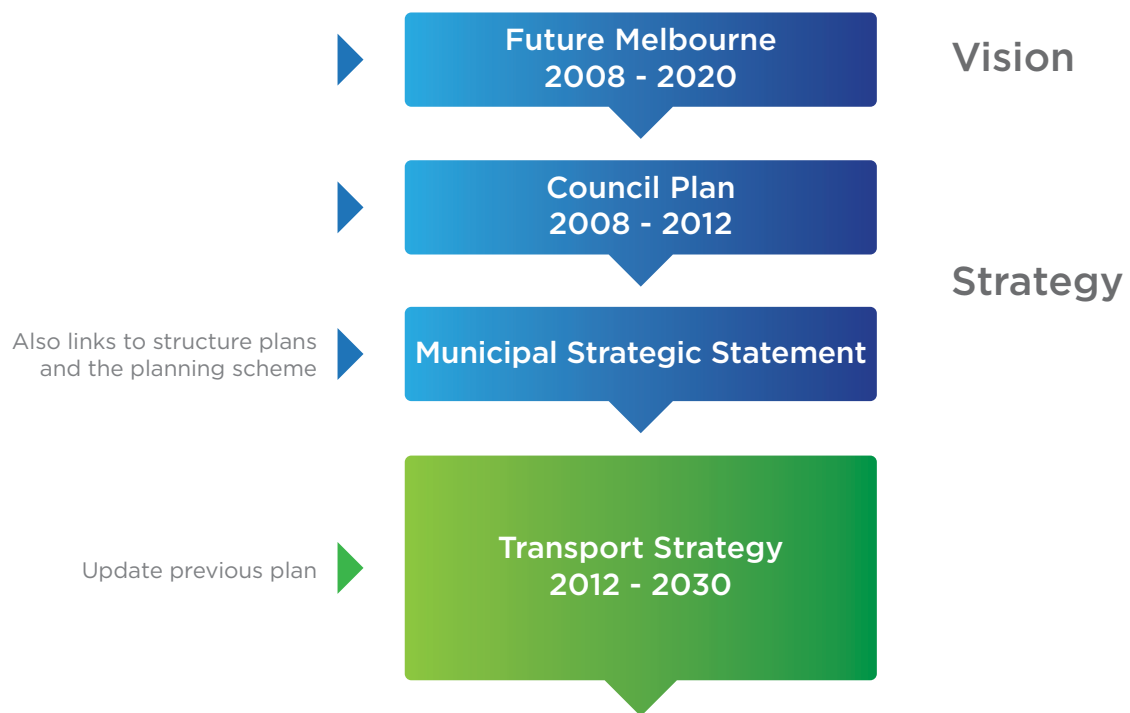
The City of Melbourne will:

- improve the municipality's walking environment to and around rail, tram and bus stations and stops
- upgrade the cycling network in the central city, and
- develop options for central city freight delivery.

The City of Melbourne will work with others to:

- increase the capacity for more rail trips into the city, particularly through constructing a new Footscray to Caulfield underground line
- optimise the city's streets as 'high mobility streets' for the new generation of trams services, and
- develop a road Network Operating Plan for the municipality that will enable future mobility growth to be serviced mainly through tram, bus, walking and cycling.

Strategic Framework

▶	Future Melbourne 2008 - 2020	Vision
▶	Council Plan 2008 - 2012	
Also links to structure plans and the planning scheme ▶	Municipal Strategic Statement	Strategy
Update previous plan ▶	Transport Strategy 2012 - 2030	

- -

Implementation

Action Plans

New plan ▶	Pedestrian Plan	
Update previous plan ▶	Bike Plan	
New plan ▶	Car Share Plan	
Update previous plan ▶	Parking Plan	
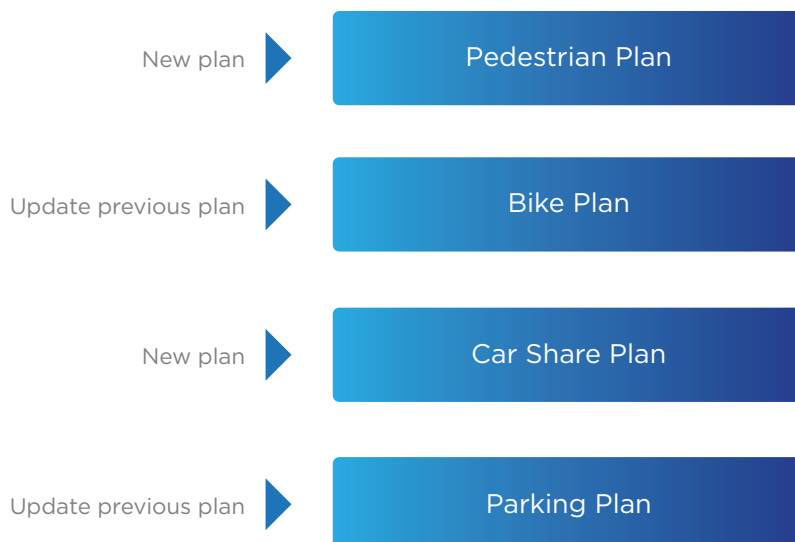
Introduction

Little Collins Street is open to pedestrians between Swanston and Elizabeth Street from 12-2pm each weekday to cater to busy lunchtime crowds.

1 Preface

Fig 1.1 Moving People and Freight, Transport Strategy 2006

The achievements of Moving People and Freight 2006-2020

The City of Melbourne adopted Moving People and Freight 2006-2020 as its transport strategy in 2006. The vision of the strategy was for an integrated and sustainable transport system for getting people to and around the city, and for freight and commercial travel.

The strategy proposed major infrastructure ideas such as an early version of the Melbourne Metro rail tunnel and the Melbourne bike share scheme. Both of these have won State and Federal Government support.

It launched planning and capital works by the City of Melbourne including the new bus lanes on Queen and Lonsdale Streets, an amendment to the Melbourne Planning Scheme to enable lower rates of car parking provision in new residential developments, better management of on-street resident parking, expanded car sharing facilities, improved cycle times for pedestrians at traffic signals in the Hoddle Grid area and extension of bicycle lanes including dedicated lanes.

Melbourne's changing transport environment

In 2012 the vision of Moving People and Freight 2006-2020 and its strategic directions remains relevant. In the six years since its adoption, however, there have been significant developments in transport in Melbourne — stronger than expected growth in public transport use, walking and cycling, increasing costs of congestion on both road and public transport,

new Victorian State Government transport policy and legislation, and the implementation of major new transport infrastructure.

This update of Moving People and Freight 2006-2020 is a response to these new transport developments and it extends the horizon of the strategy to 2030. The update also aligns with the City of Melbourne's new strategic urban growth and development perspective set out in its Municipal Strategic Statement and associated structure plans for the urban renewal areas of the municipality.

City of Melbourne policy

Future Melbourne 2008

Future Melbourne (2008) was developed as the community's plan for Melbourne. Its overall vision was for Melbourne to grow as a global city, and as one of the top ten most liveable and sustainable cities in the world. To realise this vision it set out a framework of objectives grouped under six main goals:

- A city for people
- A creative city
- A prosperous city
- A city of knowledge
- An eco-city
- A connected city.

This review and update of Moving People and Freight 2006-2020 incorporates the Future Melbourne's connected city goal: 'for all people to be able to move about freely, to communicate and trade locally, regionally and globally, without sacrificing essential social or ecological values.' The Future Melbourne's Connected City target is for 90 per cent of people

working in the Melbourne CBD to arrive by public transport, cycling or walking in 2020 — up from 72 per cent in 2006.

Council Plan 2008-2013

Council has adopted many of the Future Melbourne goals in its Council Plan 2008-2013.

Council policies and strategies

A range of council policies and strategies and plans are in place. These have all been developed within the framework of Future Melbourne since 2008.

Municipal Strategic Statement

The City of Melbourne's new Municipal Strategic Statement is a plan for the growth and development of the municipality over the next 20 to 30 years. This growth will see significant increases in resident, worker and visitor populations in the municipality. The plan identifies the need to expand and upgrade transport to service the city's future urban renewal areas, Central City growth and links to the inner west and Footscray Central Activities Area.

Planning for urban renewal

Structure plans for urban renewal are being developed in line with the Municipal Strategic Statement. The City of Melbourne has recently developed plans for Southbank, City North (south Parkville area) and Arden-Macaulay (industrial land in North Melbourne/

Kensington). State Government is leading comparable planning for urban renewal in Docklands, E-Gate and Port Melbourne. All of these plans have identified new transport directions and developments in these areas.

Another area which will see significant growth is the Hoddle Grid area of the Central City. Here one of the major new directions has been the City of Melbourne's redevelopment of Swanston Street to accommodate the high levels of tram, pedestrian and bicycle activity in the street.

Inner Melbourne Action Plan

The Inner Melbourne Action Plan was adopted by its members (the Cities of Melbourne, Yarra, Port Phillip and Stonnington and VicUrban) in 2005, with a 10 year plan to make Melbourne more liveable. Since then its strategies include:

- linking and improving transport routes
- minimising traffic congestion and increasing public transport use
- supporting planned residential growth and housing choice
- developing the inner city's distinctive activity centres
- business investment and tourism; and
- linking regional open spaces.

Victorian State Government policy and legislation

Key policies and strategies from the previous State Government included the East West Link Needs Assessment (2008), the Victorian Transport Plan (2009) and Shaping Melbourne's Freight Future (2010). Based on these, a number of major transport projects have been planned, including the Melbourne Metro Rail, the Regional Rail Link (under construction) and planning for the Port of Melbourne and the Melbourne Freight Terminal.

The previous government also updated its Metropolitan Strategy with Melbourne @ 5 million (2008), and developed the Victorian Cycling Strategy (2009) and the Pedestrian Access Strategy (2010).

Under the current State Government a new metropolitan strategy is expected in 2012-2013.

The Victorian Transport Integration Act (2010)

The new Transport Integration Act (2010) requires the transport system to be planned as a single system performing multiple tasks rather than as separate transport modes. Its core focus is integration and sustainability.

The City of Melbourne is required to have regard for the objectives and decision-making principles of the Act. The transport system objectives of the Act are to achieve social and economic inclusion, economic prosperity, environmental sustainability, integration of transport and land use, efficiency, coordination and reliability, safety, health and wellbeing.

The Act prescribes principles that support integrated decision-making;

- triple bottom line assessment
- social equity
- a user perspective of the transport system
- a precautionary approach
- stakeholder engagement
- community participation; and
- transparency.

The City of Melbourne's transport and land use policies align with these principles and objectives and the City of Melbourne will use them when making transport and land use decisions.

There have been other legislative changes since 2006 which will continue to have an impact on the planning and delivery of transport services and infrastructure in Victoria, such as the Climate Change Act (2010).

Victoria's Submission to Infrastructure Australia

The November 2011 Victorian Government submission to Infrastructure Australia represents the most complete view of the current State government priorities in transport. It was developed in the context of increasing demand on our transport networks, a growing freight task, declining productivity growth across the economy, escalating construction costs and a tight fiscal environment.

The submission presents current State Government priority projects in the following framework:

- Strategic city-shaping projects that would increase capacity at

the core of the transport network

- Maximising the efficient use of existing infrastructure
- Unlocking opportunities for integrated urban renewal in Melbourne

The centrepiece of the submission is the Melbourne Metro project, a rail tunnel from South Kensington to South Yarra. It includes an additional pair of tracks through central Melbourne in a 9km tunnel and five new stations at Arden, Parkville, CBD North, CBD South and Domain.

The following projects are included in the submission, many of which are of significance to the City of Melbourne and contribute to achieving the vision outlined in this strategy.

Planning and Development

- East West Link
- Port of Hastings
- Dandenong Rail Capacity program
- Avalon Airport Rail Link
- High Capacity Signalling
- Removing Level Crossings
- Western Interstate Freight Terminal
- Integrated Urban Renewal

Delivery

- Melbourne Metro
- National Managed Motorways
- Tram Route 86
- Green Triangle Freight Transport program

Further work

- Doncaster Rail Link Study
- Rowville Rail Link Study
- Melbourne Airport Rail Link Study
- Rail Revival Study
- Upgrade Regional Passenger Lines
- Metropolitan Intermodal System
- Truck Action Plan

Australian Government policy and legislation

Infrastructure Australia

The Australian Government established Infrastructure Australia and the Major Cities Unit in 2008 under the Department of Infrastructure and Transport to raise the profile and improve the coordination of Australian city planning and development.

The Major Cities Unit is setting out the Australian Government's new framework for transport and land use planning. Infrastructure Australia advises the Government on Australia's current and future infrastructure needs; mechanisms for financing infrastructure investments; policy, pricing and regulation and their impacts on investment, and on the efficiency of the delivery, operation and use of national infrastructure networks.

Clean Energy Futures, Carbon Price and Transport

In July 2011, the Federal Government released the 'Clean Energy Future Plan' including the introduction of a carbon price from 1 July 2012. Emissions from domestic aviation, shipping and rail transport will be covered.

However, the carbon price will not apply to fuel used by households in private cars and light on-road commercial vehicles.

The Government will seek to expand the coverage of the carbon price to include heavy on-road vehicles from 1 July 2014.

Trip distance to the City of Melbourne
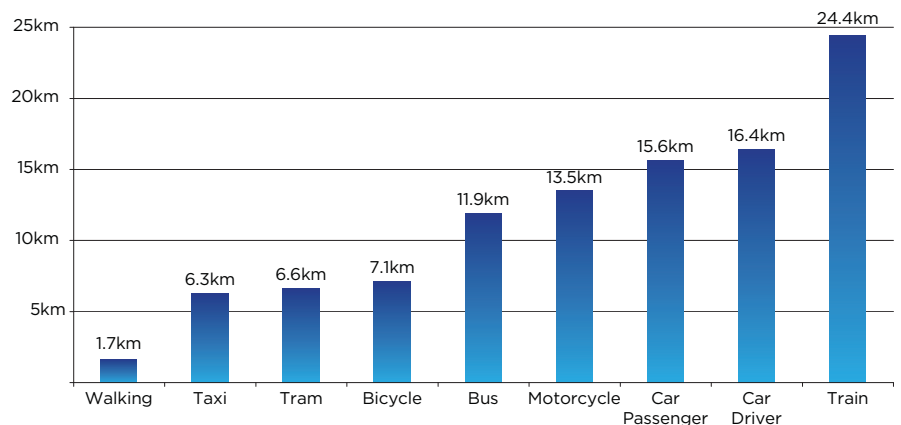### Average weekday trips 2009

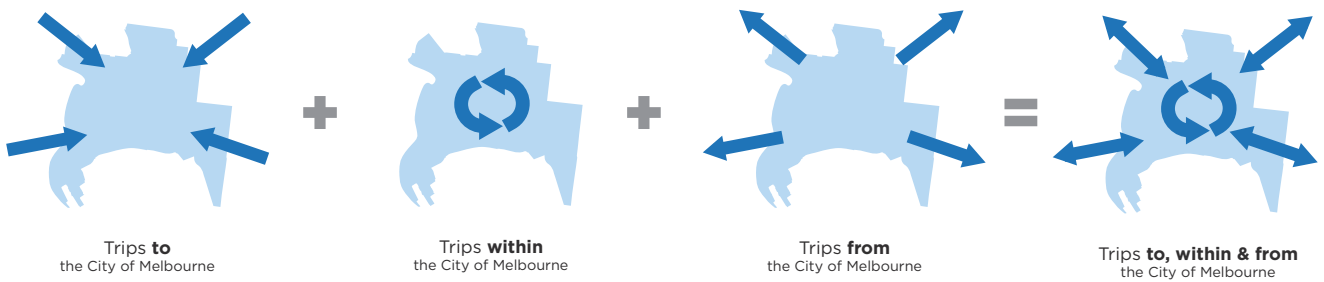| Mode	Distance
Walking	1.7km
Taxi	6.3km
Tram	6.6km
Bicycle	7.1km
Bus	11.9km
Motorcycle	13.5km
Car Passenger	15.6km
Car Driver	16.4km
Train	24.4km

Source: VISTA 2009

Fig 1.2

Trips **to**
the City of Melbourne

Trips **within**
the City of Melbourne

Trips **from**
the City of Melbourne

Trips **to, within & from**
the City of Melbourne

Total trips to, within and from the City of Melbourne
Weekday current, forecast growth and target mode share

2009
Figure
2,072,137

Forecast Growth
& Target Share
3,339,225

Walking
20% (400,598)

Walking
30% (1,001,766)

Cycling
4% (81,534)

Cycling
10% (333,922)

Private Car
39% (833,729)

Private Car
20% (667,844)

Public Transport
36% (756,276)

Public Transport
40% (1,335,688)

4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
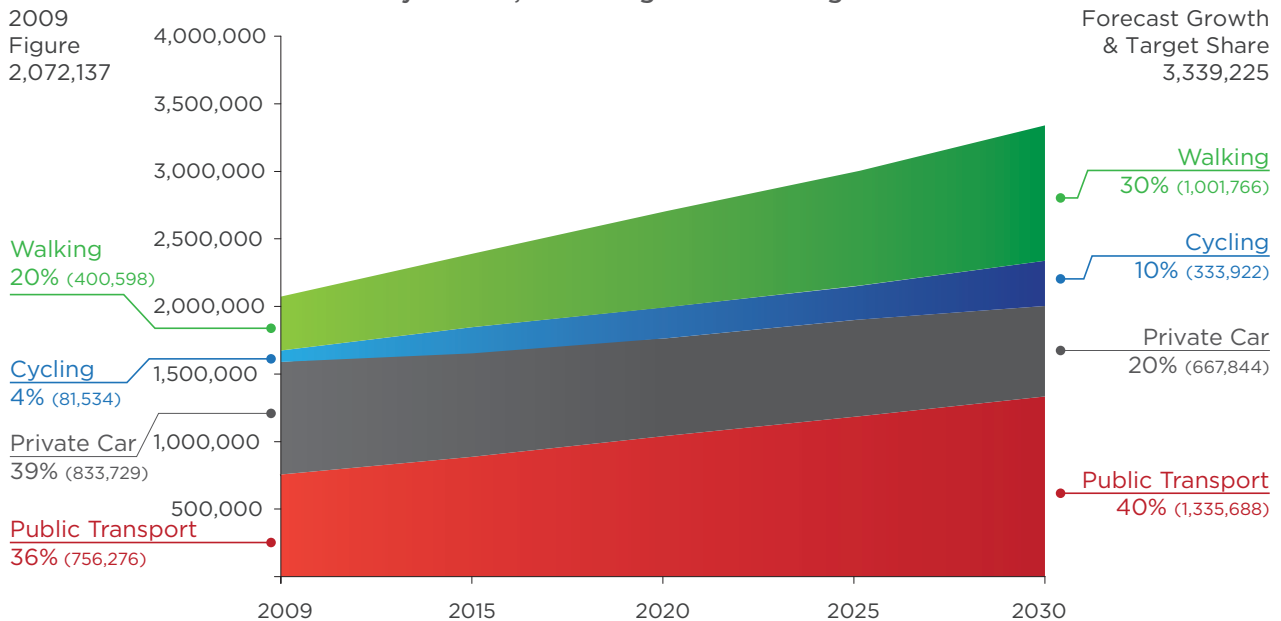1,000,000
500,000

2009   2015   2020   2025   2030

Figure 1.3

*Source: 2009 mode share, Victorian Integrated Survey of Travel and Activity,
Department of Transport*

*Weekday 2010 population & 2030 forecast, Central City User Survey, daily population
estimates and forecasts model, 2011, City of Melbourne City research branch. 2030
amount of trips is based on current level of trips per person per day*

Transport patterns in Melbourne

This strategy sets targets for the movement of people in Melbourne. The targets are for:

- Trips to the City of Melbourne;
- Trips from the City of Melbourne;
- Trips within the City of Melbourne;

According to the Victorian Integrated Survey of Travel and Activity, in 2009 there were around 2.1 million trips per day to, from and within the City of Melbourne. This number is predicted to increase to around 3.3 million trips by 2030 as more people come to live, work and play in the city.

The following graph shows the modes by which those trips were made in 2009 and the mode share targets for 2030.

High level targets

By 2020

- 90 per cent of all commuter trips to the CBD will be by public transport, cycling or walking — the 2006 journey to work census figure was 72 per cent.

By 2030

- 80 per cent of all trips to the City of Melbourne will be by public transport, cycling or walking — the latest Victorian Integrated Survey of Travel and Activity (VISTA) 2009 figure is 50.9 per cent.
- Bicycle use will increase by 400 per cent from 4 per cent to 12 per cent of all trips.
- 95 per cent of all trips within the municipality will be by public transport cycling and walking — the latest VISTA 2009 figure is 84 per cent.
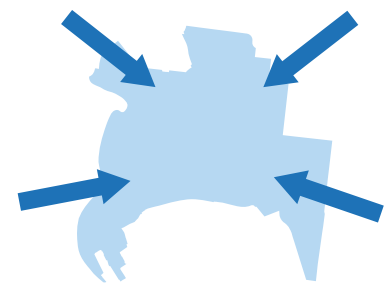
Trips **to**
City of Melbourne

Trips **within**
City of Melbourne

Figure 1.4 & 1.5 (right)

Source: 2009 mode share, Victorian Integrated Survey of Travel and Activity, Department of Transport. This does not include commercial deliveries.

Weekday 2010 population & 2030 projection based on Central City User Survey, daily population estimates and forecasts model, 2011, City of Melbourne City research branch

2030 amount of trips is based on current level of trips per person per day

Weekday trips to the Municipality
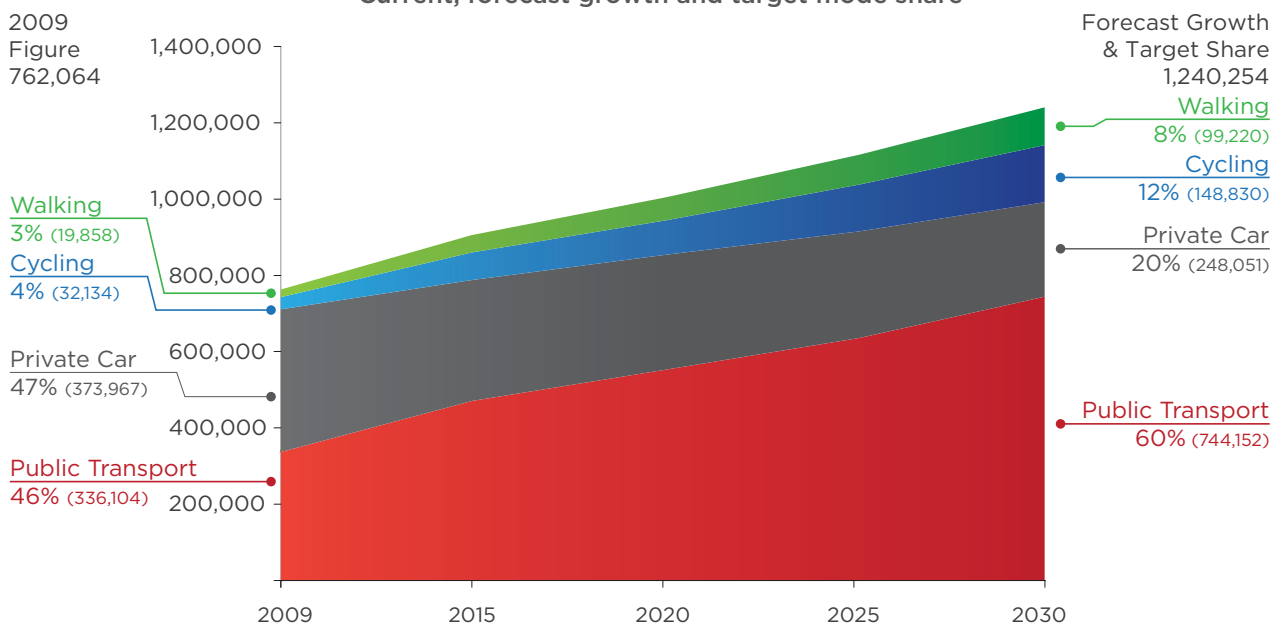## Current, forecast growth and target mode share

2009
Figure
762,064

Forecast Growth
& Target Share
1,240,254

Walking
8% (99,220)

Cycling
12% (148,830)

Private Car
20% (248,051)

Walking
3% (19,858)

Cycling
4% (32,134)

Private Car
47% (373,967)

Public Transport
46% (336,104)

Public Transport
60% (744,152)

1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000

2009   2015   2020   2025   2030

Figure 1.3

Weekday trips within the Municipality
Current, forecast growth and target mode share

2009
Figure
549,112

Forecast Growth
& Target Share
853,814

Walking
66% (359,958)

Walking
69% (589,132)

Cycling
3% (16,932)

Cycling
8% (68,305)

Private Car
15% (81,114)

Private Car
5% (42,691)

Public Transport
16% (91,107)

Public Transport
18% (153,687)

900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000

2009   2015   2020   2025   2030
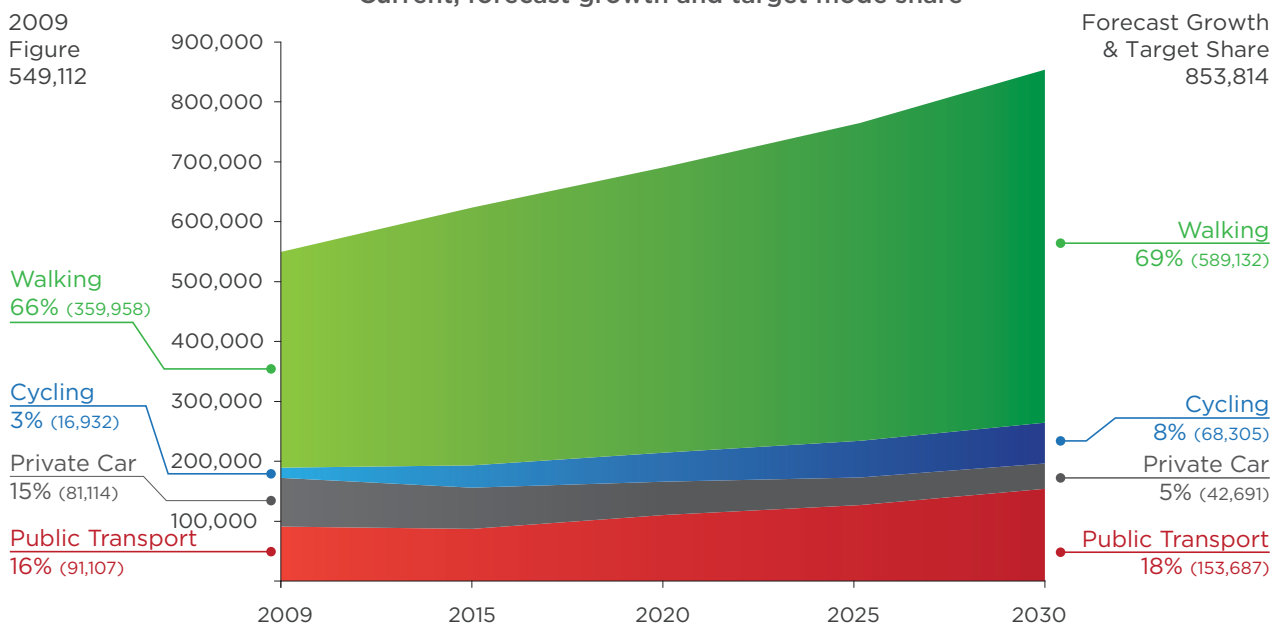
Figure 1.4

Car trips by purpose
To the City of Melbourne 2009

Change mode <1%
Recreational 3%
6% With someone
3% Shopping
1% Pickup/delivery
Social 13%
8% Pickup/dropoff someone
Personal 6%
2% Education
Work 57%
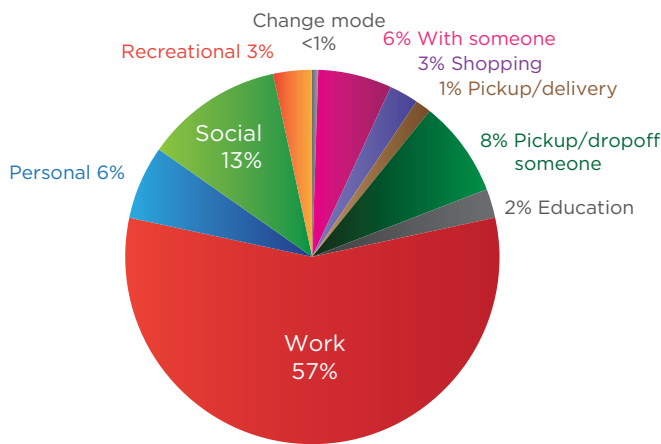
Source: VISTA 2009

Fig 1.6 Average weekday car driver and passenger trips to the City of Melbourne by purpose 2009. This does not include commercial deliveries.
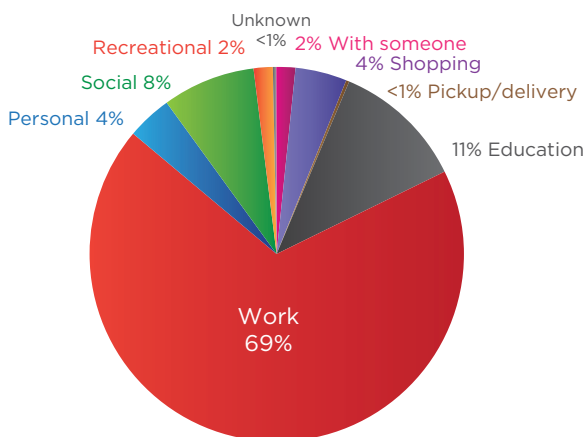
Public Transport trips by purpose
To the City of Melbourne 2009

Unknown <1%
Recreational 2%
2% With someone
4% Shopping
Social 8%
<1% Pickup/delivery
Personal 4%
11% Education
Work 69%

Source: VISTA 2009

Fig 1.7 Average weekday public transport trips to the City of Melbourne by purpose 2009. This does not include commercial deliveries.

Policy targets

By 2016 (the term of the 2012-2016 Melbourne City Council):

Bicycles

- Bicycles trips account for 12 per cent of trips to the municipality and six per cent of all trips within the municipality — the latest VISTA 2009 figure for each was four per cent.
- Planning scheme is amended to increase provision of off-street bicycle parking in inner Melbourne.
- 30 new on-street bicycle parking corrals are installed.
- Two fully-connected east-west and two north-south separated bicycle routes are constructed in the Hoddle Grid.
- A map of the quality of the inner Melbourne bicycle network is published regularly.

Pedestrians

- Pedestrians account for six per cent of trips to the municipality — the VISTA 2009 figure was 2.6 per cent — and 80 per cent of all trips within the municipality — the Vista 2009 figure was 65.6 per cent.
- Master plans are completed to maximise pedestrian access to key public transport nodes including all City Loop and Melbourne Metro 1 stations, and key trams stops.
- Pedestrians are given priority in traffic signal operation at all key intersections in the Central City.
- Pedestrian death or major trauma from road accidents is reduced by 25 per cent.

Cars

- Review car parking rate controls in the Melbourne Planning Scheme for non-residential uses outside the Capital City Zone.
- A minimum of 300 on-street car share spaces are installed in the City of Melbourne, of which 50 are in the Hoddle Grid.
- 40 kph is implemented as the speed limit in central Melbourne.
- New network operating plan is approved and 50 per cent of Hoddle Grid signals are changed to prioritise efficient transport modes.

Trains

- Construction has commenced on the Melbourne Metro line.
- Regional Rail Link is complete and operating.
- Peak hour (peak direction) train frequency is increased by more than 50 per cent from the current 115 services.

Trams

- 90 per cent of tram stops in the municipality are level access stops.
- Average tram speeds in the municipality are increased by 20 per cent and reliability is improved due to signal priority, level access stops and tram lanes.
- Tram frequency is increased to a minimum of 10 minute frequencies, where these levels are not currently met.

Buses

- Queen Street and Lonsdale Street are optimised to reduce bus travel times by 30 per cent

in the city and improve reliability.
- Blue Orbital (inner metropolitan) SmartBus route is operating.

Governance

- Transport and land use systems in central Melbourne are being planned and managed in a transparent and integrated manner, with the participation of key agencies including the Department of Transport, Department of Planning and Community Development, VicRoads, the City of Melbourne and others.
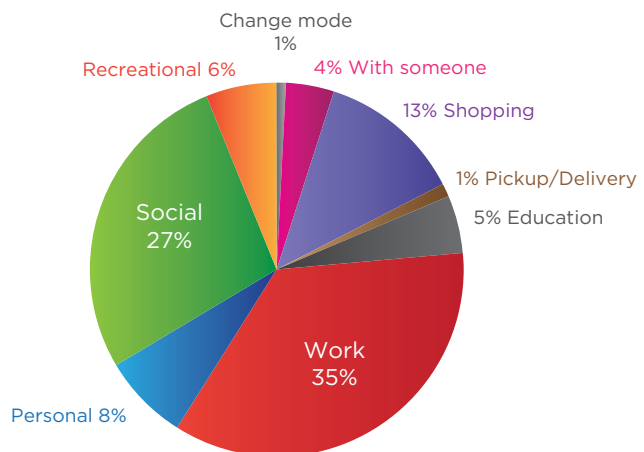- A program of enforcement is improving the operation of on-road public transport in Melbourne.

Data

- A Melbourne Transport Account is published regularly, indicating progress towards

strategic transport goals for central Melbourne.

Communications

- A coordinated communications campaign is informing travellers about appropriate travel choices and behaviours in Melbourne.

Walking trips by purpose
Within the City of Melbourne 2009

Change mode 1%
Recreational 6%
4% With someone
13% Shopping
1% Pickup/Delivery
5% Education
Social 27%
Work 35%
Personal 8%

Source: VISTA 2009

Fig 1.8 Weekday walking trips within the City of Melbourne by purpose 2009. This does not include commercial deliveries.

2 Making Melbourne a connected city

Planning for future growth

The metropolitan growth trend in the west

Metropolitan Melbourne is a sprawling metropolis of 7,700 square kilometres with a population of just over four million. There are five outer metropolitan economic sub-regions surrounding the inner metropolitan region. The inner region includes the municipality of Melbourne, the area immediately outside the municipality and the middle eastern and southern suburbs.

Metropolitan growth has been skewed to the east and south east of the central city.[1] The highest concentration of jobs is along the inner south eastern corridor from the central city to approximately Clayton. This concentration of jobs is enabled by a rich infrastructure of roads, rail and tram which provides businesses with a high degree of accessibility.

Metropolitan Melbourne's growth by one million people by 2030 is expected to occur mainly in the western half of the metropolis. One of the key challenges for metropolitan planning is matching this residential growth with jobs growth in the west.

Traditionally jobs in the west have been in manufacturing but this sector has been in relative decline and is unlikely to be a major source of future jobs growth. The current and future jobs growth is in the knowledge/service sector. In the west this sector will be fostered by intensive development of the mixed

Fig 2.1 Self contained employment regions. Source: SGS Economics

use activity centres at Footscray, Sunshine, Sydenham and Werribee.

Business growth in these urban centres will require improved transport connections, particularly to provide high levels of accessibility to the employment centre in the central and inner eastern areas. These connections will also give residents in the west better access to jobs in the centre and inner east. Because much of this improved east-west connectivity would be to, and through, the municipality of Melbourne, it is also an important focus of this strategy.

Growth in the municipality of Melbourne

The City of Melbourne has an area of 37.7 square kilometres and a residential population of 96,000. It is the economic and cultural heart of metropolitan Melbourne. Each workday about 787,000 people travel into the municipality to work, study and visit. Most come into the central city, an intensive activity area of 15 square km. Over the last 20 years this area has expanded from the Hoddle Grid area (the traditional CBD) to include Southbank and Docklands.

The growth surge in the municipality which began in the 1980s is predicted to see a doubling of the residential

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1 The metropolitan population is centred 10km south east of the Central City at Glen Iris.

population to 180,000, and an increase of more than 110,000 jobs (currently 430,000) by 2030. The number of people coming into the municipality each weekday for work, recreation, education, and other purposes is expected to grow from 787,000 in 2011 to over 1.2 million per day by 2030.

The City of Melbourne is planning for much of this growth to be accommodated by intensified development of urban renewal areas within the municipality. These areas will need to be serviced by efficient and effective transport locally and to the wider metropolitan and inner metropolitan regions.

The aim of this strategy is to ensure that access and mobility to and around the City of Melbourne meets future demands, while improving prosperity, sustainability and liveability.

Economic prosperity

The economic importance of the municipality of Melbourne

The City of Melbourne is Victoria's capital city municipality and primary business and activity destination. Twenty one per cent of Victorian jobs, are located in the municipality, and 40 per cent in inner Melbourne. The municipality is an international hub for trade, business, retailing, education, science, arts, culture, freight logistics and industry.

The municipality's productivity is essential for the prosperity of Melbourne, Victoria and the nation. In 2008, the gross local product of the municipality was an estimated $45 billion, approximately 24 per cent of the gross state product (GSP) of the
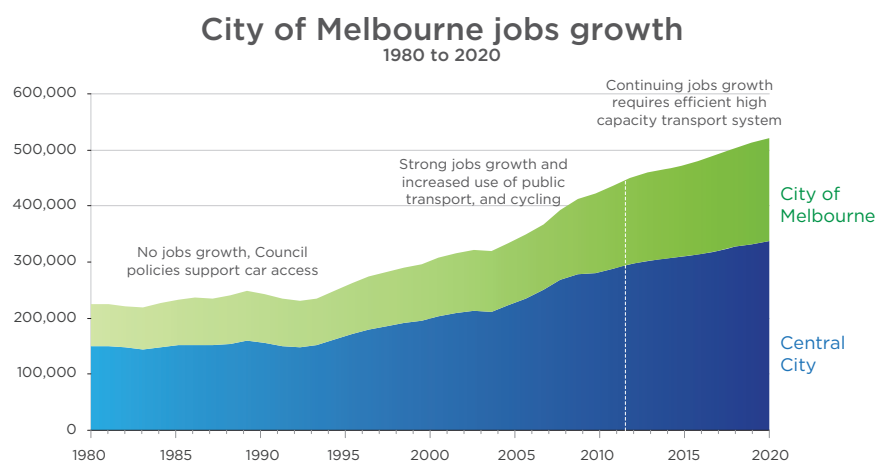
City of Melbourne jobs growth
1980 to 2020

Fig 2.2 City of Melbourne jobs growth 1980-2020

Melbourne Statistical Division and 18.5 per cent of Victoria's GSP.

The knowledge/services economy enabled by excellent transport

Melbourne's decline in manufacturing competitiveness has been compensated by the growth of its new knowledge/service economy.

Knowledge/service sector businesses seek to agglomerate in dense urban locations, enabled by high levels of transport accessibility, because this results in greater economies of operation, increased rates of knowledge transfer and innovation, and higher levels of specialisation. This is why the municipality is an attractive location for this sector.

Melbourne's central city is the hub of Victoria's knowledge/services economy with finance, insurance, personal, property and business
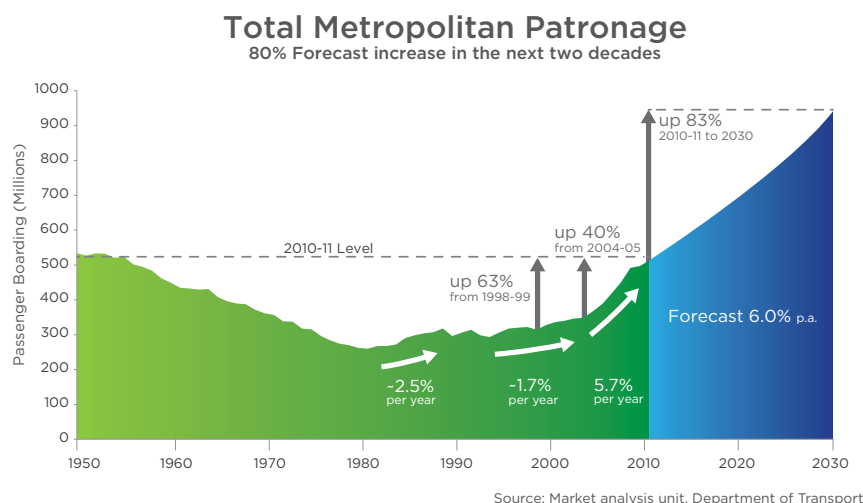
Total Metropolitan Patronage
80% Forecast increase in the next two decades

Source: Market analysis unit, Department of Transport

Fig 2.3 Department of Transport total metropolitan public transport patronage

Work trips by mode
To the City of Melbourne 2009

Bus 2%
Tram 10%
40% Vehicle Driver
Train 37%
Taxi 1%
Bicycle 5%
1% Walking
1% Motorcycle
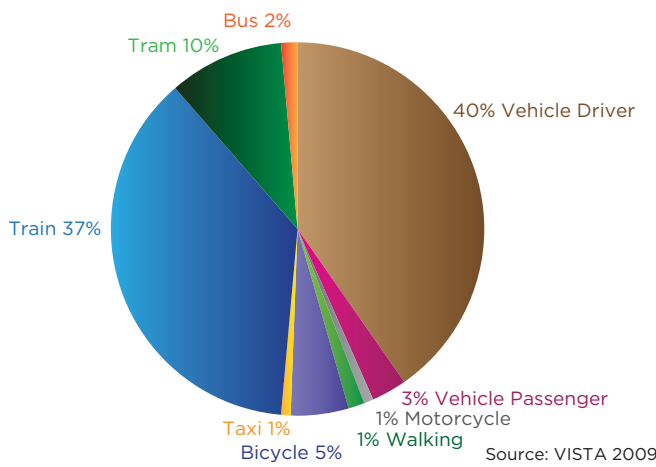3% Vehicle Passenger
Source: VISTA 2009

Fig 2.4 Weekday work trips to the City of Melbourne by mode 2009

services. Jobs in these areas are forecast to grow and the central city footprint must expand to accommodate this growth.

Transport enabled agglomeration can be measured by Effective Job Density (EJD)[2] . EJD maps the density of businesses and their degree of connectedness to other businesses and the labour market pool. Metropolitan Melbourne's highest EJD area is in the inner

metropolitan region, with the peak in the municipality of Melbourne. This high EJD is achieved by the accessibility afforded to businesses by the private and public transport services in these areas.

In past decades, the car has been the dominant enabler of this accessibility. Train and tram services and walking however, are growing in importance because they are better at servicing this high density agglomeration. These modes are also needed to underpin the expansion of the central city to the inner west of the municipality, the Footscray Central Activities Area and subsidiary centres in the west.

Melbourne as a 24-hour city

Over the past decade the city has attracted a diverse and vibrant mix of residents, visitors and business using the city 24 hours a day, seven days a week.

This has underpinned economic and cultural development and has seen the city develop into an internationally recognised location in which to live, work, visit and socialise.

Melbourne's vibrant night-time economy is a major contributor to its status as a world leading cultural city. However, as the city stays awake longer, there is a need to make policy and operational decisions to manage the competing demands of the groups who visit the city, as well as those who live and work there.

Liveability and social inclusion

Since the 1990s, 30,000 new residents have come to live in the municipality. Most of this new residential population is living in high density apartment

Work trips by mode
Within the City of Melbourne 2009

Tram 17%
12% Vehicle Driver
Train 2%
2% Vehicle Passenger
Taxi 1%
<1% Motorcycle
Bicycle 4%
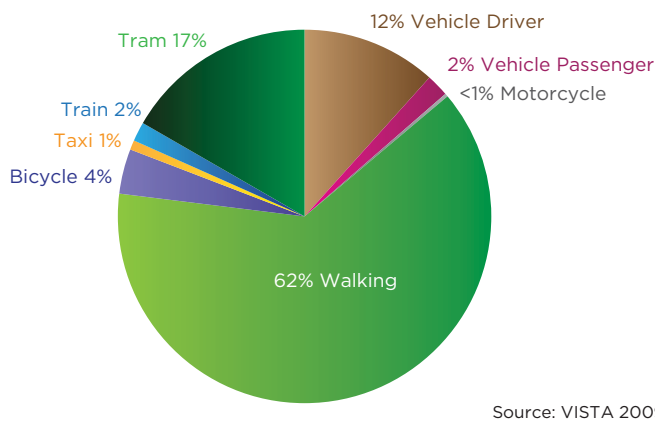62% Walking
Source: VISTA 2009

Fig 2.5 Weekday work trips within the City of Melbourne by mode 2009

2 *SGS Economics & Planning (2010) Employment Land Study; Kensington North Melbourne, for the City of Melbourne*

Effective Jobs Density
Inner City, all transport modes

Very High
High
Moderate
Low
Very Low

1km

Effective Jobs Density
Metropolitan, public transport only

1km

Effective Jobs Density
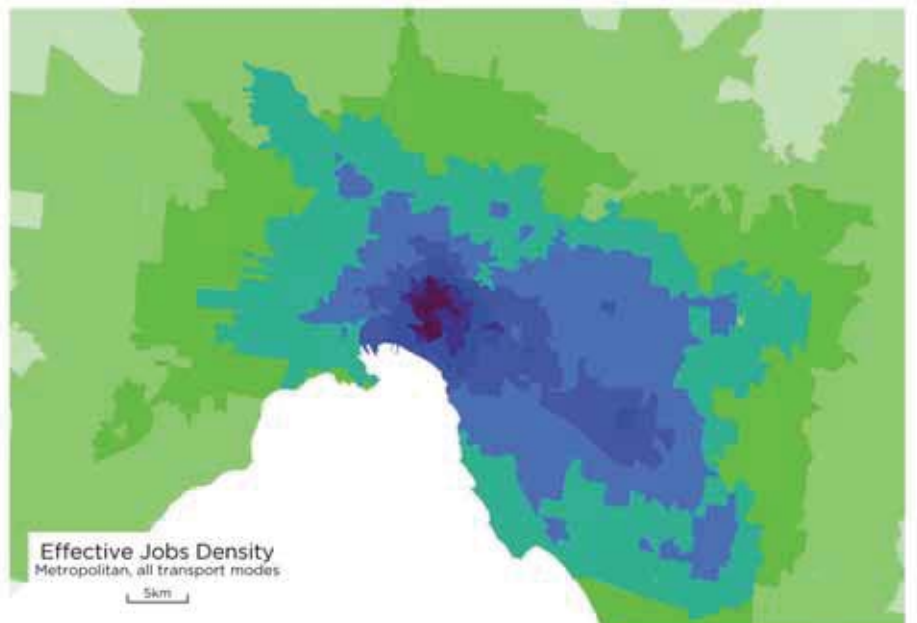Metropolitan, all transport modes

5km

Fig 2.5 Effective Jobs Density Source: SGS Economics

dwellings, 20,000 in the central city. These residents are attracted to live in the city for many of the same reasons as business – close access to a very wide range of employment, social, entertainment, shopping, cultural, recreational and transport opportunities and services. Residents of public housing make up 10 per cent of dwellings in the municipality.

Most residents in the municipality have access to tram, train and bus services that provide them with above average public transport accessibility and 69 per cent of all trips in the municipality are by walking.

A very high proportion of apartment residents in the municipality's two main urban renewal areas walk to work – 34 per cent in Docklands and 48 per cent in Southbank. Future urban renewal will be designed to provide similar or better levels of access by public transport, walking and cycling.

Disability access

Approximately 18 per cent of the Victorian population has some form of disability. This strategy incorporates the City of Melbourne's policy commitments[3] to ensure access to the municipality's publicly accessible spaces and places for all abilities and ages.

The Disability Discrimination Act (DDA) requires 90 per cent of the public transport system to be compliant with the act by 2017. This strategy incorporates these objectives to ensure those with disabilities can access train, trams and buses. DDA compliant access also means quicker and easier
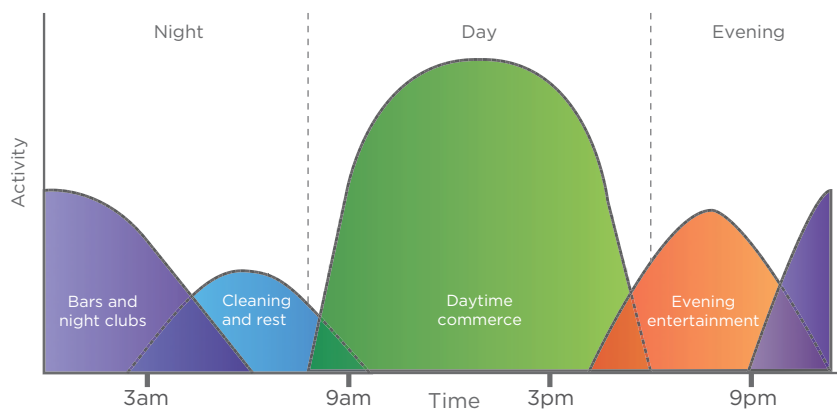
Melbourne as a 24 hour City

Fig 2.4 City of Melbourne 24-hour city rhythms.

access for able bodied users and for users with pushers and trolleys.

Equitable access to the central city

Residents and businesses in Melbourne's inner and middle eastern suburbs have above average to very good access to the municipality and central city. With most metropolitan growth likely to occur in the west, significantly improved transport connections from the west to the central city and to the inner and middle east are needed to provide residents and businesses in the west with more equitable access to the high density of jobs and services in those areas.

Transport and Health

Transport consequences for human health are varied and range from direct effects like noise and air pollution to less direct effects such as more sedentary lifestyles. The benefits of addressing these issues are spread across health, environment and transport which create a challenge for integrated and coordinated responses from government.

Physical activity

There are significant benefits to increased physical activity and transport provides a major opportunity to increase physical activity through increased levels of walking and cycling. Creating the conditions in which healthy lifestyles become embedded in our social and physical infrastructure is a key step in addressing these issues.

Air quality

Transport is a major source of urban air pollution which in turn imposes significant health impacts on the community. Human health effects range from mild respiratory effects, through to asthma, cardiovascular conditions and premature mortality. Despite substantial reductions in the levels of many ambient air pollutants, several remain of policy concern. These are particulates and the precursors to photochemical smog—nitrogen oxides and volatile organic compounds. Motor vehicles are the major source of

the precursors to photochemical smog in Australian capital cities.[4]

Environmental sustainability

The transport integration act requires that the transport system actively contribute to environmental sustainability by protecting the natural environment, minimising harm to the broader environment, promoting more sustainable modes of transport and improving the environmental performance of all modes of transport.

This can be achieved by:

- adapting the transport system to a changing climate
- ensuring transport infrastructure practices are resource-efficient and environmentally friendly
- reducing travel distances
- increasing the use of environmentally sustainable transport
- ensuring all forms of transport are more resource efficient and environmentally friendly.

Transport emissions

Transport emissions are the result of the quantity and type of transport being used. There are many kinds of emissions that have a significant effect on human health and the environment. Substantial growth in the demand for travel in Victoria is predicted over the coming decades. This growth must be accompanied by a shift to low emissions modes of transport and an improvement in

4 Bureau of Transport and Regional Economics (2005). Health impacts of transport emissions in Australia: economic costs. Canberra, Department of Transport and Regional Services.

Transport emissions in 2009
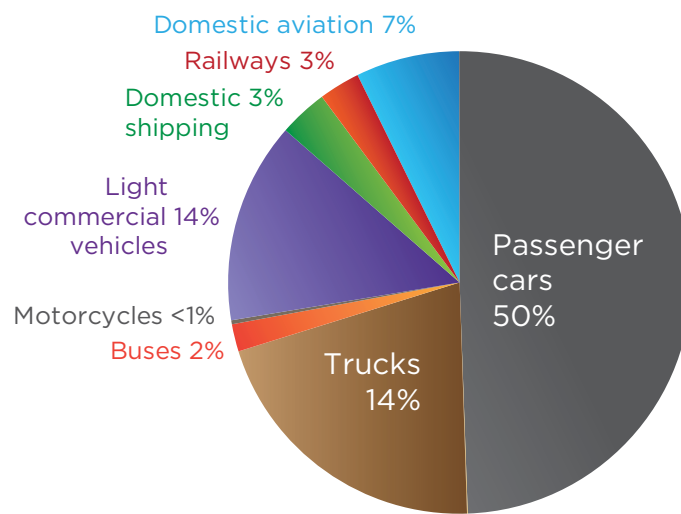
Source: Department of Climate Change and Energy Efficiency

Fig 2.6 Transport emissions

vehicle fuel efficiency to prevent a significant increase in emissions.

Greenhouse emissions

A framework for reducing greenhouse gas emissions (GHG) associated with the municipality is set out in the City of Melbourne's Zero Net Emissions by 2020 (Update 2008).

Transport emissions associated with the municipality of Melbourne accounted for 20 per cent of all GHG emissions in 2005–06 and this is predicted to grow by 61 per cent by 2020. Passenger transport (road and rail) accounts for 12 per cent of total emissions, with freight at 8 per cent.

The focus of transport solutions in the Zero Net Emissions strategy is on passenger transport. Passenger cars are the largest contributors to transport emissions. The primary source of passenger transport

emission reduction in the short- to medium-term (and which the City of Melbourne can reasonably influence) are policies and actions to facilitate a mode shift away from cars to public transport, cycling and pedestrian options.

Carbon price and transport

The federal government's Clean Energy Future Plan (CEF) includes a carbon price from 1 July 2012. Emissions from domestic aviation, shipping and rail transport will be covered however, the carbon price will not apply to fuel use by households for transport and light on-road commercial vehicles. Insulating private vehicle travel from the carbon price, while applying it to other more sustainable transport, like public transport, may have a negative effect on achieving the mode share targets outlined in this strategy. It is important to begin

moving to low carbon forms of transport sooner rather than later.

The relative impact that the CEF will have on the cost of driving and public transport needs to understood and accounted for. However the combination of a carbon price and volatility in the global price of oil means that transport emissions are likely to become an economic issue as much as an environmental one.

Electric cars

Passenger cars are the largest source of GHG emissions in the transport sector, accounting for almost half of transport emissions in 2009. These emissions are primarily related to vehicle kilometres travelled and the fuel efficiency of the vehicle fleet. Electric cars have lower emissions and are not reliant on petrol for fuel. The higher costs of electric vehicles are expected to reduce over the next 10 to 20 years. Hybrid and fully electric freight vehicles are also expected to play a significant role in the future reducing the pollution and amenity impacts of urban freight.

Electric vehicles appear likely to become more prolific over the next 20 years. This increase will reduce noise and air pollution, however, it will not change the transport characteristics of driving and it will not lower greenhouse gas emissions while Victoria's electricity come from burning brown coal. A combination of train, tram, walking, cycling and reducing the overall need for travel through land use policies will remain intrinsically more energy and logistically efficient for the city's core transport tasks.
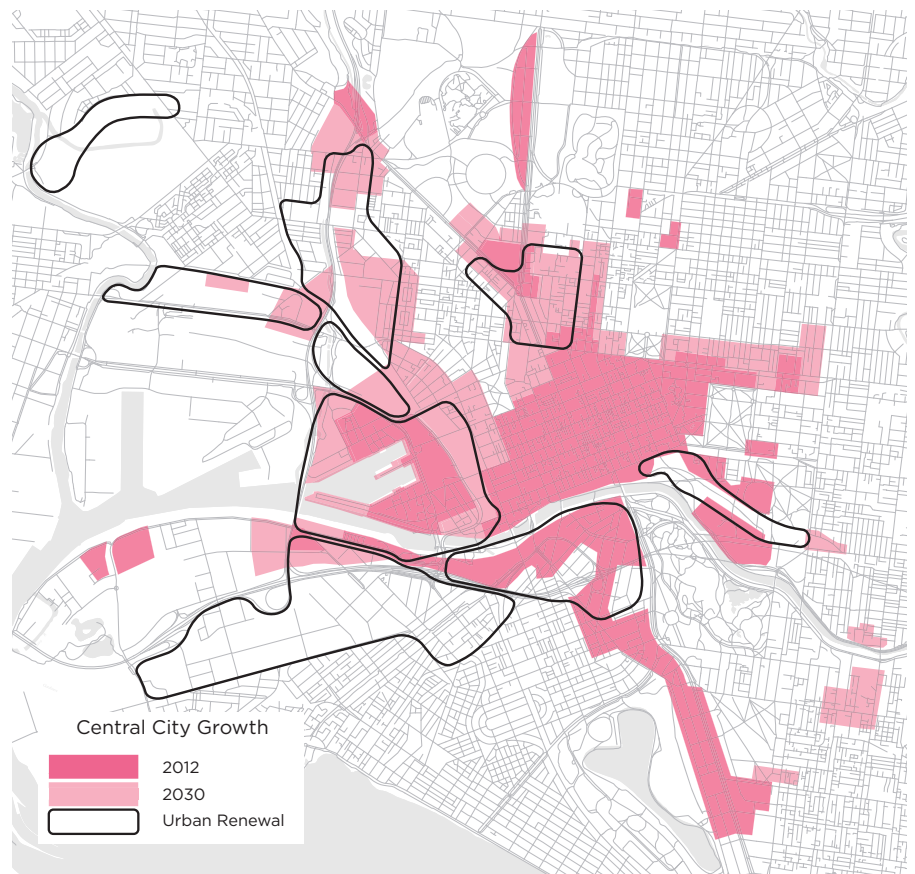

Fig 2.7 Central city growth scenario and urban renewal areas.

Energy cost vulnerability

CSIRO predictions of oil price rises indicate that petrol prices in Australia could be between $2 and $8 per litre if there is a near-term peak in international oil production, resulting in declining future oil supplies[5]. A significant factor behind the surge in public transport patronage during 2006 and 2008 was the rise in petrol prices.

Large residential areas of metropolitan Melbourne are dependant on car access and are therefore vulnerable to oil price rises[6]. This strategy and the Municipal Strategic Statement will increase the provision of urban development that is efficiently serviced by good public transport, and will reduce Melbourne's vulnerability to transport energy cost increases.

5 CSIRO (2008) Fuel for thought: The future of transport fuels: challenges and opportunities. CSIRO Corporate Centre

6 Vampire index, from Dodson, J. & Sipe, N. (2008) Unsettling Suburbia: The New Landscape of Oil and Mortgage Vulnerability in Australian Cities. Griffith University Urban Research Program, Research Paper No. 17

Climate change adaptation

The City of Melbourne developed its Climate Change Adaptation Strategy in 2009. The strategy identifies key risks to the City of Melbourne, several of which have implications for our transport system. They include consideration of the impact of the transport system on the environment as well as how a changing climate will impact on the functioning of the transport system.

Of the key adaptation risks to the City of Melbourne, heat waves, intense rainfall and wind storm events are the most likely to effect our transport systems and are expected increase in intensity and frequency,

Extreme heat can severely impact train and tram networks due to rail infrastructure vulnerability and power supply issues.

The train system is highly interdependent. Failures at one location can quickly impact the whole network. Heat stress can also lead to passenger illness causing significant train delays.

Mitigating the urban heat island effect

Many dense urban environments suffer from the urban heat island effect due to the build up and retention of heat in buildings and pavements during summer. This effect increases the temperatures of hot summer nights in the city by as much as four degrees. It increases air conditioning loads, premature death and the risk of anti-social behaviour. City of Melbourne Climate Change Adaptation Strategy (2009) predicts an increasingly hotter and drier climate for Melbourne
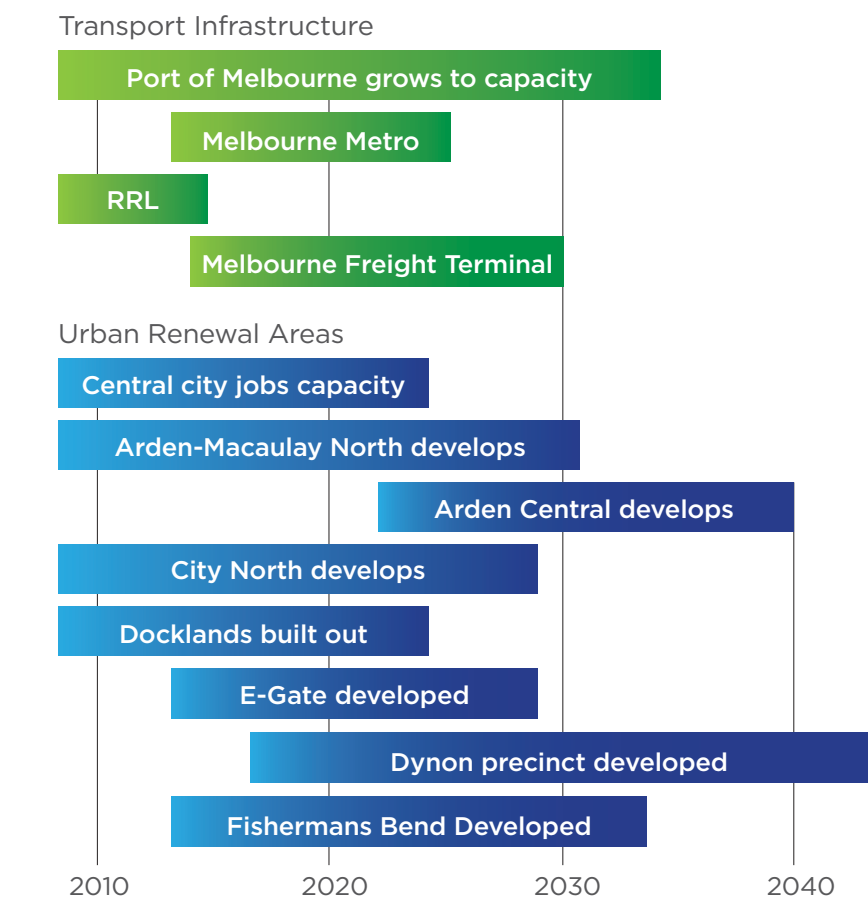

Fig 2.8 Future inner Melbourne land renewal build out scenario

and identifies this effect as one of the key associated risks.

The most effective means of mitigating the effect is by building a functioning healthy urban street tree canopy to provide shade and cooling (by evapotranspiration)[7] to reduce heat absorption and emission from the built environment. During the daytime, the street tree canopy also improves human thermal comfort

in the street for pedestrians and cyclists, and reduces air conditioning loads in vehicles. In this context, street trees play a part in the effectiveness and fuel efficiency of the municipality's transport system. The City of Melbourne's approach to managing its urban forests is outlined in its Urban Forest Strategy 2012-2032.

7 City of Melbourne (2011) draft Urban Forest Strategy; Making a Greener City 2012-2032

Integration of transport and land use

Urban renewal in the municipality

The decline of manufacturing and the rationalisation of freight logistics in the municipality provides significant urban renewal opportunities. This enabled development of Southbank and Docklands. Within the municipality of Melbourne there remain about 400 hectares of relatively underutilised industrial/freight land close to the central city.

This land provides a significant competitive advantage for Melbourne and Victoria. Through urban renewal it can be activated into new high-density, mixed-use developments as attractive places to live, and productive places for businesses and high value jobs. It can provide space for the central city's continued expansion.

The Municipal Strategic Statement sets out a high-level, integrated transport and land use strategy for accommodating the residential and business growth through the development of the urban renewal areas. The mobility needs of these high-density areas would be primarily served by the space efficient modes of walking, cycling and public transport.

The Municipal Strategic Statement proposes that between now and 2030, land will be developed in Docklands, E-Gate, City North and then into the Arden/Macaulay and Dynon areas. This will form a high-density activity and employment corridor contiguous with the Footscray Central Activity Area.

This transport strategy shows in more detail how the Municipal Strategic Statement urban renewal strategy will be integrated with, and enabled by, the provision of high quality access and mobility infrastructure and services.

Coordination of transport systems

Growth and transport mode shift transition

Since the 1990s, the municipality has moved into a mode shift transition. Rates of driving in Melbourne have generally levelled off since 2003[8]. Between 1990 and 2007 the share of all weekday trips into the municipality made by car declined from 65 per cent to 45 per cent in a context of very strong residential and worker population growth in the same period. Whereas travel by public transport, cycling and walking have all increased. This trend is predicted to continue and is reflected in the 2030 target for public transport, cycling and walking to comprise 80 per cent of all weekday trips to the municipality.

The mode share targets in this strategy for weekday trips into the municipality and for weekday trips within the municipality factor in this population growth.

Effective and integrated public transport

Our definition of public transport includes train, tram, bus, taxi, car share and bike share and, for regional trips, air travel – all cases of the use of a shared vehicle. Government plays a major role through ownership, operation, regulation and coordination of these services.

State Government is largely responsible for running much of the public transport system, but local government, as the land use regulator and the manager of the pedestrian network, has a key role integrating the public transport system with land use development in the municipality and with the walking component of each public transport trip. The City of Melbourne has an additional role as it is at the hub of the public transport system.

Train and tram are the most effective means of moving large numbers of people safely and efficiently. Currently, about the same number of people take public transport to the municipality on a weekday as drive, but this strategy envisages they will account for 60 per cent of these trips by 2030.

The city's transport systems should be useable and navigable by the widest possible cross section of the public -for people from the ages of eight to eighty, men and women and for visitors.

This is a high priority for this strategy and will require a close collaboration between State Government and the City of Melbourne. The key tasks are to significantly upgrade and expand networks and rolling stock, increase the speed, frequency and reliability and provide safe and convenient pedestrian access to and from all stations, stops and interchanges.

Flexible and adaptable private transport

Government, and particularly local government, has a significant role in developing, maintaining and operating the

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8 Newman, P. & Kenworthy, J. (2011) *'Peak Car Use': Understanding the Demise of Automobile Dependence. World Transport, Policy & Practice. Vol. 17.2, June 2011*

road and path network required by pedestrians, cyclists and drivers.

Pedestrians and cyclists are vulnerable road users and their safety is a critical factor. Cycling and walking are also effort-sensitive modes and need to be provided with routes that take this into account: for example the most direct, and least hilly. For this reason, walking and cycling should have as wide an access as possible to the whole road and path network and that network needs to have a fine grain. Walking and cycling are ideal for direct door-to-door trips.

Walking is part of any public transport trip. Together, walking and public transport account for the majority of all weekday trips into and within the municipality, and this is targeted to increase as priority is given to both. Cycling is also a good complement to public transport. It can significantly extend the catchment of rail stations when combined with a rail trip.

Walking will remain a marginal mode for trips into the municipality. Cycling is likely to grow more strongly as the safe cycling network is expanded around and within the municipality.

Driving is predicted to continue to decline as a proportion of weekday trips, as improved public transport increases its share. It is anticipated that driving will also decline in absolute terms, as the tram and bus networks to and through the municipality are provided optimum road priority and pedestrian access. Driving into and within the municipality will become a complementary mode, catering for those more specialist trips that cannot be achieved by public transport, walking or cycling.

Efficient urban freight

The movement of goods and services to and from the municipality is critically important for the city and the state's economy. The two focal areas for freight are the Port of Melbourne and the central city.

The Port of Melbourne is central to Victoria's import and export markets. It is Australia's largest port and continued significant expansion of throughput is predicted up to 2035. This growth requires major infrastructure upgrade of rail and road freight distribution systems.

In the short term this freight growth will be taken up on road. Direct and efficient access to the metropolitan freeway/tollway network will be vital. Longer term, rail capacity will be developed, including the Melbourne Freight terminal south of Dynon Road. Urban renewal around the port and freight terminal precinct will need careful planning to ensure it does not inhibit freight efficient operations.

The central city's intensive land uses require high levels of goods and services deliveries and waste collection. This freight is provided by many different operators, resulting in overall logistics inefficiencies.

This is a large and often intrusive component of traffic on the municipality's roads. This strategy identifies the need to develop more efficient solutions to reduce the overall cost of this freight task and reduce its impact on the roads and general urban amenity.

Better transport information systems

Public transport's customer information user interfaces are extremely important for ease of journey planning, payment, navigation and orientation. Rapid innovation using mobile devices, online journey planning, booking and payment and real time service status information is starting to enable convenient, personalised use of public transport services.

These information systems can now bring together all modes of public transport – rail, tram, bus, taxi, car and bike share – as one integrated service to meet the user's mobility needs. They also allow the public transport planners and managers to work together to optimise the efficiency, running costs and customer orientation of the system.

When integrated with similar advances in real time information and payment systems for drivers, cyclists and pedestrians, the separation between public and private transport begin to dissolve. This empowers users to make informed choices to meet their mobility needs using all the modes at their disposal.

Increasing the deployment of this information technology will be a powerful agent for the behaviour change needed for the modal shift envisaged in this strategy. Improved information systems are also important to manage mass public transport interruptions and failures caused by heatwaves or storm events. These technologies will also revolutionise how those with disabilities can access and navigate city transport.

Increased innovation and implementation of these approaches will require closer collaboration between transport providers and planners and increased data sharing between providers, as well as information technology innovators wherever they are.