City of Melbourne

Daily Population Estimates and Forecasts

2017 Update
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Executive Summary

The City of Melbourne’s Daily Population Estimates and Forecasts is a biennial report produced to provide the latest essential information and data about people travelling to, or being present in, Melbourne municipality on an average weekday and weekend day. This 2017 update is intended to provide insights about what has happened over the past two years and what is most likely to happen in the next two decades. It, in particular, aims to provide answers to the following four critical questions about daily population in the city: (i) how many people are in the city on a typical weekday or weekend day; (ii) who they are; (iii) why they come to the city and (iv) where they come from.

This report is based on a most comprehensive mathematical model yet developed using a wide range of information and data sources. It was first developed and published in 2005 and has been updated biennially since. This 2017 update has benefited from incremental improvements and enhancements in methodology and various most up-to-date data sources.

For the purpose of this report, people travelling to or being present in the city are defined as ‘daily population’. They are grouped into five main categories based on their primary purpose of travel to the city and place of origin. These categories are: (i) residents; (ii) workers; (iii) students; (iv) visitors and (v) under 15 years of age. The visitor category is further divided into metropolitan visitors, regional visitors, interstate visitors and international visitors according to their place of residence.

This report reveals that daily population to Melbourne continued to grow over the past two year. It is estimated that in 2016 there were approximately 911,000 people, 53,000 more than two years ago, in the city on an average weekday. This represents a 6.2 per cent increase in total. The growth occurred across all daily population categories and in a snapshot in 2016 there were:

- 148,000 residents, including under 15 years of age children, living in the city – up by 14.5 per cent
- 381,000 workers travelling to work or to undertake work related activities in the city on an average weekday – up by 1.3 per cent
- 78,000 students travelling to study or to undertake study related activities in the city on an average weekday – up by 9.8 per cent
- 170,000 metropolitan visitors travelling to the city for visit purpose, non-work or non-study, on an average weekday – up by 4.3 per cent
- 14,000 regional Victoria visitors travelling to the city for visit purpose, non-work or non-study, on an average weekday – up by 12.1 per cent
- 35,000 interstate visitors travelling to the city on an average weekday – up by 14.9 per cent
- 53,000 international visitors travelling to the city on an average weekday – up by 17.0 per cent
- 32,000 children under 15 years of age travelling to the city on an average weekday – up by 5.6 per cent

The above growth suggests that Melbourne continues to be a great place to live, work, study, play and socialise. If this is to continue into the future, the report offers a preview of Melbourne in the next 20 years that challenges us to consider planning now for what is shaping up to be a major growth period in all daily population categories. The annual percentage growth rate alone speaks for itself and suggests the following annual growth rates over the next 20 years: resident population – 2.9 per cent to reach 263,000; workers – 1.8 per cent to reach 549,000; higher education students – 2.4 per cent to reach 125,000; metropolitan visitors – 0.3 per cent to reach 180,000; regional visitors – 1.1 per cent to reach 17,000; interstate visitors – 2.6 per cent to reach 59,000; international visitors – 5.6 per cent to reach 159,000 and under 15 years of age children – 2.2 per cent to reach 50,000.

The above numbers add up to 1.4 million people in the city on an average weekday by 2036. This clearly suggests a need for all internal and external stakeholders to continue to adopt and improve a
long-term strategy for planning, policy development and service provision (including emergency preparedness). It will require this kind of far-sighted vision to maintain and enhance Melbourne’s reputation as a harmonious and safe place for work, business, study, visit, socialising and entertainment.

The daily population estimates and forecasts report is developed using a wide range of following datasets and reports:

- Australian Bureau of Statistics (ABS) Population Census 2011
- Australian Bureau of Statistics (ABS) Revised Estimated Resident Population
- City of Melbourne Census of Land Use and Employment (CLUE)
- Victorian Integrated Survey of Travel and Activity (VISTA)
- National Visitors Survey (NVS)
- International Visitor Survey (IVS)
- Higher Education Student Statistics
- City of Melbourne Central Melbourne Travel Surveys
- City of Melbourne Pedestrian Counting Data
- City of Melbourne Development Activity Monitor
- City of Melbourne/SGS Employment Forecasting 2016 – 2036
- City of Melbourne’s Forecast Population
- Tourism Research Australia Tourism Forecasts 2016

It therefore rests with numerous assumptions made in those data sources and readers are strongly advised to consult with relevant data sources and reports for further information.
Introduction

Melbourne is a city for people and the City of Melbourne commits itself to make it a great place to live, work and play at every stage of life. ‘People’ in this context goes beyond city residents to cover all who happen to travel to work, study, play, shop, socialise or carry out other activities in the city. Accurate, reliable and up-to-date information and data about these people, therefore, is very useful and important for well-informed decision makings and effective service delivery and planning. In response to the need, the Smart City Office branch has developed the most comprehensive mathematical model yet to estimate and forecast numbers of people travelling to, or being present in, the city. The model was first developed and published in 2005 and has been updated biennially since.

This update 2017 was prepared to provide the latest essential information and data about people travelling to, or being present in, the city, defined as daily population, on an average weekday and weekend day. It has benefited from incremental improvements and enhancements in methodology and the latest data sources.

This report particularly attempts to answer four critical questions about daily population in the city: (i) how many people are in the city on a typical weekday or weekend day; (ii) who they are; (ii) why they come to the city and (iv) where they come from.

Geographic coverage and definitions

In reading this report, it is important to keep in mind the following geographical areas and definitions:

‘Municipality’, ‘city’ or ‘Local Government Area (LGA)’: the area governed by Melbourne City Council, unless otherwise stated. The area consists of Carlton, Docklands, East Melbourne, Kensington (and the Flemington Racecourse), Melbourne, North Melbourne, Parkville, Southbank, South Yarra (east of Punt Road) and West Melbourne (See Figure 1).

‘Central Melbourne Area (CMA)’: the area comprising the Central Business District (CBD) including the Hoddle grid and the area south of Victoria Street, Docklands and Southbank including South Wharf (See Figure 1).

‘Estimated resident population’: people, including under 15 years of age children, who reside in the Melbourne municipality.

‘Daily population’: the number of people who travel to, or are present in, the municipality or city for any purposes including city residents on an average weekday or weekend day. This includes all people of all ages unless otherwise stated.

For the purpose of this report, daily population is divided into the following five main categories based on their primary purpose for travelling to, or being present in, the city and residence location:

- ‘Residents’ include all people residing in the municipality regardless of where they work and study.
- ‘Workers’ include all individuals aged 15 years plus who live outside the municipality and travel to the municipality primarily for work or work-related purposes.
- ‘Students’ (Higher Education Students) include all individuals aged 15 years plus who live outside the municipality and travel to the city primarily for study or study-related purposes.
• ‘Visitors’ include all individuals aged 15 years plus who live outside the municipality and travel to the city for all purposes except work and study. This group is further subdivided into the following four subcategories based on their origin of residence:

  - Metropolitan visitors: those live in metropolitan Melbourne
  - Regional visitors: those live in regional Victoria
  - Interstate visitors: those live in other states or territories
  - International visitors: those live overseas

• ‘Under 15 years’ include all individuals aged under 15 years old who travel to the municipality for any purposes. This group is considered as a separate category due to legal complications in interviewing them and scarcity of information.

Figure 1. City of Melbourne Suburb and Central City Area Boundaries

Methodology and Data Sources

To ensure continuity, comparability and consistency, this update is largely built on the same methodology and structure that had been adopted in previous updates. The method has been well developed, improved and enhanced over time utilising a wide range of data sources. Some of the most comprehensive data sources used in this update are:

- Central Melbourne Travel Survey (formerly known as City Users Survey): a biennial survey that has been conducted since 2004, the latest being 2016. The survey is the most important source of information and data for this study. It is designed to collect necessary information about travelling patterns of all daily population groups including residents, city
workers, students, metropolitan visitors, regional visitors, interstate visitors and international visitors. It consists of two types of interviewing – Computer Assisted Telephone Interviewing (CATI) and Computerised Assisted Personal Interviewing (CAPI) or Intercept interviewing. The earlier is designed to collect information about travelling patterns of Victorian residents: metropolitan residents and regional Victoria residents. The latter is to collect additional information from the above two groups as well as other daily population groups, especially those cannot be reached via CATI – international and interstate visitors.

They both are conducted concurrently for two weeks in late April and early May every round. Sample sizes of the survey have been maintained at around 2000 for each CATI and CAPI to maintain consistency and comparability.

- **Census of Land Use and Employment (CLUE):** a highly detailed and comprehensive information system and study of land use, business and employment activity in the Melbourne municipality. It was first conducted in 1962 to collect information about buildings and businesses operating in the Melbourne CBD and it expanded to cover the entire municipality in 2002. It was initially conducted every five years then to two years from 2000 and it is now conducted all year round. It mainly incorporates data collected through valuations process and field visit to all properties and establishments.

  The information collected in CLUE includes industry structure and type (ANZSIC code and number of establishments or business locations); floor space type and use (office, retail, industrial, accommodation or entertainment and office vacancy rates); employment number and type (full-time, part-time, casual or contractor); building information (number of floors, year of construction, gross floor area and lettable area); venue and capacity measures (cafe or restaurant seats, child care centre spaces, off-street car parking spaces, bicycle and shower facilities, residential dwellings, student dwellings, student beds, theatre and stadium seats, conference and meeting seats and gaming machines) and spatial distribution (maps, CLUE small areas, blocks and customised regions). Various attributes of the data were used throughout this report wherever relevant and applicable.

- **National Visitor Survey (NVS) and International Visitor Survey (IVS):** the most comprehensive survey of domestic and international visitors collected and managed by Tourism Research Australia (TRA). The surveys provide very comprehensive information about characteristics and travel patterns local and international visitors.

  The surveys are conducted year round and data collected is released on a quarterly basis through TRA’s publications and online portal which allows subscribed users to simply drag and drop variables to build tables, graphs, maps and reports. The data used in this report was generated through the portal and was used in conjunction with data sources to estimate regional, interstate and international visitor numbers.

- **Victorian Integrated Survey of Travel and Activity (VISTA) 2007, 2009 and 2012-13:** a comprehensive ongoing survey undertaken by Department of Economic Development, Jobs, Transport and Resources (DEDJTR). It is designed to collect extensive personal travel information – from walking the dog, through to interstate travel. The survey covers occupied private residential households living in the Greater Melbourne, Geelong and, periodically, in selected regional centres across Victoria.

  The data is released in various publications and an online interactive data visualisation. The data used in this publication was specifically obtained for only trips that have destinations and/or origins in the city.

- **Employment forecasts:** the employment forecast data for this report came from City of Melbourne Employment Forecasts 2016-36 Report. The report was prepared primarily to forecast employment in the city by testing four scenarios: (i) base scenario; (ii) residential...
growth in West Melbourne (residential) to support and leverage the health and research functions that operate in Parkville; (iii) growth in West Melbourne (residential) to support tourism, arts and cultural activities located in and nearby the area and (iv) development of the Fishermans Bend Design Engineering and Advanced Manufacturing Precinct. The report examined changes in the composition of employment within each scenario and derived statistically insignificant differences in the total job numbers at the municipality level due to the nature of the anticipated impact of development in those precincts. Therefore only base scenario employment was incorporated in this report.

- **Higher education student**: collected and managed by the Department of Education and Training. The data is collected year round and disseminated through statistical publications, datasets, tabulations, extracts and analyses. Key attributes collected are enrolments and commencements, courses provided by higher education institutions; numbers and characteristics of students undertaking the courses; student load; completion of units of study and courses; student disability status; numbers and characteristics of staff in higher education institutions; income and expenditure for higher education institutions; research activity; and undergraduate applications, offers and acceptances.

  The data used in this report was specifically generated based on two criteria – postcode locations of institutions and term residence locations of students. These two criteria allows us to determine the number of student enrolments in the city and the number of students residing in the city during their study.

- **Forecast population**: calculations are based on a well-established statistical method that combines three approaches: (i) housing unit method; (ii) cohort component method and (iii) sequential household propensity method. These three methods are merged into one and single forecast model that provides estimates of the number of people for each small area in the city.

- **Under 15 years of age population**: calculations of daily population for this group are based on a number of different data sources. One of the primary sources is the Central Melbourne Travel Survey in which a few questions have been introduced since 2012 to collect information about the number accompanying children under the age of 15 years old and the data, in combination with other data sources such as NVS and IVS, was used.

Other data and information sources are:

- City of Melbourne Central Melbourne Travel Surveys
- City of Melbourne Census of Land Use and Employment (CLUE)
- Australian Bureau of Statistics (ABS) Estimated Resident Population
- Victorian Integrated Survey of Travel and Activity (VISTA)
- National Visitors Survey (NVS)
- International Visitor Survey (IVS)
- Higher Education Student Statistics
- City of Melbourne Pedestrian Counting Data
- City of Melbourne Development Activity Monitor
- City of Melbourne/SGS Employment Forecasts 2016-36
- City of Melbourne/Geograafia Population Forecast
- Tourism Research Australia Tourism Forecasts 2016
- Australian Bureau of Statistics (ABS) Population Census
- Australian Bureau of Statistics (ABS) Labour Force
- Other data sources.

The methodology and data sources used in this report can be summarised in Figure 2 below.
Findings

Daily Population

Weekday daily population

We estimated approximately 911,000 people travelled to, or were present, in our municipality on an average weekday in 2016. This represents a 6.1 per cent increase from 858,000 in 2014. In other words, there were 52,000 more people on an average weekday in the city than two years ago (See Figure 3). In a snapshot for 2016, there were:

- 148,000 residents, including under 15 years of age children, living in the city – up by 14.5 per cent from 2014
- 381,000 workers travelling to work or to undertake work related activities in the city on an average weekday – up by 1.3 per cent from 2014
- 78,000 students travelling to study or to undertake study related activities in the city on an average weekday – up by 9.8 per cent from 2014
- 170,000 metropolitan visitors travelling to the city for visit purpose, non-work or non-study, on an average weekday – up by 4.3 per cent from 2014
- 14,000 regional Victoria visitors travelling to the city for visit purpose, non-work or non-study, on an average weekday – up by 12.1 per cent from 2014
- 35,000 interstate visitors travelling to the city on an average weekday – up by 14.9 per cent from 2014
- 53,000 international visitors travelling to the city on an average weekday – up by 17.0 per cent from 2014
- 32,000 children under 15 years of age travelling to the city on an average weekday – up by 5.6 per cent from 2014

The above growth suggests that Melbourne continues to live up to its reputation as a great place to live, work, study, play and socialise. If this is to continue into the future, the report offers a preview of Melbourne in the next 20 years that challenges us to consider planning now for what is shaping up to be a major growth period in all daily population categories. The annual percentage growth rate alone speaks for itself and suggests the following annual growth rates over the next 20 years:

- resident population – 2.9 per cent to reach 263,000
- workers – 1.8 per cent to reach 549,000
• higher education students – 2.4 per cent to reach 125,000
• metropolitan visitors – 0.3 per cent to reach 180,000
• regional visitors – 1.1 per cent to reach 17,000
• interstate visitors – 2.6 per cent to reach 59,000
• international visitors – 5.6 per cent to reach 159,000
• under 15 years of age children – 2.3 per cent to reach 50,000.

The above numbers add up to 1.4 million people in the city on an average weekday by 2036. This clearly suggests a need for all internal and external stakeholders to continue to adopt and improve a long-term strategy for planning, policy development and service provision (including emergency preparedness). It will require this kind of far-sighted vision to maintain and enhance Melbourne’s reputation as a harmonious and safe place for work, business, study, visit, socialising and entertainment.

Weekday daily resident population estimates and forecasts

Living in the city continued to gain momentum over the past two years. It is estimated that more than 148,000 people, including under 15 years of age, resided in the municipality in 2016, which equates to 19,000 additional people compared to two years ago. This represents a 14.5 per cent increase which makes Melbourne one of the fastest growing local government areas (LGA) in the country.

At a smaller geographical area, the Melbourne CBD experienced the largest growth, in absolute number, gaining 7000 additional residents or up by 20.3 per cent between 2014 and 2016. Other high growth small areas were Southbank (with 3000 additional residents or up by 17.1 per cent), Docklands (with 2700 additional residents or up by 29.2 per cent), Carlton (with 2500 additional residents or up by 14.1 per cent) and North Melbourne (with 2400 additional residents or up by 12.4 per cent).

The solid growth has been primarily driven by high-rise apartment living. According to the CoM’s Census of Land Use and Employment (CLUE) 2016, approximately 9000 residential accommodation dwellings were constructed across the city during two years to 2016 of which the vast majority, 86.2 per cent, are apartment dwellings.

Outlook

High-rise living momentum is forecast to continue and city resident population is set to grow. CoM’s Forecast Population suggests that resident population is to grow around 3.3 per cent annually in the next two decades to reach 263,000 in 2036, nearly double of the current population. If their demand for services were to grow at the same rate, the City of Melbourne would have to double its service delivery capacity, just to keep up with it, in the next two decades. This would present numerous challenges that require long-term thinking and planning. Further information about the resident population forecast is available online at http://melbournepopulation.geografia.com.au/.

Weekday daily worker estimates and forecasts

Accounting nearly one in two of daily population in Melbourne, workers are an integral part and their presence and activity are vitally important for city’s vitality and vibrancy. We estimated that the number of daily workers, excluding those live and work in the city, grew 1.3 per cent over the past couple of years to reach 381,000 in 2016.
The growth was mainly driven by city employment, whose place of work is in the city, as the number of people travel to undertake work related activities remained relatively unchanged. According to the latest CLUE data, the number of jobs in the city experienced a 2.2 per cent growth over the past two years, which equates to 9600 additional jobs. The largest growing industry, in terms of absolute number of jobs, was business services (also known as professional, scientific and technical services which is comprised of highly-skilled businesses such as scientific research services, architectural services, surveying and mapping services, engineering design and engineering consulting services, legal services, accounting services, veterinary services and other professional, scientific and technical services) with 5400 additional jobs (up by 7.3 per cent). Other industries experiencing fast employment growth were health care and social assistance with 2400 additional jobs (up by 6.2 per cent); and electricity, gas, water and waste services with 1900 additional jobs (up by 24.3 per cent).

Some of the industries in the city, however, experienced a decline in employment. Wholesale trade had the largest decrease, down by 3500 or 32.2 per cent, due mainly to the relocation of Melbourne’s wholesale fruit, vegetable and flower market at Footscray Road in West Melbourne to a new site in Epping in 2015. Other industries with negative employment growth were finance and insurance (down by 255 jobs or 0.4 per cent), rental and hiring services (down by 142 jobs or 23.5 per cent, construction (down by 141 jobs or 2.4 per cent) and others with marginal declines.

A further analysis of CLUE data reveals spatial distribution of employment in the city. As can be seen in Figure 4, it is apparent that the vast majority of jobs are concentrated in the three central areas namely the Melbourne CBD, Docklands and Southbank. They combined accounted for more than two thirds, 70.5 per cent (CBD – 48.4 per cent, Docklands – 12.9 per cent and Southbank – 9.2 per cent), of the total employment in the entire municipality in 2016. They also experienced higher employment growth rate, at 3.2 per cent, than the municipality average – 2.2 per cent. Other parts of the city with high employment concentration are areas around Alfred Hospital, the University of Melbourne and hospital precinct in Parkville and Parliament and Treasury precinct where many state government institutions are located.

Figure 4. Employment concentration, 2016
Along with employment growth, space use for office also experienced significant growth. The City of Melbourne’s Development Activity Monitor and CLUE data suggest that more than 159,000 m$^2$ of office floor space was constructed in the city during the reporting period. Most of the newly constructed space spreads across two small areas – Docklands (80,000 m$^2$ or 50.1 per cent of the total) and the Melbourne CBD (74,000 m$^2$ or 46.2 per cent). This adds up to the total office floor space in the areas to 0.78 million and 3.07 million square metres respectively.

**Outlook**
The forecast number of workers in this report was primarily based on the latest CoM’s employment forecast model, undertaken by SGS Economics and Planning. It is a top-down approach that establishes the total level of employment in Victoria, metropolitan Melbourne, Melbourne municipality and then down to each suburb in the municipality by industry. The employment growth is then constrained by the total labour force. The model forecasts that employment in the city is set to grow around 2.0 per cent per annum to reach 696,000 in 2036. Applying ratios of workers away from work, do not go to work and work from home on any given day, this translates into a forecast of more than 549,000 workers travelling to work or to undertake work-related activities in the city on an average weekday by 2036. It is important to note that this figure does not include those workers who live and work in the city because they are categorised as residents for the purpose of this report.

**Weekday daily higher education student estimates and forecasts**

Home to major universities such as the University of Melbourne, RMIT and Victoria University and other tertiary education institutions, Melbourne is an ideal study destination and the higher education sector plays an integral part of the city’s economy and community. It exerts an
influence on the structure of the resident population as well as daily population using the city on a daily basis. We estimated that approximately 78,000 people, excluding those resided in the city, travelled to the city to study or to undertake study related activities on an average weekday in 2016. This represents a 9.8 per cent growth from 71,000 in 2014.

The sector has experienced remarkable growth over the past decade. According to the Department of Education and Training’s higher education student statistics data, the growth rate of the number of higher education student enrolments in the city has been substantial, increasing around 5.0 per cent per annum over the past ten years. The growth has been driven by both domestic and overseas students. Though overseas student enrolments experienced a much higher growth rate, at 6.5 per cent, compared 4.2 per cent for domestic counterparts.

For the purpose of this report, domestic students are defined as students who are Australian citizens, New Zealand citizens or holders of permanent resident visas. According to the higher education student statistic data, this group accounts for the largest proportion, 65.8 per cent, of the total higher education students enrolments at campuses in the city. In 2015, there were 89,000 domestic students enrolled at campuses in the city, increasing by 3.8 per cent from 81,000 in 2014. Despite the growth their share of total higher education student enrolments in the city decreased gradually, from 68.3 per cent to 65.8 per cent between 2014 and 2015. This is mainly due to fact that overseas student enrolments at the campuses in the city grew at a faster rate during the same period.

It is important to note that the domestic higher education student enrolments have experienced significant growth in recent years due to the introduction of Transforming Australia Higher Education System policy in 2011. The policy aims to have 40 per cent of 25 to 34-years-old holding a bachelor degree or higher, and give more people the chance to participate in higher education. It is a student demand-driven funding system, whereby funding for university followed student demand rather than universities having a specific allocation of funded places. It also provides opportunities for capable people from all backgrounds, especially disadvantaged, to participate to their full potential and be supported in doing so. Consequently, the domestic higher education student enrolments experienced a 6.2 per cent annual growth rate between 2011 and 2015 compared to only 2.7 per cent annually between 2002 and 2011.

As expected, domestic higher education students are relatively young. More than three in five, 61.9 per cent, were under 25 years old (23.8 per cent in under 20 years old and 38.1 per cent in 20-24 years old age brackets) in 2015.

Of the overall higher education sector, international education subsector plays a vital role despite contributing to only a third of the total student enrolments. It is estimated that the subsector supported over 30,000 jobs across Victoria and was worth $5.8 billion to the state’s economy making it the state’s largest service export sector in 2015.

Overseas higher education student enrolments in the city continued to bounce back in the last couple of years, after a marginal decline in 2011 and 2012. It is estimated that there were approximately 43,000 full-time and part-time overseas students studying at higher education institutions in the city in 2015, which represents a 16.6 per cent increase from 2014. The growth has mainly been driven by Asian markets. In 2015, all of the top 10 countries of origin of higher education students in the city are in Asia – China (excluding SARs and Taiwan), India, Malaysia, Indonesia, Viet Nam, Pakistan, Singapore, Nepal, Sri Lanka, and Hong Kong (SAR of China) (See Figure 5). They combined accounts for four in five, 80.0 per cent, of the total overseas higher education students in the city.

Figure 5. Top ten markets of overseas higher education students in the city in 2015
China has continued to lead overseas higher education student enrolments. It is estimated that there were more than 14,000 Chinese students studying in the city in 2015. This accounts for nearly one in three (32.8 per cent) of the total overseas students in Melbourne growing almost three fold over the past ten years from 5000 in 2005. This is due probably to CoM's sister city relationship with TianJin, which established in 1980.

Many would be surprised to learn that the number of students from Southern Asian markets, which include Afghanistan, Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan and Sri Lanka, has grown substantially over the past decade. It is estimated that there were 12,000 students from these countries studying in 2015, which accounted for 28.2 per cent of the total. This presents a major growth opportunity for the sector.

Similar to domestic students, overseas students are relatively young. In 2015, the 20-24 age group was predominant accounting for more than one in two, 55.0 per cent. Other major age groups were 25-29 years old sharing 22.4 per cent and under 20 years old sharing 13.7 per cent.

The rapidly growing higher education sector in the city has helped to drive other related sectors in the city. It, in particular, has driven purpose built student accommodation construction and the number of student apartments rose by 53.8 per cent from 3600 dwellings in 2006 to 5500 dwellings in 2016. It utilised more than 1.39 million square metres, 4.2 per cent, of the total built floor space in the city increasing by 18.2 per cent increase from 2006. The growth in floor space use has resulted in an increase in student capacity and today all higher education institutions in the city combined have a maximum capacity of more than 160,000 students, a 39.5 per cent growth from 114,000 in 2006.

Employment in this sector has also grown and it now employs approximately 24,100 people, up by 11.9 per cent between 2006 and 2016.

**Outlook**

Higher education sector in the city is likely to continue to grow driven by demand from both domestic and overseas students.

With the right policy in place, *Transforming Australia Higher Education System*, the domestic higher education sector is likely to grow strong. As noted above, the domestic higher education enrolments in the city has grown significantly since the introduction of the policy,
almost three time higher than pre-policy period growth rate, 2002-2011. Therefore it is reasonable to expect the policy to continue to have positive impacts on domestic higher education student enrolments during the period covered by this forecast, unless there will be changes introduced.

Overseas higher education sector is also forecast to grow strong. The growth will be driven by various factors such as increasing global demand for higher education services; high quality of Australian higher education; relatively stable Australian dollars and other advantages of studying in Australia in general and in Victoria and Melbourne in particular. The introduction of Australia’s first broad level policy targeting international education sector – National Strategy for International Education 2025, published in April 2016, which coincided with introduction of state level policy called “International Education, Sector Strategy” in the same year is expected to facilitate and encourage the growth. The CoM international student program is also expected to continue to have positive contribution in attracting international students to Melbourne as well as empower and engage them while they are in Melbourne.

Despite impact of the above policies is remained to be seen the latest Australian Education International’s (AEI) student data reveals continued recovery of overseas student enrolments and commencements in Victoria after a decline between 2010 and 2011. As shown in Figure 6, student enrolments and commencements in English Language Intensive Courses for Overseas Students (ELICOS) in Victoria rose 18.2 per cent over the past two years. Since ELICOS is a common pathway into higher education, a growth in this subsector is seen as an indication of future growth in higher education. Furthermore anecdotal evidence from the Australian Education International indicating a further growth in the near future in the wake of Brexit and rapidly changing USA’s international policies.

We therefore forecast that the number of domestic and overseas students travelling to the city is likely to grow between 2.0 and 3.0 per cent per annum during the forecast period, 2017-2036. This will see approximately 125,000 people, or students for the purpose of this report, travelling the city to study or undertake study-related activities in 2036.

Figure 6.  Student enrolments and commencements in ELICOS in Victoria, 2002-16

Source:  Australian Education International (AEI), 2016.

Weekday daily metropolitan visitor estimates and forecasts
As a major commercial and retail centre of the state, a large proportion of daily population in the city comes from all parts of Victoria, especially the Greater Melbourne area. We estimated that more than 170,000 Melburnians aged 15 years and over travelled to the city for visit, non-work or non-study, on an average weekday in 2016 which was 4.3 per cent higher than in 2014.

Melburnians travel to the city for a wide range of visiting primary reasons. In 2016, a quarter reported to do so for visiting or meeting up with friends and relatives, according to an analysis of the Central Melbourne Travel Survey 2016 intercept data. The second most commonly reported primary reason was shopping (20.9 per cent) while other were attending personal appointments — medical, banking, solicitor and other (16.8 per cent); sightseeing (10.6 per cent); and dining at a café or restaurant (5.2 per cent) (See Figure 7).

Unsurprisingly travelling to the city is multipurpose. Melburnians are very likely to carry out other secondary activities while in the city. In 2016, the vast majority, more than three quarters, reported to undertake secondary activities. Most of those activities involved spending: two in three (40.9 per cent) ate or dined at cafés or restaurants; 19.9 per cent bought takeaway food or drinks; 19.4 per cent shopped and another 4.2 per cent visited bars, pubs or nightclubs. This has helped to drive city’s economy, especially retail and hospitality sector. According to CLUE, the city witnessed a 52.1 per cent increase in café and restaurant venues in the past ten years, from 1536 in 2006 to 2336 in 2016. This makes it one of the fastest growing industries in the city, in terms of percentage growth. Today there are 161,000 indoor and 37,000 outdoor café and restaurant seats in the city.

Other common secondary activities that do not necessarily involve direct spending were visiting or meeting up with friends or relatives (10.9 per cent) and sightseeing (6.5 per cent).

Figure 7. Metropolitan visitors’ primary reasons, 2016

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting/meeting up with friends or relatives</td>
<td>25.2%</td>
</tr>
<tr>
<td>Shopping</td>
<td>20.9%</td>
</tr>
<tr>
<td>Personal appointment eg. medical, banking and other</td>
<td>16.8%</td>
</tr>
<tr>
<td>Sightseeing</td>
<td>10.6%</td>
</tr>
<tr>
<td>Dining at a café or restaurant</td>
<td>5.2%</td>
</tr>
<tr>
<td>Just passing through</td>
<td>5.1%</td>
</tr>
<tr>
<td>Attending live theatre, concert, opera and other</td>
<td>4.1%</td>
</tr>
<tr>
<td>Jury duty/attending court</td>
<td>4.1%</td>
</tr>
<tr>
<td>Visiting an art gallery or museum</td>
<td>1.9%</td>
</tr>
<tr>
<td>Other</td>
<td>3.3%</td>
</tr>
<tr>
<td>Buying takeaway food or drinks</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

Source: CoM Central Melbourne Travel Survey 2016, Intercept survey.

Outlook

Resident population in the Greater Melbourne is forecast to grow around 1.7 per cent annually in the next 20 years to reach 5.1 million by 2021 and 7.0 million by 2041, based on Department of Environment, Land, Water and Planning’s Victoria in Future 2016. Inevitably, the growth will contribute to overall increase in Melburnians travelling to the city for visit. Based on the current information from the Central Melbourne Travel survey and other sources, it is
forecast that there will be 180,000 metropolitan visitors travelling to the city on an average weekday by 2036.

**Weekday daily regional visitor estimates and forecasts**

We estimated that approximately 14,000 regional Victorian residents travelled to the city for visit on an average weekday in 2016, which is an increase of 12.1 per cent over 2014. This translates into 2.5 million daytrips and 0.9 million overnight trips by Regional Victoria residents. Compared to 2014, daytrips increased by 5.6 per cent while overnight trips rose by 29.2 per cent. In 2016, the overnight regional visitors spent 1.6 million nights in total in the city, increasing by 14.4 per cent over the past two years.

Similar to other visitor groups, regional visitors travel to the city for a wide range of primary purposes. In 2016, one in four (25.1 per cent) reported to do so for holiday and leisure in the city. Other commonly reported main reasons were visiting relatives and friends (24.0 per cent combined), medical reasons (13.0 per cent), and attending events and watching sports (10 per cent each). Compared to 2014, all of the above top four categories experienced double digit growth rates: holiday and leisure (up by 26.5 per cent); visiting friends and relatives (up by 16.9 per cent); medical (up by 12.6 per cent) and watching sports (up by 54.5 per cent).

In addition to primary reasons, regional visitors indeed carry out other activities while in the city. Eating out or dining at a café or restaurant remained the most popular secondary activity in 2016 – 63.3 per cent reported to do so. Other popular secondary activities were visiting friends and relatives (34.5 per cent) and shopping for pleasure (33.4 per cent) and attending an organised sporting event; sightseeing and looking around and going to pubs, clubs discos (just above 10 per cent each).

**Outlook**

Along with metropolitan population growth, Regional Victorian population is forecast grow over the next two to three decades. According to *Victoria in Future 2016*, the regional Victorian population aged 15 years plus is forecast to grow at around 1.3 per cent annually between 2016 and 2040. This growth will see more and more regional visitors to the city on an average weekday. Assuming that the ratio of regional Victorian residents travelling to the city is to remain unchanged during the forecast period, it is expected that the number of regional visitors will grow at around 1.1 per cent annually to reach 17,000 people by 2036.

**Weekday daily interstate visitor estimates and forecasts**

We estimated that more than 35,400 interstate visitors travelled to the city on an average weekday in 2016, which is an increase of 14.9 per cent from 2014.

In 2016, Melbourne received more than 112,000 interstate daytrips and 2.0 million interstate overnight trips in total. Compared to two years ago, the number of daytrips experienced a remarkable growth, up by 15.5 per cent, while overnight trips grew at a much slower rate, at 4.8 per cent. The overnight visitors spent more than 7.18 million nights in total. A third of overnight visitors, 30.1 per cent, stayed between 4 and 7 nights in Melbourne while another 28.3 per cent stayed only 2 nights. The majority of nights, 60.0 per cent, were spent in commercial accommodation: hotels/resorts/motels or motor inns. Only quarter nights were spent at friends or relatives’ properties.

Given its relatively large resident population and proximity to Melbourne, New South Wales (NSW) remained the largest single contributing state/territory to the international visitors to
Melbourne. In 2016, NSW residents made nearly one million trips (987,000) to Melbourne, up by 12.8 per cent from 875,000 in 2014. This accounted for almost half (46.0 per cent) of the total interstate visitors. Other key states and territories were Queensland (378,000 visitors or 17.6 per cent), South Australia (280,000 visitors or 13.0 per cent) and Western Australia (217,000 visitors or 11.5 per cent).

The majority of interstate visitors travel to Melbourne for holiday and leisure. In 2016, holiday and leisure visitors remained the main driving force of the growth accounted for nearly one in two (46.2 per cent) of the total interstate visitors. This solid growth saw an increase of 15.3 per cent in interstate overnight holiday trips to Melbourne over the past couple of years. Visiting relatives and friends visitors also remained high sharing 16.3 per cent and 8.6 per cent of the total respectively.

More than a quarter of interstate visitors to Melbourne aged in the 55 years old or over age group in 2016. Other main age groups were the 25 to 29 years (12.7 per cent), 50 to 54 years (10.5 per cent) and 20 to 24 years (10.3 per cent).

While in Melbourne, interstate visitors visit various iconic attractions. In 2016, more than two in three interstate visitors, 69.6 per cent, reported to visit Melbourne central business district shopping precinct. Other popular attractions were Southbank/Southgate (41.4 per cent), Federation Square (40.8 per cent), Crown Casino/Entertainment Complex (34.6 per cent) and Queen Victoria Market (32.4 per cent).

**Outlook**

According to Tourism Forecasting Committee and Tourism Victoria, domestic overnight travel is forecast to grow around 5 per cent over the next couple of years and 3.5 per cent per annum over the next ten years. Consequently it is expected that the number of interstate visitors to Metropolitan Melbourne region is to grow at around 2.5 per cent per annum during the next decade.

If the proportion of interstate visitors to the city, in comparison to broader Metropolitan Melbourne, and other assumptions are to remain unchanged, it is forecast that the number of interstate visitors to the city on an average weekday is to grow around 2.4 per cent annually in the next decade. This will add up to around 59,000 interstate visitors visiting the city on an average weekday by 2036.

**Weekday daily international visitor estimates and forecasts**

Melbourne’s reputation as an ideal destination to visit spreads beyond country boundary. More and more international visitors come to Melbourne. This has seen a rapid increase in international visitor arrivals in recent years. We estimated that 53,000 international visitors aged 15 years plus travelled to, or stayed in, the city on an average weekday in 2016. This represents a 17.0 per cent increase from 2014.

This adds up to approximately 1.62 million international visitors staying in the city and a number of those who stayed outside the city but travelled to the city in 2016. The number of visitors staying in the city increased significantly over the past two years, by 20.4 per cent, from 1.35 million in 2014. They in total spent more than 14.2 million nights.

The vast majority of international visitors, 83.2 per cent, stayed between 1 and 7 nights in the city on average in 2016. 9.1 per cent stayed between 8 and 14 nights while the rest stayed more than 14 nights.

More than half, 52.1 per cent, of international visitors are first time to Australia.
Unsurprisingly, international visitors are likely to stay in commercial accommodation while in Melbourne. In 2016, 65.6 per cent stayed in commercial accommodation – hotels, resorts, motels or motor inns, rented houses, apartments, flats and units. While the rest, nearly one in three or 32.1 per cent, stayed with friends or relatives.

The solid growth of international visitors to Melbourne has mainly been driven by Asian markets. In 2016, the number of Asian visitors to Melbourne nearly reached a million mark, 910,000 visitors. They accounted for more than one in two, 55.9 per cent, of the total international visitors to Melbourne growing at a 9.5 per cent annually over the past decade or 34.0 per cent in the past two years. This has happened while the number of international visitors from the rest of the world experienced marginal growth or remained unchanged during the same period (See Figure 8).

Of the Asian markets, China has been the largest and fastest growing single source country. In 2016, Chinese visitors accounted for more than one in four, 25.3 per cent, of the total international visitors to Melbourne growing at 45.0 per cent in the past two years or 13.8 per cent annually over the past ten years. Other fast growing Asian markets with double digit annual growth rates are India (12.8 per cent), Malaysia (11.3 per cent) and Indonesia (11.2 per cent) over the past decade.

The shares of non-Asian key markets in 2016 were New Zealand (10.2 per cent), the United States of America (8.3 per cent), The United Kingdom (7.2 per cent) and Germany (3.6 per cent).

Of the total, the vast majority, 67.4 per cent, travelled to Melbourne primarily for holiday and pleasure. This category experienced a staggering growth rate, 31.9 per cent, over the past two years or a sustained growth rate of 6.6 per cent annually since 2006. Other popular main reasons for visiting Melbourne were visiting friends and relatives (15.5 per cent including 2.2 per cent were to visit their friends or relatives studying in Australia) and business (9.1 per cent).

Figure 8. Number of international visitors* to the city by origin continent

* Excludes those with education and employment stopover reasons.
Source: Tourism Research Australia, IVS 2016.
The gender split of international visitors to the city has gradually changed over the past decade. There has been a gradual increase in the share female visitors from 46.8 per cent in 2006 to 53.0 per cent in 2016.

Given the remarkable overall growth in visitor number to the city, all age groups experienced an increase over the past two years. Despite sharing only 3.3 per cent of the total the 15-19 year old age group grew at the fastest rate, 35.5 per cent, between 2014 and 2016. Other fast growing age groups were 25-29 years old (up by 32.6 per cent); 50-54 years old (up by 31.7 per cent); and 35-39 years old (up by 27.7 per cent) during the reporting period.

In 2016, more than two in five, 42.2 per cent, of the international visitors to the city travelled unaccompanied while another quarter, 23.8 per cent, travelled as an adult couple. Compared to 2014, the earlier group experienced a 10.8 per cent growth while the latter rose by 35.1 per cent.

Historical and modern landmarks in Melbourne are among the most popular destinations for international visitors. With its charm and historical value, Queen Victoria Market tops the list as one of the most popular destinations for international visitors. More than one in two (51.8 per cent) of international visitors to Melbourne reported to visit the market during their trips in 2016. Other favourites include Federation Square (49.5 per cent); Bourke Street Mall (30.0 per cent); Southbank/Southgate (27.0 per cent); St Kilda (24.2 per cent) and Crown Casino/Entertainment Complex (22.9 per cent).

Since the introduction of smart phones and mobile devices, access to the internet has become more and more important for international visitors. Unfortunately questions about internet accessibility were not asked in the past two survey years and this section is based on IVS 2014 data. More than three quarters, 76.3 per cent, of the visitors to the city used the internet before their trips for information about their trips. The top four reasons were: (i) to help plan Australian trip itinerary (53.3 per cent); (ii) to find out more about Australia after decided to visit Australia (50.3 per cent); (iii) to find out about accommodation in Australia (47.3 per cent) and (iv) to look for airfares or air schedules: for travel to Australia (46.3 per cent).

Access to the internet is not only important before trip but also during their trip to Australia. In 2014, the vast majority of international visitors to the city, 83.5 per cent reported to access to the internet during their trips. Figure 9 illustrates rates of internet use by country of residence while travelling in Australia. It is interesting to note that European visitors were likely to have a higher, on average, propensity to access the internet while in Australia than their Asian counterparts. French visitors had the highest rate of internet access (95.8 per cent) while other European visitors with high level of internet use during their trips were Scandinavians (93.9 per cent); Italians (93.2 per cent); Other European visitors (92.9 per cent); Dutch (91.5 per cent) and British (90.9 per cent).

Figure 9. International visitors* use of the internet
Among the Asian markets, Hong Kong and South Korea were the top two Asian nations with the highest rates of internet access, 94.7 and 93.9 per cent respectively. This is due mainly to high rates of mobile phone ownership in those countries and they tend to bring their mobile devices with them while travelling. Other Asian visitors with lower levels of internet access during their trips to Australia were Chinese (68.1 per cent); other Asians (77.8 per cent) and Indians (81.2 per cent). It would be interesting to see the growth of internet access for these counties as mobile phone ownership rates have grown rapidly in recent years.

International visitors primarily use their phones or mobile devices to access the internet for different reasons while on their trips. Finding ways to get around the city topped the list – two in three, 66.9 per cent, reported to use the internet to access maps in 2016 while more than a third, 37.1 per cent, used it to look up transport timetables. They also accessed the internet for restaurant guides (30.4 per cent), destination guides (28.5 per cent), attraction guides (24.0 per cent), event guides (19.1 per cent) and language translations (13.6 per cent).

Smartphones are by far the most popular device used by international visitors to access the internet while travelling in Australia. In 2014, more than three quarters, 79.7 per cent of international visitors to the city accessed the internet via smartphones. Other popular devices used to access the internet were netbooks/laptops (33.6 per cent), iPads (27.0 per cent), personal computers in accommodation (9.7 per cent) and tablets (9.3 per cent).

In 2014, Facebook was also the most popular social media site to get information about Australia during their trips, more than two thirds, 68.1 per cent. Other popular social media sites used were TripAdvisor (26.6 per cent); Youtube (14.1 per cent) and GooglePlus (10.8 per cent).

**Outlook**
Future growth of international visitors to Australia as a whole, and to Melbourne in particular, depends largely on a range of internal and external factors. Some of which are global economic, financial and political uncertainty; especially in key markets such as China, New Zealand, UK, USA, Singapore and other Asian nations; lower interest rates; lower fuel prices;
lower value of Australian dollar against leading currencies; international aviation capacity to and from Australia and other supply and demand factors.

Taking all of the above information into consideration, Tourism Research Australia forecasts that inbound tourism to Australia will continue to grow between 4.0 and 5.0 per cent per annum over the next 10 years. Based on these, we forecast that the number of international visitors to the city is likely to grow at around 6.0 per cent annually between 2016 and 2036.

It is important to note that Brexit and uncertain and fast changing international policies in the United States of America will have an impact on international visitation to Australia and Melbourne but unfortunately during the preparation of this report it was premature to be measured.

Weekday daily population aged under 15 years

According to ABS Population Census 2011, population aged under 15 years accounts for nearly one in five, 18.2 per cent, of the total Victorian resident population. The way in which this group uses the city, therefore, is important and this report attempts to quantify and explain their travelling patterns to the city.

Due to legal restrictions on interviewing this population group, data on their travelling behaviours is very scarce. To overcome this issue, a couple of questions have been added to the Central Melbourne Travel Surveys asking adult respondents about accompanying children under 15 years of age. These questions are asked in both computer-assisted telephone interviewing and intercept interviewing surveys.

The data from those questions was then cross-checked with other data sources such as VISTA data and NVS-IVS. All data sources suggested consistently higher proportions of adult population travelling to the city with children under 15 years of age on weekends than on weekdays. Based on VISTA 2012-13 data, it is estimated that 4.9 per cent of Victorian adult residents travelling to the city on an average weekday have children aged under 15 years old, compared to 11.4 per cent on an average weekend day. These ratios are used to calculate the number of children under 15 years of age to the city for metropolitan and regional visitors on an average weekday and weekend day. Similarly, numbers of children travelling with interstate and international adult visitors were derived from NVS and IVS data in the same way. The NVS and IVS do not interview children under 15 years of age directly but do collect data about travelling parties in which a question is asked if the visitors travel as a family group – parent(s) with children. The data from this question offers some insightful information about the proportion of interstate and international visitors travelling to Melbourne with their children under 15 years of age.

Based on the above information sources, we estimated that approximately 32,000 children under 15 years of age, excluding residents, travelled to or were present in the city on an average weekday in 2016.

Weekend daily population estimates

As expected, there are logical differences between weekday and weekend travelling patterns to the city. While the weekday pattern is strongly influenced by workers, who account for half of the total weekday daily population, the weekend pattern is determined by other primary reasons of travelling. Our model estimates that more than 0.66 million people travelled to, or
were present in, the city on an average weekend day in 2016, an increase of 7.4 per cent over 2014 (See Figure 10).

In 2016, nearly half, 45.8 per cent, of weekend daily population were metropolitan visitors, followed by city residents aged 15 years plus, 23.1 per cent. Weekend workers shared only a small proportion, 13.3 per cent, of the total. International and interstate visitors shared relatively sizeable proportions – 8.7 per cent and 5.9 per cent respectively.

Figure 10. Weekend daily population (including under 15 years) estimates 2004-16, (‘000)

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<td>15 years plus</td>
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<td>Residents</td>
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<td>91</td>
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<td>98</td>
<td>109</td>
<td>114</td>
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<td>Workers(1)</td>
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<td>64</td>
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<td>Students(2)</td>
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<td>Inter-state visitors</td>
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<td>35</td>
<td>29</td>
<td>30</td>
<td>28</td>
<td>27</td>
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<td>29</td>
<td>29</td>
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<tr>
<td>International visitors</td>
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<td>25</td>
<td>23</td>
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<td>33</td>
<td>40</td>
<td>44</td>
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<td>Total 15 years plus</td>
<td>358</td>
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<td>Under 15 years</td>
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<td>Total*</td>
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<td>537</td>
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<td>576</td>
<td>598</td>
<td>618</td>
<td>624</td>
<td>663</td>
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An analysis of CoM’s pedestrian count data was undertaken to understand the differences between weekday and weekend patterns. As can be seen in Figure 11, the weekday patterns have three distinctive peaks: a morning peak when workers arrive to work, a lunch-time peak when they go out during lunch break and an evening peak when they head home. Meanwhile weekend patterns has a bell shape curve shape with only one afternoon peak, between 2.00 and 3.00 pm. This is mainly when people arrive to shop, socialise, or meet up with friends and relatives, sightseeing, or carry out other activities.

Figure 11. Average hourly pedestrian counts for the first 18 active sensors in 2016

Source: City of Melbourne’s Pedestrian Counting System, 2016.
**Weekend metropolitan visitors**

Shopping and visiting/meeting up with friends or relatives are the top two reasons for travelling to the city for metropolitan on an average weekend day. According to the Central Melbourne Travel Survey, these two main reasons combined accounted for nearly half of the weekend total – 47.8 per cent in 2016 (See Figure 12). Other main visiting reasons were sightseeing (10.2 per cent) and dining at a café or restaurant and attending a sporting event (around 8.0 per cent each).

**Weekend regional visitors**

Similar to metropolitan visitors, the majority of regional visitors travel to the city primarily to visit or meet up with friends, relatives and shopping. These three main reasons combined accounted for 60.6 per cent of the total weekend regional visitors to the city. Other main reasons for regional visitors were attending live theatre, concert and opera (8.8 per cent) and sightseeing (6.6 per cent).

**Weekend interstate and international visitors**

Unlike local visitors, sightseeing was the most popular main reason amongst distance visitors: interstate and international. In 2016, 33.3 per cent of interstate visitors and 39.5 per cent of international visitors reported sightseeing was their main reason for travelling to Melbourne on weekends. Other frequently reported main reasons were shopping (interstate – 25.7 per cent and international – 22.4 per cent) and visiting or meeting up with friends or relatives (interstate – 12.4 per cent and international – 14.5 per cent).

**Figure 12. Weekend visitors’ primary reasons**

![Weekend visitors' primary reasons chart](chart.png)

Source: Central Melbourne Travel Survey 2016 intercept data.

**Night-Time and Overnight Daily Population**

Night-time activity in Melbourne plays an important role in contributing to the city vibrancy and economy. It is not only important for residents, workers and students but it is also an attractive
magnet for international and interstate visitors. It is estimated that Melbourne night time economy was worth $2.7 billion in 2014.

In recognising this importance, the City of Melbourne introduced *Melbourne’s Policy for the 24 Hour City*, the first policy of its kind, in 2008. It articulated the economic, cultural, and social opportunities and challenges for community. It was later merged with *Strategy for a Safer City* to form a single strategic plan titled *Beyond the Safe City 2014-17*. The intention of this latest strategic document is to set out a positive vision for Melbourne’s late night economy that balances activation with regulation and thereby promotes a safe, vibrant and inclusive city that extends from the day into the night. This section is to provide some information about night-time daily population in the city, trends and changes have been occurring since 2004.

**Weekday night-time daily population (aged 15 years plus) estimates**

For the purpose of this report, weekday night-time daily population is defined as people aged 15 years plus travelling to or present in the city after 6pm, including those stay overnight. Based on this definition and the latest data sources, we estimated that approximately 418,000 people were in the city at night on an average weekday in 2016. This represents a 10.3 per cent increase over 2014 (See Figure 13). City residents, excluding those under 15 years of age, were the largest source of night-time daily population accounting for a third of the total. Other main groups were workers (30.5 per cent); international visitors (11.3 per cent) and metropolitan visitors (10.3 per cent).

**Figure 13. Weekday night-time daily population (aged 15 years plus) estimates ('000)**

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<sup>(1)</sup> Are not included in the total.

<sup>(2)</sup> Are not necessarily in the city to work at night but their primary reason of travelling to the city for the day is to work or undertake work related activity.

<sup>(3)</sup> Are not necessarily in the city to study at night but their primary reason of travelling to the city for the day is to study or undertake study related activity.

<sup>(4)</sup> A slight variations in total figures are due to rounding.

**Weekday overnight daily population (aged 15 years plus) estimates**

Overnight daily population is defined as those people aged 15 years plus who stay overnight in the city. For the purpose of this report and simplicity, we assumed that all city residents are in the city overnight despite we understand that some municipal residents are away from home on any given night. We estimated that approximately 210,000 people, excluding residents under 15 years of age, stayed overnight in the city in 2016 on an average weeknight. This is an increase of 16.8 per cent from 2014 (see Figure 14).
Unsurprisingly, city resident group was the predominant overnight population group. In 2016, 15 year old plus residents accounted for nearly two in three of the total. Other key overnight daily population groups were international visitors (18.6 per cent) and interstate visitors (9.4 per cent).

**Figure 14. Weekday overnight daily population (aged 15 years plus) estimates (‘000)**

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</tbody>
</table>

(1) Are not included in the total.
(2) Are not necessarily in the city to work at night but their primary reason of travelling to the city for the day is to work or undertake work related activity.
(3) Are not necessarily in the city to study at night but their primary reason of travelling to the city for the day is to study or undertake study related activity.
(4) A slight variations in total figures are due to rounding.

**Weekend night-time daily population (aged 15 years plus) estimates**

Weekend night-time daily population is defined as people aged 15 years plus who travel to, or are present in, the city on an average weekend night after 6pm. Based on this definition, we estimated that that approximately 327,000 people were in the city on an average weekend night in 2016, a 15.4 per cent increase over 2014 (See Figure 15). The growth is partly due to the introduction of night time network program which sees all public transport modes run all night long on weekends. This has probably attracted more people to city or encouraged people to stay longer in the city on weekend nights.

**Figure 15. Weekend night-time daily population (age 15 years plus) estimates, (‘000)**

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(1) Are not included in the total.
(2) Are not necessarily in the city to work at night but their primary reason of travelling to the city for the day is to work or undertake work related activity.
(3) Are not necessarily in the city to study at night but their primary reason of travelling to the city for the day is to study or undertake study related activity.
(4) A slight variations in total figures are due to rounding.
Weekend overnight daily population (aged 15 years plus) estimates

Weekend overnight population is defined as people, including residents, aged 15+ years old staying overnight in the city. The model suggests that more than 208,000 people stayed overnight in the city on an average weekend night in 2016, representing a 16.8 per cent growth from 2014 (See Figure 16). The growth is primarily driven by a combination of increasing resident population, international visitors and interstate visitors staying overnight in the city and introduction of night time network program.

City residents accounted for the majority of the overnight weekend population. In 2016, this population group, excluding under 15 years of age, accounted for 66.4 per cent of overnight weekend population. The second largest group was international visitors (18.3 per cent) and interstate visitors (9.4 per cent).

Figure 16. Weekend overnight daily population (aged 15 years plus) estimates, (‘000)

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<th>Residents (15 years plus)</th>
<th>Workers</th>
<th>Students</th>
<th>Metropolitan visitors</th>
<th>Regional visitors</th>
<th>Interstate visitors</th>
<th>International visitors</th>
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(1) Are not included in the total.
(2) Are not necessarily in the city to work at night but their primary reason of travelling to the city for the day is to work or undertake work related activity.
(3) Are not necessarily in the city to study at night but their primary reason of travelling to the city for the day is to study or undertake study related activity.
(4) A slight variations in total figures are due to rounding.

Conclusions

The Melbourne average daily population continued to grow over the past two years despite concerns over global political, economic and financial uncertainty. It is estimated that 911,000 people travelled to, or were present in, the city on an average weekday in 2016. This is an increase of 6.2 per cent from 2014.

The estimates and forecasts in this report clearly suggest that the growth is likely to continue over the next 20 years, with a total number of daily population to the municipality growing around 2.0 per cent annually between 2017 and 2036. If this is materialised daily population to the city will reach a record of one million people in 2022.

This presents a number of important challenges for planning and policy formulation with regards to maintaining and enhancing Melbourne’s reputation as a place for work, study and play. More specifically, this major growth will translate into an increase in demand for:

- More open space/gardens/parks
- Improved public transport
- Greater pedestrian flow management
• More entertainment, cultural and sporting activities, as well as opportunities to socialise
• Maximise safety at night time and
• More office, residential and retail floor space.

In short, there is a clear need for all stakeholders to continue to adopt a long-term strategy vision for the forecasted over a million people travelling to our city by 2036.

It should be noted that these estimates and forecasts are subject to data limitations and assumptions made in relation to a wide range of internal and external factors influencing people travelling patterns. Changes in any of these assumptions or factors can result in the forecasts becoming less accurate and out of date. The data inputs and assumptions, therefore, must be reviewed regularly and the model should be updated regularly to ensure its accuracy and currency.
References


