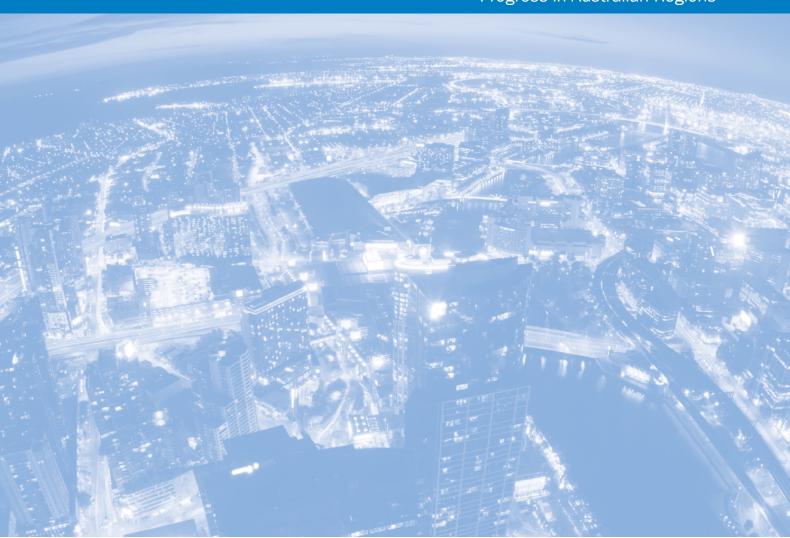
### **State of Australian Cities 2014-2015**

Progress in Australian Regions



# **State of Australian Cities 2014-2015**

Progress in Australian Regions



This Report has been prepared by officers of the Commonwealth Department of Infrastructure and Regional Development. The principal authors, Peter Atkins, Richard Marson and Brendon Brann, would like to acknowledge those people and organisations that contributed to this report. The report would not have been possible without the advice and assistance of our colleagues at the Bureau of Infrastructure, Transport and Regional Economics, particularly Dr Catharina Williams, and the current and former members of both Planning Analysis Branch and Regional Economic Policy Branch. We also acknowledge the editorial and content oversight of senior Departmental officers, and the provision of expert advice or data from companies including PwC, RP Data and SGS Economics & Planning. The views expressed in this report are those of the Department of Infrastructure and Regional Development, and should not be attributed to any other individual or organization.

Photographs are acknowledged with gratitude in the text.

© Commonwealth of Australia, 2015 ISBN 978-1-925216-19-6 December 2014/INFRA2291

#### Ownership of intellectual property rights in this publication

Unless otherwise noted, copyright (and any other intellectual property rights, if any) in this publication is owned by the Commonwealth of Australia (referred to below as the Commonwealth).

#### Disclaimer

The material contained in this publication is made available on the understanding that the Commonwealth is not providing professional advice, and that users exercise their own skill and care with respect to its use, and seek independent advice if necessary.

The Commonwealth makes no representations or warranties as to the contents or accuracy of the information contained in this publication. To the extent permitted by law, the Commonwealth disclaims liability to any person or organisation in respect of anything done, or omitted to be done, in reliance upon information contained in this publication.

#### Creative Commons licence

With the exception of (a) the Coat of Arms; (b) the Department of Infrastructure and Transport's photos and graphics; copyright in this publication is licensed under a Creative Commons Attribution 3.0 Australia Licence.

Creative Commons Attribution 3.0 Australia Licence is a standard form licence agreement that allows you to copy, communicate and adapt this publication provided that you attribute the work to the Commonwealth and abide by the other licence terms.

A summary of the licence terms is available from http://creativecommons.org/licenses/by/3.0/au/deed.en. The full licence terms are available from http://creativecommons.org/licenses/by/3.0/au/legalcode. This publication should be attributed in the following way: © Commonwealth of Australia 2015. State of Australian Cities 2014-2015.

#### Use of the Coat of Arms

The Department of the Prime Minister and Cabinet sets the terms under which the Coat of Arms is used. Please refer to the Department's Commonwealth Coat of Arms and Government Branding web page http://www.dpmc.gov.au/guidelines/index.cfm#brand and in particular, the Guidelines on the use of the Commonwealth Coat of Arms publication.

#### Contact us

This publication is available in hard copy or PDF format. All other rights are reserved, including in relation to any Departmental logos or trademarks, which may exist. For enquiries regarding the licence and any use of this publication, please contact:

Director — Publishing and Communications Section Department of Infrastructure and Regional Development GPO Box 594, Canberra ACT 2601 Australia

Email: publishing@infrastructure.gov.au Website: www.infrastructure.gov.au

### **Foreword**



Since 2010, the State of Australian Cities reports have examined the progress being made in our major cities.

These reports have provided insight into the vital role that Australian cities play in the growth of our economy and have tracked the overall progress made in Australia's major centres. The State of Australian Cities 2014 - 2015 once again looks at the drivers behind some of the public policy issues facing the country today and into the future.

In late 2014, the Department of Infrastructure and Regional Development produced *Progress in Australian Regions* – *Yearbook 2014* as a basis for this report. The *Progress in Australian Regions* – *Yearbook 2014* contains much of the pure statistical data that has underpinned previous State of Australian Cities reports and also explores progress in Australian regions across a range of indicators for the whole country.

Australia is a highly urbanised country. The populations of Australia's major cities are at record levels, as is the number of people employed. It is in our cities that the overwhelming majority of jobs are located and where the most new jobs are being created. The economic output of our major cities has grown and their national importance remains extremely high.

However, alongside that growth there is more demand on transport systems in Australia than ever before. This report examines population growth, economic growth and the increased traffic flows through our ports and airports and on our roads and rail lines.

Issues of space and the potential conflicts of the usability of cities with the utility and long term capacity of freight hubs, ports and airports and the movement of goods and people in cities is a challenge for policy makers. This report provides the evidence base for policy makers at all levels of government to consider those challenges now and into the future.

#### Mike Mrdak

Secretary

Department of Infrastructure and Regional Development

July 2015

### Contents

Foreword	iii
Chapter 1 Introduction	1
Overview	2
Key findings	6
State of Australian Cities reports 2010-2014	9
Structure of reporting in 2014	9
Research methodology	10
Geographical boundaries	10
Time series analysis	10
Place of usual residence	10
Data presentation consistency	11
Use of the Yearbook indicator framework	11
Chapter 2 Population	13
Australia's population	13
Demographic aspects of Australia's population	14
Australia's ageing population	20
Economic implications of an ageing population	21
Demographic aspects of ageing for major cities	22
Ageing in place	26
Population Projections	26
Cities population projections	27
Chapter 3 Settlement	31
Australia's early settlement legacy	31
Early Infrastructure	32
Population distribution within Australia's cities	33
Jobs and housing	41
Australia's changing housing stock	42
Changing densities within Australia's cities	45
Chapter 4 Economy	51
The international context – cities and global competiveness	52
Australia's changing economic structure	55
The growth of global trade	56
What Australia is trading	57
Productivity of Australia's cities	60
The changing economy and employment structure	65
Employment change	68
Ports	71
The role of airports	72
The role of domestic business travellers	77

Chapter 5	Human Capital and Labour	81
Labour	force participation	81
Labour	mobility and labour market disadvantage	86
Human	capital in cities	89
Chapter 6	nfrastructure and Transport	101
Heighte	ned demand	102
Conflict	s, trade-offs and transport mode shares	104
Ca	travel	108
Pul	olic transport	111
Act	ive transport	113
Poi	ts	114
	ght route maps	
-	·	
·	ucture planning	
	ting jobs and housing	
	ing jobs	
	ucture's city shaping role	
1:54	of account unline	
LIST (	of case studies	
Case st	udy: Progress in cities	95
	udy: Port of Melbourne	
	udy: Badgerys Creek Airport	
0.000		
Liot a	of tables	
LISU	of tables	
Table 2.1	Population growth projections, 2031 and 2061	26
Table 2.2	Population projections by capital cities, 2031 and 2061	
Table 4.1	Selected Australian capital cities competiveness rankings within the Asia-Pacific, 2009-2010	
Table 4.2	Australia's top 25 exports, 2011–2013	
Table 4.3	Australia's top 25 imports, 2011–2013	
Table 4.4	Main industry contributor to job growth	65
Table 4.5	Employment clusters in the centres of cities and in selected suburban centres, 2011	68
Table 4.6	Fastest-growing areas (centres of cities), 2001–2011	69
Table 4.7	Air passenger movements by airport, actual and projected, 2010–11 to 2030–31	75
Table 6.1	Mode share by age of travellers (average weekday), Sydney 2011-12	103
Table 6.2	Estimate summary of benefits to metropolitan Melbourne, 2011	124

# List of figures

Figure 1.1	Australia's urbanised population trends 1911-2013	2
Figure 1.2	Proportion of those aged 65 years and over in capital cities, 2012, 2031 and 2056	3
Figure 1.3	Proportion of Gross Domestic Product attributed to cities and regional areas of Australia, 2010	4
Figure 1.4	Growth in total passengers by mode of travel, 1970–2013	5
Figure 1.5	Average commuting times from residence to workplace by selected capital cities, 2002–2010	5
Figure 2.1	Capital cities share of population growth, 1911–2013	13
Figure 2.2a	Population proportion by settlement type, 1911–2011	14
Figure 2.2b	Population proportion by settlement type, 1971–2011	15
Figure 2.3	Number of persons living in the most populous capital cities, for 2004 and 2014	17
Figure 2.4a	Number of persons living in other major cities, for 2004 and 2014	17
Figure 2.4b	Major city population growth rates, 2004-2009 and 2010-2014	18
Figure 2.5	Components of annual population growth, 1972–2011	19
Figure 2.6	Measure of life expectancy by capital cities and other areas, 2006–2012	20
Figure 2.7	Labour force participation of people aged 55 years and over in capital cities, 1978–2014	21
Figure 2.8	Age structure for 20 most populous cities, 2012	22
Figure 2.9	Proportion of people aged 65 years and over in capital cities, 2012, 2031 and 2056	23
Figure 2.10	Projected change in people aged 65 years and over in capital cities, 2012–2031	24
Figure 2.11	Actual and projected number of persons by capital cities, 2003–2061	28
Figure 3.1	Population urbanisation trends 1911–2013	31
Figure 3.2	Rail passenger journeys, selected capital cities, 1900–2013	33
Figure 3.3a	Australian city groupings house prices (nominal prices), 1992–2014	39
Figure 3.3b	Australian non capital major cities house prices (nominal prices), 1992–2014	
Figure 3.4	Nominal house prices in Melbourne by distance to central business district,1990-91 to 2013	40
Figure 3.5	Divergence in house price growth across Melbourne (nominal prices), 1992–2014	42
Figure 3.6	Proportions of dwelling stock and net change by type, Sydney, 2001–2011	43
Figure 3.7	Proportions of dwelling stock and net change by type, Melbourne, 2001–2011	43
Figure 3.8	Changing population-weighted density of Australian cities, 1991–2012	46
Figure 3.9	Population-weighted density by distance to CBD	46
Figure 3.10	Change in number of dwellings in centres, Sydney, 1996-2011	47
Figure 4.1	Contribution to Gross Domestic Product growth (volume measure) by cities and regions, 1990's, 2000's and 2012–13	51
Figure 4.2	Jobs distribution by capital city and balance of state, 1994-2014	52
Figure 4.3	Population size and productivity premium by cities in North America, Mexico, Germany, Great Britain and Spain	53
Figure 4.4	International metropolitan area labor productivity, 2010	53
Figure 4.5	Industry share of total Australian Gross Domestic Product, selected industry sectors, 1901–2013	55
Figure 4.6	World and Australia total merchandise trade, 1948–2013	
Figure 4.7	World and Australia total commercial services trade, 1980–2013	57
Figure 4.8	Labour productivity and multifactor productivity measures (market sector industries aggregate), 1995–96 to 2012–13	
Figure 4.9	Top 10 Australian ports by highest number of shipping containers (full and empty), 2012–13	
Figure 4.10	Growth in container trade at Australia's largest ports, 2009–10 to 2013–14	
Figure 4.11	Air passenger movements through all Australian airports, 1985–2013	
Figure 4.13	Estimated number and proportion of international business visitors by capital city, 2012–13	
Figure 4.14	Estimated number and proportion of international business visitor nights by capital city. 2012–13	

Figure 4.15	Estimated number of domestic business travellers, (overnight visitors, visitor nights and expenditure), 2013-2014	77
Figure 5.1	Selected comparisons of earning or learning, vocational or higher qualifications and labour force participation	82
Figure 5.2	Labour force participation rate by selected age groups 1978 - 2014	83
Figure 5.3	Labour force participation in selected capital cities	84
Figure 5.4	Australia's unemployment rate (seasonally adjusted), 1994–2014	85
Figure 5.5	Australia's unemployment rate by age, 1979–2014	86
Figure 5.6	Selected real median weekly household incomes, 2001–2011	89
Figure 5.7	Average Australian personal income, 2011–12	90
Figure 5.8	Education price premium paid in selected major cities compared with the Australian male average lifetime earnings per qualification, 2011	90
Figure 5.9	Education price premium paid in selected major cities compared with the Australian female average lifetime earnings per qualification, 2011	91
Figure 5.10	Labour productivity by selected capital cities, 1999–2011	92
Figure 5.11	Selected real median weekly household incomes, Sydney	95
Figure 5.12	Unemployment rate for South-West Sydney and Greater Sydney (excluding South-West Sydney), 2001–2011	96
Figure 5.13	Labour force participation rates South-West Sydney and Greater Sydney (excluding South-West Sydney 2001–2011	
Figure 5.14	Proportion with a vocational or higher education qualification for South-West Sydney and Greater Syd (excluding South-West Sydney), 2001–2011	
Figure 6.1	Total urban passenger task for Australia, (selected modes) 1945–2013	102
Figure 6.2	Vehicle kilometres travelled per person for Australia, 1900-2013	103
Figure 6.3a	Mode share of commuting, by area of work, Sydney, 2011	105
Figure 6.3b	Mode share of commuting by area of residence to City and Inner South area of work, Sydney, 2011 .	106
Figure 6.4	Mode share of commuting by area of residence to Inner area of work, Melbourne, 2011	.107
Figure 6.5	Total kilometres travelled by car, 2001–02 to 2011–12	108
Figure 6.6	Stock of registered motor vehicles, 2001–02 to 2013–14	111
Figure 6.7	Public transport passenger kilometres, metropolitan Australia	112
Figure 6.8	Share of active transport by commuting mode, 2001–2011	. 113
Figure 6.9	Australian containerised imports and exports for all ports, 1993-94 to 2032-33	114
Figure 6.10	Total interstate freight estimates and forecast by mode, 1971-2040	116
Figure 6.11	Growth in number of vehicle registrations, 2009–2014	116
Figure 6.12	Air passenger movements through all Australian airports, 1985-86 to 2013-14	119
Figure 6.13	Self-containment rates for selected geographic areas surrounding Melbourne, 2011	122
Figure 6.14	Self-containment rates for selected geographic areas surrounding Sydney, 2011	123
Figure 6.15	Self-containment rates for selected geographic areas surrounding Brisbane, 2011	123
Figure 6.16	Benefit stream across time of selected Melbourne transport projects (\$ billions), 1981–2011	125

# List of maps

Map 2.1	Population compositional change, 1991–2011	16
Map 2.2	People aged 65 years and over by East coast Statistical Area Level 2 (SA2) geographic area, 30 June 2012	25
Map 3.1	Population compositional change, Sydney, 1991–2011	34
Map 3.2	Population compositional change, Melbourne, 1991-2011	35
Мар 3.3	Population compositional change, Brisbane, 1991–2011	36
Map 3.4	Population compositional change, Adelaide, 1991–2011	37
Map 3.5	Population compositional change, Perth, 1991–2011	38
Мар 3.6	Proportion of houses sold which were affordable by low to moderate income purchasers in Melbourne, 1981–2006	41
Мар 3.7	Distribution of dwelling net change, Sydney, 2001–2011	44
Map 3.8	Distribution of dwelling net change, Melbourne, 2001–2011	
Map 4.1	Sydney's productivity, 2011–12	
Map 4.2	Melbourne's productivity, 2011–12	62
Map 4.3	Brisbane's productivity, 2011-12	63
Map 4.4	Perth productivity, 2011–12	64
Map 4.5	Professional services jobs concentration in Melbourne's suburbs, 1996–2011	66
Map 4.6	Manufacturing jobs concentration in Melbourne's suburbs, 1996–2011	67
Map 4.7	Economic output density, Sydney	70
Map 4.8	Economic output density, Melbourne	70
Map 5.1	Disadvantaged suburbs in Melbourne: lowest and second-lowest decile threshold levels	87
Map 5.2	Disadvantaged suburbs in Brisbane: lowest and second-lowest decile threshold levels	88
Мар 5.3	Population with non-school qualifications aged 20-64 years, New South Wales, 2011	93
Map 5.4	Population change by Statistical Area Level 2, Queensland, 2012–13	94
Map 6.1	Population Density Change, Sydney 2001–2011	104
Map 6.2	Median distance travelled to work, Melbourne, 2011	109
Мар 6.3	Vehicle Kilometres Travelled – Sydney 2011	110
Map 6.4	Map of key freight routes, Sydney, 2014	117
Map 6.5	Map of key freight routes, Brisbane, 2014	118

