

1. Country Report of Australia¹

1.1 Current Status of the ICT Sector of Australia

Australia stands at the precipice between growth cycles. Behind us are the glory days of its traditional economic strengths based on mining, traditional manufacturing and farming. As we look around us, we see the old industries of mass production and traditional heavy manufacturing being decimated. Traditional manufacturing has declined from 20 per cent to 6 per cent of GDP in the last 30 years. Even those areas of significant strength and value – including financial services, law, consulting and media – are increasingly under threat from automation, from AI, from new technologies. There is a revolution underway and Australia's future – uncertain as it may be – depends not only on average Australians leaping into a new economic paradigm but for Australian entrepreneurs to imagine what that paradigm might look like, where tomorrow's jobs, careers and industries will be. One such future industry is the 'medtech' healthcare industry with medical technology systems and platforms considered to be a key engine of progress for Australia as well as for the entire APEC region.

There are conflicting reports on the use of ICT and Smart Technology in Australia. Some websites report a penetration rate of over 85 per cent of the Australian population, which is currently just above 24 million. According to the Australian Bureau of Statistics (ABS), there were 13.7 million internet subscribers in Australia at the end of June 2017, representing an increase of 2.1% from the end of December 2016. Fibre connections grew by 49.8 per cent in the six months between December 2016 and June 2017. There were 2.1 million fibre connections in June 2017, an increase of 123.3 per cent for the year between June 2016 and June 2017.² In 2014-15, desktop and laptop computers still ruled the roost in terms of devices used to access the internet at home (94%). However, smartphones were not far behind (86%) and tablets were also gaining more of a foothold at 62 per cent indicating an increasing number of households are accessing the web via multiple devices.

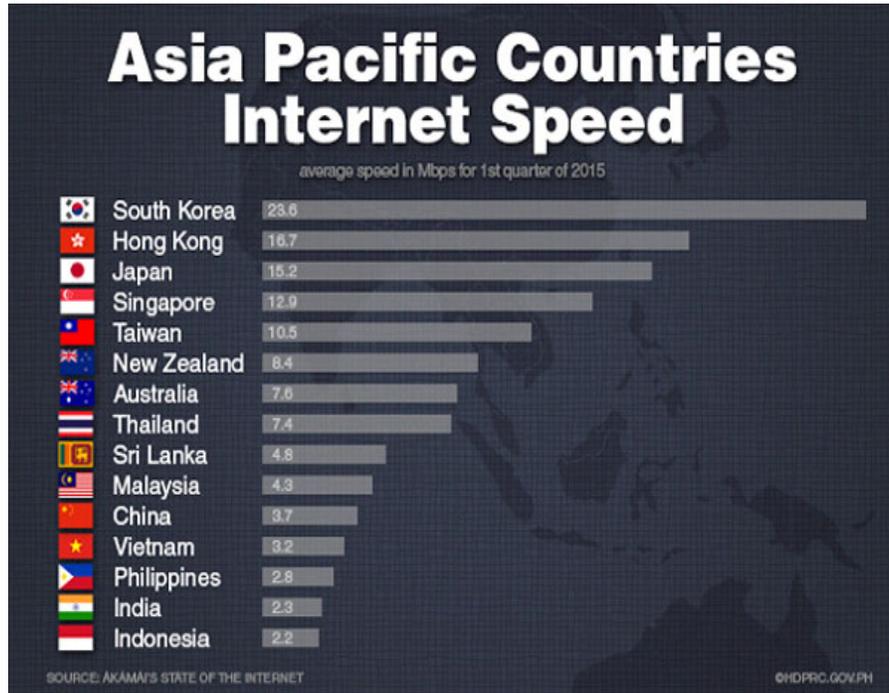
Australian smartphone penetration rates are higher than the global average of 81 per cent, with only a few economies, including Norway, South Korea and the Netherlands, reporting higher ownership. Smartphone ownership rose to 84 per cent in 2016. Today the smart phone penetration in Australia is approaching its peak with rates likely to slow in the years after 2017. This is, in part, due to the fact that Australia's major mobile network operators are shutting down 2G services, forcing mobile users to upgrade to 4G speed or higher. More than three quarters of Australians

¹ This report was written by Patrice Braun, Professor, Research & Innovation Portfolio, Federation University Australia, Australia.

² ABS 8153.0 - Internet Activity, Australia, June 2017

now have a 4G connection with peak headline speeds approaching 100 Mbit/s across parts of the country, which is much lower than the 360 Mbit/s mobile consumers have on offer in economies like South Korea.

Figure 1. Asia Pacific Countries Internet Speed



Source: www.statista.com/statistics/381388/asia-average-internet-connection-speed-by-country/

The saturation of the smartphone market is a worldwide phenomenon and is most pronounced in developed countries such as Australia. Connected entertainment drives Internet of Things (IoT) spending but there is at present no notable surge in demand for connected home devices. Just under 30 per cent of Australians own Smart TVs or gaming consoles.

It is no surprise that younger mobile consumers are smartphone hungry, 94 per cent of mobile consumers are aged 18-24 old, showing an increase from 91 per cent in 2015 and highlighting the importance this demographic places on being connected and mobile³. The average number of hours per week spent on the internet for personal use across all Australians was 10, although averages vary between age groups. The 15-17 years bracket clock up the highest number of average hours per week (18 hours per week) and the 55–64 years and 65 years or over age groups were the lowest at 7 hours per week⁴.

³ Mobile Consumer Survey 2016 – The Australian Cut, Deloitte, 2016

⁴ <https://www.roi.com.au/blog/australian-internet-social-media-statistics-2017>

Australians are continuing to demonstrate they are quite comfortable with e-commerce. In 2014–15, 61 per cent – 9.7 million people – purchased goods or services online during a three month period. The most common purchases were music, movies, electronic games or books; followed by clothes, cosmetics and jewelry. While to date the internet retail figures only account for a small percentage of total sales, the online retail market is about to be shaken up with American giant Amazon going live in Australia as of late November 2017. The entry of Amazon may well be the moment when shopping behaviors in Australia swings decisively towards e-commerce with much increased competition for existing retailers. Offering customers an enhanced online shopping experience and competitive pricing across a wide range of products, the online retailer is expected to appeal to price-conscious Australians and the disruption will likely force current retailers to better leverage their relationships with customers.

Despite the substantial uptake of technology, there is still a considerable difference in ICT/smart technology uptake in Australia’s major cities (88 per cent) vs. uptake in remote and very remote parts of Australia (79 per cent). The ‘digital divide in the bush’ remains a major challenge for Australia, particularly when it comes to access to fast broadband.

Australian Business Use of IT

There are no sex-disaggregated data available on the use of ICT and smart technology by Australian enterprises. Available key indicators of business use in IT include internet access, the use of broadband, web presence, social media presence and internet commerce (e.g., the placing and receiving of orders via the internet) are for all businesses regardless of gender or size.

For the first time, a web presence was reported by more than half of all Australian businesses (50 per cent). By industry, Arts and recreation services had the highest proportion of businesses with a web presence (76%), while the Agriculture, forestry and fishing industry had the lowest proportion of businesses with a web presence (12%). More than a third of Australian businesses had a social media presence (38%). The highest proportion of businesses with a social media presence was recorded in the 200 or more persons employed range (81%) followed by SMEs with 20 to 199 persons employed (63 per cent). During the year ended 30 June 2016, over half of all businesses placed orders via the internet (57 %). The proportion of businesses that reported having received orders via the internet was 37 per cent, with income obtained from these orders totaling an estimated \$321 billion⁵.

⁵ ABS 8166.0 - Summary of IT Use and Innovation in Australian Business, 2015-16

Table 1. Business Use of Information Technology, Selected Indicators - 2013-14 to 2015-16

		2013-14	2014-15	2015-16
Estimated Number of Businesses	'000	757	776	799
Businesses with:				
Internet Access	%	94.7	94.8	95.3
Web Presence	%	47.1	48.6	50.1
Social Media Presence	%	30.8	34.0	38.2
Businesses with Internet Access:				
Broadband as the Main Type of Connection	%	99.2	99.2	99.3
Businesses that:				
Placed Orders Via the Internet	%	56.0	55.7	57.0
Received Orders Via the Internet	%	33.2	33.8	36.8
Internet Income	\$b	266.8	285.5	321.4