Australian Government
Department of Foreign Affairs and Trade

about Australia

information and communications technology

Information and communications technology (ICT) is a key driver of Australia's strong economic growth and innovation. The Australian ICT market, which comprises firms engaged primarily in providing computer and telecommunications services, as well as hardware sales and service, is the fourth largest in the Asia–Pacific region after the Chinese, Japanese and South Korean markets and the 11th largest in the world.

According to the E-readiness Rankings produced by the Economist Intelligence Unit, Australia ranked fourth out of 70 countries for its 'e-readiness'* in 2008. Australia was ranked first overall in the category of social and cultural environment including aspects such as level of education and literacy, level of internet literacy, degree of entrepreneurship, technical skills of workforce, and degree of innovation.

The telecommunications sector in Australia has undergone a significant transformation in the past decade. The Australian Government introduced open competition in the market in 1997, and today Australia has one of the highest rates of mobile phone ownership in the world. State-of-the-art network coverage is available to more than 98 per cent of the population.

Australia is a nation of sophisticated ICT users, and the majority of people with home internet access use broadband technology. According to the Australian Bureau of Statistics (ABS), in December 2007 there were 7.1 million internet subscribers: 964 000 business and government subscribers and 6.14 million household subscribers.

An ABS survey found that in 2006–07, 64 per cent of Australian households had home internet access and 73 per cent had access to a home computer. Children aged five to 14 are major users of computers and the internet. Of the 2.7 million children in this age group, 65 per cent use the internet and 92 per cent use a computer.

The number of non-dial-up internet subscribers is increasing rapidly. At December 2007, they totalled 5.22 million, representing 73 per cent of total internet subscribers, compared to 59 per cent in September 2006. Digital subscriber line (DSL) continued to be the main access technology, used by 3.82 million or 73 per cent of non-dial-up subscribers.

key facts

- Australia's ICT market is the fourth largest in the Asia–Pacific region and the 11th largest in the world.
- In 2006–07, 64 per cent of Australian households had home internet access and 73 per cent had access to a home computer.
- Australia's ICT sector employs more than 387 000 people.
- Australia has one of the highest rates of mobile phone ownership in the world.

By December 2007, the number of connections with download speeds of 1.5Mbps or greater had increased to 2.52 million subscribers, compared to 1.1 million subscribers at the end of September 2006.

More than 387 000 Australians are employed in ICT-related positions across the economy. ICT has generally contributed between 50 per cent and 80 per cent of productivity growth in Australia's services and manufacturing sectors in the past 20 years. The production of ICT goods and services generates revenue of around $54 billion, and ICT industries earn more than $100 billion. ICT accounts for around 4.6 per cent of Australia's total gross domestic product.

According to the Australian ICT Trade Update 2007, in 2006, Australia exported ICT goods and services valued at $5.7 billion, down from the peak of $6.9 billion exported during the boom in 2000 (in current prices). During the same period, Australia imported ICT goods and services valued at $26 billion.

ICT and Australian business

The Internet and e-commerce have boosted the international competitiveness of Australian businesses. Many Australian firms are now using internet technology to expand into new foreign markets.

Small to medium-sized enterprises are increasingly using e-commerce because of the low overheads and initial outlay of capital, leading to a fast return on investment.

About 94 per cent of large businesses and 60 per cent of medium businesses in Australia had a website in 2006, while over 37 per cent of all businesses placed orders for products and services online. The percentage of all businesses receiving orders online in the same period was 21 per cent.

In 2006–07, of the estimated 11.3 million people who accessed the internet in Australia, 61 per cent used the internet to purchase or order goods or services for private purposes.

Internet income for Australian businesses increased from $24.3 billion in 2002–03 to $56.7 billion in 2005–06.

ICT innovation and excellence

The Australian Government supports ICT innovation and excellence to develop sustainable competitive advantage, to stimulate the development of new firms, and to foster widespread use of ICT to achieve productivity benefits and win global opportunities for Australian ICT firms.

Recent government ICT initiatives have included:

- a publication called *2006 e-Government Strategy, Responsive Government: A New Service Agenda*, which examines how the government will meet the challenge of harnessing ICT to improve service delivery while at the same time improving efficiency and reducing costs
- an authentication framework that aims to enable e-government by providing confidence in online transactions with government
- world-leading initiatives to combat internet scams and spam and unsolicited telemarketing phone calls through a 'Do not call' register

- plans to combine 17 different cards into a single smart card, which will be used by Australians to access a range of government health benefits and social services
- the development of biometric passport technology making Australia one of the first countries in the world to have introduced ePassports.

The government committed $380 million over 10 years (to 2011) to establish and operate a centre of excellence for ICT research, research training and commercialisation. The centre, known as National ICT Australia (NICTA), was established in 2002 as an independent, not-for-profit company.

NICTA is now one of Australia's largest ICT research organisations and employs more than 300 research and support staff and more than 260 postgraduate students. Its key aims include:

- developing first-class ICT research capabilities in existing and emerging fields
- increasing the availability of high-quality ICT research skills
- fully developing the commercial potential of research outputs
- becoming a catalyst for the development of networks and clusters of ICT industry activity.

Research and development

Important research is also being conducted by the Australian Government-funded Commonwealth Scientific and Industrial Research Organisation (CSIRO) ICT Centre. This research focuses on innovation that creates a competitive advantage for Australia and leads to globally adopted solutions. The ICT Centre collaborates widely with industry, other parts of CSIRO, research agencies including NICTA, and the National Research Flagships program. In 2006, the centre demonstrated the world's fastest broadband wireless link technology, achieving a record-setting six gigabits per second.

Most of Australia's 39 universities and TAFE (technical and further education) colleges offer undergraduate and graduate courses in ICT fields, including a wide range of digital content courses.

Total ICT research and development expenditure in Australia is now almost $3 billion a year, accounting for around 24 per cent of Australia's total expenditure on research and development.

Today Australia is at the forefront of many ICT areas, including software development, systems integration and wireless networking, e-commerce, smart cards and computer games. Australia has become a centre for ICT support services for companies throughout the Asia–Pacific region, and many international ICT companies locate their regional headquarters in Australia to take advantage of local expertise and market opportunities.

In June 2007, the government announced a major package to deliver a new state-of-the-art broadband network throughout Australia, including regional Australia. The package involves expenditure of almost $2 billion of public and private funds to deliver high-speed broadband coverage to 99 per cent of premises throughout the country over a two-year period.

Open telecommunications sector

In the telecommunications sector, Australia has an extensive and advanced infrastructure. The opening up and liberalisation of the sector in 1997 dramatically changed the industry, encouraging competition, extensive investment in new technology and infrastructure, and improved services.

Just over a decade ago, Australia had only two national telecommunications carriers: Telstra and Optus. Today more than 160 licensed carriers operate in Australia, providing a wide range of services and competitive prices for long distance and international calls, mobile services and broadband Internet access.

As part of the opening up of the telecommunications field, the government progressively sold all its equity holdings in the Telstra Corporation, Australia's biggest telecommunications group, in three tranches in 1997, 1999 and 2006.

Australia is today well connected, both domestically and internationally, with a modern fibre-optic backbone, satellite coverage and an extensive mobile network. Since 2000, the number of connections for mobile telephones has exceeded fixed-line connections. At June 2006, there were more than 19.86 million mobile phone subscribers in Australia (in a total population of around 21 million) and many people had multiple subscriptions.

* E-readiness is a measure of a country's information and communications technology (ICT) and the ability of businesses and consumers to use ICT to their advantage.

Note: Unless otherwise stated, all dollar amounts are in Australian dollars. The term 'billion' means 'a thousand millions' (one billion therefore equals 1 000 000 000).

Further information

Austrade (Australian Trade Commission)
www.austrade.gov.au

Australian Information Industry Association
www.aiia.com.au

Commonwealth Scientific and Industrial Research Organisation ICT Centre
www.ict.csiro.au

Department of Broadband, Communications and the Digital Economy
www.dbcde.gov.au

Invest Australia
www.investaustralia.gov.au

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