



# Australian ICT Statistical Compendium 2009



AUSTRALIAN  
COMPUTER  
SOCIETY

*ICT Professionals Shaping Our Future*

# About the Australian Computer Society

The ACS (Australian Computer Society) is the recognised professional association for those working in Information and Communications Technology, seeking to raise the standing of ICT professionals and represent their views to government, industry and the community.

A member of the Australian Council of Professions, the ACS is the guardian of professional ethics and standards in the ICT sector, committed to ensuring the beneficial use of ICT for all Australians.

It provides both members and non-members with opportunities for professional development, networking and certification, as well as enabling them to contribute to the growth of their profession. Visit [www.acs.org.au](http://www.acs.org.au) for more information.



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# Why This Publication?

## MESSAGE FROM THE ACS

It can be difficult and time-consuming to gain access to relevant data about ICT economic and social trends such as employment, educational outputs, investment in research and so on.

To address this challenge and as part of our commitment to improving ICT outcomes in Australia, the ACS joined forces with the Australian Bureau of Statistics (ABS) and other relevant Government Departments to develop this Statistical Compendium, which combines a wide range of quality ICT-related data in to one report.

The objective of this project was to produce a 'snapshot' of statistical data on the ICT workforce for ACS members, industry,

government and ICT users. It incorporates statistics on the Australian ICT sector; ICT higher and vocational education, ICT trade, ICT employment and skills, ICT immigration, with breakdowns of the statistical data on a national and state/territory basis where it is available.

Our aim is to assist policy makers involved with the ICT sector by providing the latest available data, and to provide a tool for ICT professionals, the ICT industry, and for those businesses that deal with the ICT sector.

We hope you find the Australian ICT Statistical Compendium 2009 useful.



# How Should This Information Be Read?

## STATISTICAL DATA CAVEATS AND CAUTIONS

A significant amount of the data presented in this compendium is derived from the Australian Bureau of Statistics and other Government agencies. Other data is derived from surveys conducted by a variety of organisations. It should be noted that the ABS, other Government agencies and many of the organisations concerned advise that some caution should be exercised in the analysis of such data.

Some of the broader caveats to the data in this publication have been incorporated alongside the tables and charts; others are too extensive or complex for easy inclusion.

ABS outlines for its publications the methods applied to source the data, and estimates of the reliability of it for analysis purposes. This information can be accessed from the ABS website.

The quality of statistical data is affected by a number of factors, the main ones being time, depth and coverage.

### Time

Timely data is data that is reasonably up-to-date while non-timely data loses usefulness as it gets older; other than for trend analysis. In this publication we have tried to present the most timely data available at the time of compilation, however it is clear that some important ICT data is not as up-to-date as we would prefer.

### Depth

Depth of data refers to the base level to which the data penetrates and the relative size of the sample used. It also addresses whether the data only exists at a summary level, or whether it is a summation of more detailed data. In general, the greater the depth, the greater the level of accuracy.

### Coverage

Coverage applies to the relevancy of the source to the analysis, i.e. if the only sources of data come from a single state, industry sector or size of organisation, does that allow analysis to presume with any level of certainty that other states, sectors or corporations are similar.



We have tried to identify in footnotes and comments both the source and timeliness of data, and analysis has been kept to the minimum necessary to limit any inadvertent misinterpretation of the data presented.

Some data are leading indicators, i.e. they can help to project other data. (An example of a leading indicator is tertiary enrolments, which, by the application of average "success" percentages, can project likely completions three years hence). Other data are trailing indicators, i.e. job losses are often a trailing indicator of worse market conditions. Because they are gathered with different timeframes, leading and trailing indicators may not always agree. They can, however, if tracked consistently, show trends of growth or contraction, and of acceleration or slowdown.

Statistics can tell us what has happened, but not always why. Statistics can give us pointers to the future, but only to the limitations of the data and the environment. We hope you find these statistics useful.

# At a Glance

## SUMMARY TABLE OF KEY NATIONAL STATISTICS

| Measurement   | Statistics/Currency      | Period                                | Source   | Trend <sup>1</sup>  |
|---|--------------------------|---------------------------------------|--|---|
| Total ICT workers in Australia  | <b>532,500</b>           | Feb 2009                              | ABS Labour Market Survey Feb 2009, ICT Industry logistics CIIER 2008 | Slowing but steady growth, shortages apparent                                     |
| Total ICT Technical, Professional, Management, Trade staff in Australia | <b>517,103</b>           | Feb 2009                              | ABS Labour Market Survey Feb 2009, CIIER extract                     | Continued growth over 20 year cycle. Pause in early 2009                          |
| Total ICT Technical, Professional, and Management staff in Australia    | <b>397,800</b>           | Feb 2009                              | ABS Labour Market Survey Feb 2009, CIIER extract                     | Steady growth to 2008, pause indicated in early 2009                              |
| Total ICT Domestic annual enrollments in Australia                      | <b>7,839</b>             | 2007                                  | DEEWR  | Continuing decline  |
| Total temporary ICT migrants to Australia                               | <b>13,379 per annum</b>  | 2007-8                                | DIMIA, CIIER calculation   | Has been increasing rapidly to start of 2009                                      |
| Estimated ICT skills shortage   | <b>11,225</b>            | 2008                                  | CIIER 2008   | Growing   |
| Employees in ICT Industry   | <b>268,000</b>           | 2007-8                                | CIIER T250 2008, and ABS 8126-0 2006-7                               | Slowing but continued growth, major state and sectoral variations                 |
| Revenue of ICT Industry   | <b>\$85-\$98 Billion</b> | 2008-9 CIIER, 2006-7 ABS <sup>2</sup> | CIIER T250 2008, and ABS 8126-0 2006-7                               | Significant growth, sectoral variations   |
| ICT R&D   | <b>\$3,165 Million</b>   | 2006-7                                | ABS Oct 2008   | Recovery from long-term decline, led by business R&D                              |
| ICT exports (excluding re-exports)                                      | <b>\$5,025 Million</b>   | 2007-8                                | CSES 2009, ABS Trade data  | Gradual recovery to 1999-2000 export levels, but with an increasing trade deficit |

<sup>1</sup> CIIER trend assessments

<sup>2</sup> Includes electronic and precision equipment repair and maintenance revenue etc

# Defining ICT

## THE ICT SECTOR

One of the significant difficulties in understanding ICT in Australia is the frequent confusion between analysis of the ICT work-force in labour market terms (e.g. the kind of job the individual does), and analysing the ICT work-force in industry terms (e.g. what kind of organisation the individual works for).

ICT broad employment occurs in a number of groupings. These include:

- providers of ICT goods and services (usually called the ICT industry)
- purchasers and users of ICT goods and services including the government and private sectors who also employ a large number of specialists to help them apply their ICT purchases
- the trainers, teachers and researchers into ICT who generally (but not always) operate within the universities and colleges
- people who provide technical support to ICT, but who might, more properly, be categorised as electrical or electronics specialists
- people working in call-centres, or in desk-top publishing and graphics design.

The ICT industry employs a significant number of ICT professionals, however, ICT industry employment also

includes many ICT non-professional technical, sales, logistical and administrative staff.

### The ICT industry

The term "ICT Industry" is also often used in the press, or by other commentators, for a confusing range of different things, ranging from the "tight" definition of companies solely concerned with the provision of ICT products and services, but that includes companies with major units supplying ICT good and services, through a "looser" definition that may include retail ICT, that may include call centres that are mainly parts of other industries (e.g. banking), that may include significant sections of the electronics industries, and of other professional services (e.g. management consultants and historically, accountants), to a "broad" definition that can include anyone working on ICT related matters in any industry.

### ICT Employment

The ABS defines ICT employment by the Australian New Zealand Standard Classification of Occupations (ANZSCO) definition at a number of levels described by the number of digits in the code used.

At the "4 digit" level, the following are the main ICT jobs, either wholly or in part:

| ANZSCO 4 Level |   |
|----------------|---|
| 1351           | ICT Managers  |
| 2232           | ICT Trainers  |
| 2247           | Management and Organisation Analysts                              |
| 2249           | Other Information and Organisation Professionals                  |
| 2252           | ICT Sales Professionals   |
| 2324           | Graphic and Web Designers, and Illustrators                       |
| 2611           | ICT Business and Systems Analysts                                 |
| 2612           | Multimedia Specialists and Web Developers                         |
| 2613           | Software and Applications Programmers                             |
| 2621           | Database and Systems Administrators, and ICT Security Specialists |
| 2631           | Computer Network Professionals                                    |
| 2632           | ICT Support and Test Engineers                                    |
| 2633           | Telecommunications Engineering Professionals                      |
| 3123           | Electrical Engineering Draftspersons and Technicians              |
| 3124           | Electronic Engineering Draftspersons and Technicians              |
| 3131           | ICT Support Technicians   |
| 3132           | Telecommunications Technical Specialists                          |
| 3423           | Electronics Trades Workers  |
| 3424           | Telecommunications Trades Workers                                 |
| 6212           | ICT Sales Assistants  |

# Who We Are

## ICT TECHNICAL AND PROFESSIONAL EMPLOYMENT ICT JOBS BY EMPLOYER GROUP<sup>3</sup>

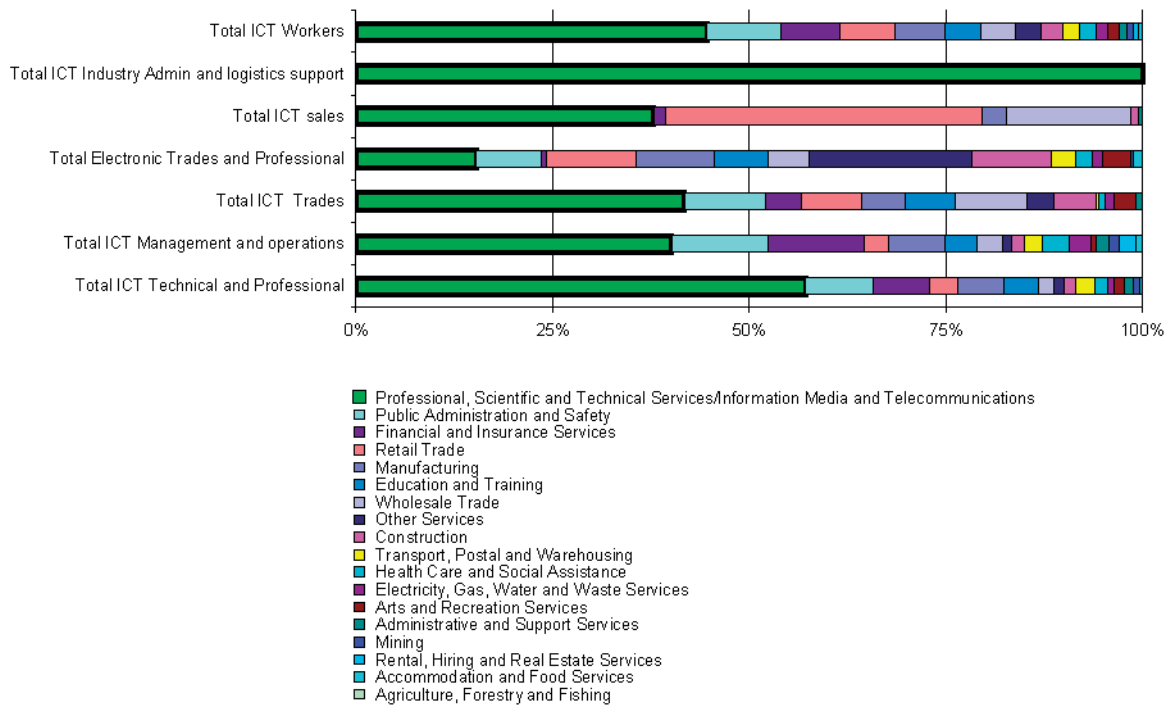
| Employing Industry Sector  | ICT Technical and Professional | ICT Management and Operations | ICT Trades    | Electronic Trades and Professional | ICT Sales     | ICT Industry Admin/Logistics Support (CIER Data) | ICT Workers (ACS Definition) <sup>4</sup> |
|--|--------------------------------|-------------------------------|---------------|------------------------------------|---------------|--|---|
| Professional, Scientific and Technical Services/Information Media and Telecommunications | 117,685                        | 65,979                        | 26,023        | 7,505                              | 12,907        | 58,273   | 288,372                                   |
| Public Administration and Safety   | 17,490                         | 20,283                        | 6,454         | 4,113                              | -             | -  | 44,227                                    |
| Financial and Insurance Services   | 15,070                         | 19,930                        | 2,787         | 304                                | 524           | -  | 38,311                                    |
| Retail Trade   | 7,298                          | 5,223                         | 4,806         | 5,665                              | 13,716        | -  | 31,043                                    |
| Manufacturing  | 11,838                         | 11,627                        | 3,451         | 4,868                              | 1,082         | -  | 27,998                                    |
| Education and Training   | 9,133                          | 6,697                         | 3,921         | 3,354                              | -             | -  | 19,751                                    |
| Wholesale Trade  | 4,055                          | 5,337                         | 5,709         | 2,551                              | 5,388         | -  | 20,489                                    |
| Other Services   | 2,723                          | 1,912                         | 2,150         | 10,219                             | -             | -  | 6,785                                     |
| Construction   | 2,949                          | 2,653                         | 3,328         | 4,959                              | 370           | -  | 9,300                                     |
| Transport, Postal and Warehousing  | 5,159                          | 3,768                         | 226           | 1,546                              | -             | -  | 9,151                                     |
| Health Care and Social Assistance  | 3,198                          | 5,836                         | 520           | 994                                | -             | -  | 9,554                                     |
| Electricity, Gas, Water and Waste Services   | 1,922                          | 4,453                         | 724           | 710                                | -             | -  | 7,099                                     |
| Arts and Recreation Services   | 2,612                          | 1,158                         | 1,697         | 1,732                              | -             | -  | 5,467                                     |
| Administrative and Support Services  | 2,409                          | 2,548                         | 535           | -                                  | 150           | -  | 5,642                                     |
| Mining   | 1,691                          | 2,093                         | -             | 138                                | -             | -  | 3,784                                     |
| Rental, Hiring and Real Estate Services  | -                              | 3,450                         | -             | -                                  | -             | -  | 3,450                                     |
| Accommodation and Food Services  | 608                            | 1,370                         | -             | 614                                | -             | -  | 1,978                                     |
| Agriculture, Forestry and Fishing  | -                              | 161                           | -             | -                                  | -             | -  | 161                                       |
| <b>Total</b>   | <b>205,840</b>                 | <b>164,478</b>                | <b>62,331</b> | <b>49,272</b>                      | <b>34,137</b> | <b>58,273</b>                                    | <b>532,564</b>                            |

<sup>3</sup> Extract from ABS Labour market statistics Feb 2009, analysed by CIER.

<sup>4</sup> Exclude non-ICT Electronic Trades and Professional employment

ABS data available on request

As the graph below shows, the majority of ICT Technical and Professional staff are employed in those ABS Industry classifications most associated with the ICT Industry, e.g Professional Scientific and Technical services - largely the Software and Services industry sector, and Information Media and Telecommunications - largely the Telecommunications industry sector, (highlighted in green). Other important ICT industry sectors are included in the Wholesale Trade, Retail Trade, and Manufacturing ABS classifications.



# ICT Employment Demographics

| Age Demography of ICT Workers <sup>4</sup>                             |             |             |            |            |
|--|-------------|-------------|------------|------------|
| ANZSCO Job-Type  | % 40 & Over | % 55 & Over | GrandTotal | Median Age |
| 3420 Electronics and Telecommunications Trades Workers (nfd)           | 100.00%     | 48.33%      | 1,045      | 53.54      |
| 2232 ICT Trainers  | 75.00%      | 24.58%      | 4,740      | 46.20      |
| 3132 Telecommunications Technical Specialists                          | 87.18%      | 0.00%       | 3,954      | 45.26      |
| 3124 Electronic Engineering Draftspersons and Technicians              | 64.44%      | 23.67%      | 8,247      | 44.23      |
| 2247 Management and Organisation Analysts                              | 54.25%      | 19.39%      | 50,576     | 41.92      |
| 2249 Other Information and Organisation Professionals                  | 51.10%      | 15.26%      | 14,375     | 40.73      |
| 1351 ICT Managers  | 53.23%      | 8.29%       | 43,771     | 40.35      |
| 2600 ICT Professionals (nfd)   | 50.98%      | 15.11%      | 13,372     | 40.21      |
| 3423 Electronics Trades Workers  | 49.25%      | 12.72%      | 41,025     | 39.31      |
| 3424 Telecommunications Trades Workers                                 | 47.67%      | 6.25%       | 13,957     | 39.12      |
| 2633 Telecommunications Engineering Professionals                      | 42.41%      | 6.90%       | 8,524      | 38.28      |
| 2611 ICT Business and Systems Analysts                                 | 40.71%      | 7.51%       | 22,010     | 38.06      |
| 3131 ICT Support Technicians   | 39.66%      | 11.33%      | 48,374     | 37.95      |
| 2632 ICT Support and Test Engineers                                    | 47.61%      | 1.57%       | 9,199      | 37.83      |
| 2621 Database and Systems Administrators, and ICT Security Specialists | 39.14%      | 6.47%       | 41,817     | 37.66      |
| 2252 ICT Sales Professionals   | 38.69%      | 10.33%      | 12,216     | 37.61      |
| 2613 Software and Applications Programmers                             | 38.19%      | 6.03%       | 74,565     | 37.44      |
| 2631 Computer Network Professionals                                    | 34.06%      | 3.53%       | 23,629     | 36.40      |
| 2324 Graphic and Web Designers, and Illustrators                       | 30.77%      | 7.33%       | 48,460     | 36.09      |
| 2612 Multimedia Specialists and Web Developers                         | 20.48%      | 10.10%      | 11,326     | 34.85      |
| 6212 ICT Sales Assistants  | 27.94%      | 7.60%       | 21,921     | 34.44      |

<sup>4</sup> Extract from ABS Labour market statistics Feb 2009. The median age has been estimated by GIER based on customised data obtained from the ABS. This should be appropriately acknowledged.  
nfd – not further defined  
ABS data available on request

# ICT Education and Training Statistics<sup>5</sup>

- In 2007, 36,297 ICT students were enrolled at public universities, 5.3 % of the total student population. This is a drop of 8.7 % from 2006.
- 1,315 ICT students were enrolled at private higher education providers 2.5% of the total student population. A jump of 289.1% from 2006.
- 36,598 ICT students were enrolled in VET courses, 37.6 % of the total student population.

| ICT Post-Graduates 2007 |                        |  |                              |              |
|-------------------------|------------------------|--|------------------------------|--------------|
| State/Territory         | State total<br>Masters | State total<br>Grad Diploma or Certificate | State total<br>Undergraduate | Total        |
| NSW                     | 358                    | 133  | 1138                         | 1629         |
| VIC                     | 362                    | 113  | 1460                         | 1935         |
| QLD                     | 200                    | 88   | 798                          | 1086         |
| SA                      | 31                     | 9  | 212                          | 252          |
| WA                      | 18                     | 85   | 256                          | 359          |
| TAS                     | 6                      | 17   | 108                          | 131          |
| NT                      | 1                      | 1  | 22                           | 24           |
| ACT                     | 30                     | 17   | 99                           | 146          |
| Multi State             | 1                      | 0  | 43                           | 44           |
| <b>Total</b>            | <b>1007</b>            | <b>463</b>                                 | <b>4,136</b>                 | <b>5,606</b> |

| Domestic ICT Enrolments – Trend Series |        |        |        |        |       |       |       |
|--|--------|--------|--------|--------|-------|-------|-------|
| Year                                   | 2001   | 2002   | 2003   | 2004   | 2005  | 2006  | 2007  |
| <b>No</b>                              | 17,436 | 15,997 | 13,553 | 11,123 | 9,277 | 8,198 | 7,839 |

<sup>5</sup> DEENR 2007

**Commencing ICT Domestic and International Students By State, Higher Education Provider and Broad Field Of Education, Full Year 2007, DEEWR**

| State/Provider                                      | Information Technology Domestic | TOTAL Domestic | ICT International | Total International | Information Technology Total | TOTAL Domestic and International | ICT % of total students at this Provider | Domestic ICT % of total ICT at this Provider |
|---|---------------------------------|----------------|-------------------|---------------------|------------------------------|----------------------------------|--|--|
| <b>New South Wales</b>                              |                                 |                |                   |                     |                              |                                  |  |  |
| Charles Sturt University                            | 363                             | 11,128         | 220               | 1,659               | 583                          | 12,787                           | 4.56%                                    | 62.26%                                       |
| Insearch  | 27                              | 394            | 91                | 963                 | 118                          | 1,357                            | 8.70%                                    | 22.88%                                       |
| Macquarie University                                | 241                             | 7,515          | 73                | 5,638               | 314                          | 13,153                           | 2.39%                                    | 76.75%                                       |
| Raffles KVB Institute Pty Ltd                       | 27                              | 135            | 13                | 57                  | 40                           | 192                              | 20.83%                                   | 67.50%                                       |
| Southern Cross University                           | 73                              | 4,820          | 103               | 1,454               | 176                          | 6,274                            | 2.81%                                    | 41.48%                                       |
| Sydney Institute of Business and Technology Pty Ltd | 26                              | 465            | 71                | 2,060               | 97                           | 2,525                            | 3.84%                                    | 26.80%                                       |
| The University of New England                       | 64                              | 5,706          | 58                | 418                 | 122                          | 6,124                            | 1.99%                                    | 52.46%                                       |
| The University of New South Wales                   | 238                             | 11,385         | 152               | 4,529               | 390                          | 15,914                           | 2.45%                                    | 61.03%                                       |
| The University of Newcastle                         | 206                             | 9,798          | 270               | 2,505               | 476                          | 12,303                           | 3.87%                                    | 43.28%                                       |
| The University of Sydney                            | 225                             | 12,532         | 199               | 4,965               | 424                          | 17,497                           | 2.42%                                    | 53.07%                                       |
| University of Technology, Sydney                    | 391                             | 8,094          | 325               | 3,150               | 716                          | 11,244                           | 6.37%                                    | 54.61%                                       |
| University of Western Sydney                        | 229                             | 10,718         | 48                | 1,701               | 277                          | 12,419                           | 2.23%                                    | 82.67%                                       |
| University of Wollongong                            | 186                             | 4,888          | 1,016             | 4,345               | 1,202                        | 9,233                            | 13.02%                                   | 15.47%                                       |
| Wollongong College Australia                        | 10                              | 44             | 28                | 82                  | 38                           | 126                              | 30.16%                                   | 26.32%                                       |
| Institutions Not Offering ICT Courses               | -                               | 6,837          | -                 | 846                 | -                            | 7,683                            | -  | -  |
| <b>State Sub-total</b>                              | <b>2,306</b>                    | <b>94,459</b>  | <b>2,667</b>      | <b>34,422</b>       | <b>4,973</b>                 | <b>128,881</b>                   | <b>3.86%</b>                             | <b>46.37%</b>                                |

Data for the Australian Defence Force Academy are included under University of New South Wales.

**Commencing ICT Domestic and International Students By State, Higher Education Provider and Broad Field Of Education, Full Year 2007, DEEWR**

| State/Provider   | Information Technology Domestic | TOTAL Domestic | ICT International | Total International | Information Technology Total | TOTAL Domestic and International | ICT % of total students at this Provider | Domestic ICT % of total ICT at this Provider |
|--|---------------------------------|----------------|-------------------|---------------------|------------------------------|----------------------------------|--|--|
| <b>Victoria</b>  |                                 |                |                   |                     |                              |                                  |  |  |
| Box Hill Institute of Technical and Further Education  | 44                              | 207            | 18                | 47                  | 62                           | 254                              | 24.41%                                   | 70.97%                                       |
| Deakin University                                      | 333                             | 9,935          | 204               | 2,896               | 537                          | 12,831                           | 4.19%                                    | 62.01%                                       |
| La Trobe University                                    | 145                             | 8,019          | 163               | 2,887               | 308                          | 10,906                           | 2.82%                                    | 47.08%                                       |
| Melbourne Institute of Business and Technology Pty Ltd | 11                              | 143            | 82                | 799                 | 93                           | 942                              | 9.87%                                    | 11.83%                                       |
| Melbourne Institute of Technology                      | 3                               | 24             | 43                | 152                 | 46                           | 176                              | 26.14%                                   | 6.52%  |
| Monash College Group                                   | 4                               | 155            | 68                | 1,441               | 72                           | 1,596                            | 4.51%                                    | 5.56%  |
| Monash University                                      | 540                             | 12,745         | 611               | 7,256               | 1,151                        | 20,001                           | 5.75%                                    | 46.92%                                       |
| RMIT University  | 579                             | 8,150          | 832               | 9,106               | 1,411                        | 17,256                           | 8.18%                                    | 41.03%                                       |
| Swinburne University of Technology                     | 301                             | 4,128          | 707               | 3,448               | 1,008                        | 7,576                            | 13.31%                                   | 29.86%                                       |
| The University of Melbourne                            | 157                             | 10,960         | 133               | 4,827               | 290                          | 15,787                           | 1.84%                                    | 54.14%                                       |
| University of Ballarat                                 | 84                              | 1,898          | 949               | 3,612               | 1,033                        | 5,510                            | 18.75%                                   | 8.13%  |
| Victoria University                                    | 170                             | 5,794          | 213               | 2,287               | 383                          | 8,081                            | 4.74%                                    | 44.39%                                       |
| Institutions Not Offering ICT Courses                  | -                               | 1,323          | -                 | 699                 | -                            | 2,022                            | -  | -  |
| <b>State Sub-total</b>                                 | <b>2,371</b>                    | <b>63,481</b>  | <b>4,023</b>      | <b>39,457</b>       | <b>6,394</b>                 | <b>102,938</b>                   | <b>6.21%</b>                             | <b>37.08%</b>                                |

**Commencing ICT Domestic and International Students By State, Higher Education Provider and Broad Field Of Education, Full Year 2007, DEEWR**

| State/Provider  | Information Technology Domestic | TOTAL Domestic | ICT International | Total International | Information Technology Total | TOTAL Domestic and International | ICT % of total students at this Provider | Domestic ICT % of total ICT at this Provider |
|---|---------------------------------|----------------|-------------------|---------------------|------------------------------|----------------------------------|--|--|
| <b>Queensland</b>                                       |                                 |                |                   |                     |                              |                                  |  |  |
| Bond University   | 22                              | 1,385          | 27                | 1,766               | 49                           | 3,151                            | 1.56%                                    | 44.90%                                       |
| Central Queensland University                           | 192                             | 5,072          | 636               | 3,291               | 828                          | 8,363                            | 9.90%                                    | 23.19%                                       |
| Griffith University                                     | 194                             | 10,603         | 156               | 4,572               | 350                          | 15,175                           | 2.31%                                    | 55.43%                                       |
| James Cook University                                   | 69                              | 3,650          | 269               | 2,112               | 338                          | 5,762                            | 5.87%                                    | 20.41%                                       |
| Queensland Institute of Business and Technology Pty Ltd | 6                               | 97             | 42                | 891                 | 48                           | 988                              | 4.86%                                    | 12.50%                                       |
| Queensland University of Technology                     | 694                             | 13,365         | 302               | 2,783               | 996                          | 16,148                           | 6.17%                                    | 69.68%                                       |
| The University of Queensland                            | 135                             | 10,216         | 84                | 3,430               | 219                          | 13,646                           | 1.60%                                    | 61.64%                                       |
| University of Southern Queensland                       | 121                             | 6,534          | 367               | 3,398               | 488                          | 9,932                            | 4.91%                                    | 24.80%                                       |
| University of the Sunshine Coast                        | 43                              | 2,521          | 1                 | 933                 | 44                           | 3,454                            | 1.27%                                    | 97.73%                                       |
| Institutions Not Offering ICT Courses                   | -                               | 1,635          | -                 | 63                  | -                            | 1,698                            | -  | -  |
| <b>State Sub-total</b>                                  | <b>1,476</b>                    | <b>55,078</b>  | <b>1,884</b>      | <b>23,239</b>       | <b>3,360</b>                 | <b>78,317</b>                    | <b>4.29%</b>                             | <b>43.93%</b>                                |

**Commencing ICT Domestic and International Students By State, Higher Education Provider and Broad Field Of Education, Full Year 2007, DEEWR**

| State/Provider                                     | Information Technology Domestic | TOTAL Domestic | ICT International | Total International | Information Technology Total | TOTAL Domestic and International | ICT % of total students at this Provider | Domestic ICT % of total ICT at this Provider |
|--|---------------------------------|----------------|-------------------|---------------------|------------------------------|----------------------------------|--|--|
| <b>Western Australia</b>                           |                                 |                |                   |                     |                              |                                  |  |  |
| Curtin International College                       | 1                               | 71             | 31                | 953                 | 32                           | 1,024                            | 3.13%                                    | 3.13%  |
| Curtin University of Technology                    | 192                             | 8,657          | 197               | 6,601               | 389                          | 15,258                           | 2.55%                                    | 49.36%                                       |
| Edith Cowan University                             | 268                             | 6,848          | 439               | 2,371               | 707                          | 9,219                            | 7.67%                                    | 37.91%                                       |
| Murdoch University                                 | 165                             | 4,082          | 77                | 1,864               | 242                          | 5,946                            | 4.07%                                    | 68.18%                                       |
| Perth Institute of Business and Technology Pty Ltd | 1                               | 25             | 47                | 403                 | 48                           | 428                              | 11.21%                                   | 2.08%  |
| The University of Notre Dame Australia             | 0                               | 2,253          | 3                 | 275                 | 3                            | 2,528                            | 0.12%                                    | 0.00%  |
| The University of Western Australia                | 114                             | 4,834          | 36                | 1,520               | 150                          | 6,354                            | 2.36%                                    | 76.00%                                       |
| Institutions Not Offering ICT Courses              | -                               | 22             | -                 | 22                  | -                            | 44                               | -  | -  |
| <b>State Sub-total</b>                             | <b>741</b>                      | <b>26,792</b>  | <b>830</b>        | <b>14,009</b>       | <b>1,571</b>                 | <b>40,801</b>                    | <b>3.85%</b>                             | <b>47.17%</b>                                |

**Commencing ICT Domestic and International Students By State, Higher Education Provider and Broad Field Of Education, Full Year 2007, DEEWR**

| State/Provider  | Information Technology Domestic | TOTAL Domestic | ICT International | Total International | Information Technology Total | TOTAL Domestic and International | ICT % of total students at this Provider | Domestic ICT % of total ICT at this Provider |
|---|---------------------------------|----------------|-------------------|---------------------|------------------------------|----------------------------------|--|--|
| <b>South Australia</b>  |                                 |                |                   |                     |                              |                                  |  |  |
| Carnegie Mellon University                                    | 4                               | 15             | 7                 | 37                  | 11                           | 52                               | 21.15%                                   | 36.36%                                       |
| South Australian Institute of Business and Technology Pty Ltd | 11                              | 146            | 35                | 336                 | 46                           | 482                              | 9.54%                                    | 23.91%                                       |
| The Flinders University of South Australia                    | 58                              | 4,835          | 18                | 1,098               | 76                           | 5,933                            | 1.28%                                    | 76.32%                                       |
| The University of Adelaide                                    | 76                              | 4,970          | 125               | 2,321               | 201                          | 7,291                            | 2.76%                                    | 37.81%                                       |
| University of South Australia                                 | 236                             | 7,990          | 222               | 5,219               | 458                          | 13,209                           | 3.47%                                    | 51.53%                                       |
| Institutions Not Offering ICT Courses                         | -                               | 760            | -                 | 14                  | -                            | 746                              | -  | -  |
| <b>State Sub-total</b>  | <b>385</b>                      | <b>18,716</b>  | <b>407</b>        | <b>9,025</b>        | <b>792</b>                   | <b>27,741</b>                    | <b>2.85%</b>                             | <b>48.61%</b>                                |
| <b>Tasmania</b>   |                                 |                |                   |                     |                              |                                  |  |  |
| University of Tasmania  | 163                             | 5,618          | 394               | 1,574               | 557                          | 7,192                            | 7.74%                                    | 29.26%                                       |
| Institutions Not Offering ICT Courses                         | -                               | 762            | -                 | 170                 | -                            | 932                              | -  | -  |
| <b>State Sub-total</b>  | <b>163</b>                      | <b>6,380</b>   | <b>394</b>        | <b>1,744</b>        | <b>557</b>                   | <b>8,124</b>                     | <b>6.86%</b>                             | <b>29.26%</b>                                |
| <b>Northern Territory</b>                                     |                                 |                |                   |                     |                              |                                  |  |  |
| Charles Darwin University                                     | 63                              | 2,584          | 10                | 185                 | 73                           | 2,769                            | 2.64%                                    | 86.30%                                       |
| Institutions Not Offering ICT Courses                         | -                               | 435            | -                 | -                   | -                            | 435                              | -  | -  |
| <b>State Sub-total</b>  | <b>63</b>                       | <b>3,019</b>   | <b>10</b>         | <b>185</b>          | <b>73</b>                    | <b>3,204</b>                     | <b>2.28%</b>                             | <b>86.30%</b>                                |

**Commencing ICT Domestic and International Students By State, Higher Education Provider and Broad Field Of Education, Full Year 2007, DEEWR**

| State/Provider                        | Information Technology Domestic | TOTAL Domestic | ICT International | Total International | Information Technology Total | TOTAL Domestic and International | ICT % of total students at this Provider | Domestic ICT % of total ICT at this Provider |
|---------------------------------------|---------------------------------|----------------|-------------------|---------------------|------------------------------|----------------------------------|--|--|
| <b>Australian Capital Territory</b>   |                                 |                |                   |                     |                              |                                  |  |  |
| The Australian National University    | 113                             | 4,315          | 48                | 1,560               | 161                          | 5,875                            | 2.74%                                    | 70.19%                                       |
| University of Canberra                | 155                             | 3,343          | 76                | 1,139               | 231                          | 4,482                            | 5.15%                                    | 67.10%                                       |
| Institutions Not Offering ICT Courses | -                               | -              | -                 | -                   | -                            | -                                | -  | -  |
| <b>State Sub-total</b>                | <b>268</b>                      | <b>7,658</b>   | <b>124</b>        | <b>2,699</b>        | <b>392</b>                   | <b>10,357</b>                    | <b>3.78%</b>                             | <b>68.37%</b>                                |
| <b>Multi-State</b>                    |                                 |                |                   |                     |                              |                                  |  |  |
| Australian Catholic University        | 66                              | 5,183          | 45                | 1,900               | 111                          | 7,083                            | 1.57%                                    | 59.46%                                       |
| Institutions Not Offering ICT Courses | -                               | 859            | -                 | 29                  | -                            | 888                              | -  | -  |
| <b>State Sub-total</b>                | <b>66</b>                       | <b>6,042</b>   | <b>45</b>         | <b>1,929</b>        | <b>111</b>                   | <b>7,971</b>                     | <b>1.39%</b>                             | <b>59.46%</b>                                |
| <b>Total</b>                          | <b>7,839</b>                    | <b>281,625</b> | <b>10,384</b>     | <b>126,709</b>      | <b>18,223</b>                | <b>408,334</b>                   | <b>4.46%</b>                             | <b>43.02%</b>                                |
| <b>Total 2006</b>                     | <b>8,198</b>                    | <b>270,236</b> | <b>10,087</b>     | <b>111,463</b>      | <b>18,285</b>                | <b>381,699</b>                   | <b>4.79%</b>                             | <b>44.83%</b>                                |
| <b>% change on 2006</b>               | <b>-4.4%</b>                    | <b>4.2%</b>    | <b>2.9%</b>       | <b>13.7%</b>        | <b>-0.3%</b>                 | <b>7.0%</b>                      | <b>-6.8%</b>                             | <b>-4.1%</b>                                 |

**Publicly Funded VET Enrolments and Awards 1999-2007**

Source: NCVET VET Provider Collection

|  | 1999 | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007   |
|--|------|--------|--------|--------|--------|--------|--------|--------|--------|
| ASCED - 02 - Information Technology enrolments             | -    | -      | -      | 82,604 | 72,864 | 62,279 | 57,900 | 56,991 | 36,598 |
| ICA - Information and Communications Technology enrolments | 319  | 25,774 | 53,025 | 60,282 | 63,769 | 55,284 | 52,103 | 54,855 | 50,027 |
| ICT - Telecommunications enrolments                        | 238  | 3,563  | 11,706 | 12,538 | 12,336 | 10,526 | 9,975  | 9,887  | 10,694 |
| ASCED - 02 - Information Technology awards                 | -    | -      | 1,069  | 18,759 | 15,338 | 13,020 | 12,185 | 10,099 | -      |
| ICA - Information Technology awards                        | 141  | 6,035  | 12,330 | 16,741 | 15,611 | 13,124 | 12,815 | 11,722 | -      |
| ICT - Telecommunications awards                            | 96   | 811    | 3,572  | 3,846  | 4,582  | 4,464  | 4,392  | 3,021  | -      |

This data is limited to publicly funded Vocational Education and Training (VET) activity. The private VET training market is also substantial. NCVET indicated in 2005 that it was approximately the same size as the publicly funded VET market.

The qualifications data is limited to those Training Package qualifications within the ICA and ICT Training Packages. In addition to the listed qualifications a large number of students undertake VET with no intention of achieving a qualification, just to study part of a qualification, therefore there are many 'subject only' students who may meet the ICT profile but as they are not listed as being enrolled in a qualification they

are not reflected in the enrolments data. Additionally, many VET students undertake non-training package qualifications (e.g. nationally or locally endorsed qualifications), some of these may be ICT qualifications. Enrolments include all those enrolments within a given year; both commencing and continuing students. Specific qualification data when measured over time should be treated with care as qualifications tend to take a few years to become widely adopted, and are gradually phased out once they are superseded.

Qualifications Awarded is the VET equivalent of completions data. There are however a number of differences between the two. Firstly, qualifications awarded data tracks

those students who are actually awarded their qualification (such as at a graduation ceremony or sent in the mail), this differs from completions data as completions data tracks the moment a student qualifies for their qualification, not whether that student actually received it. (This is important as many VET students undertake nested qualifications e.g. Completing Cert. III, followed by a Cert. IV then perhaps a Diploma, only ever receiving a qualification for the final qualification they undertake). The NCVET Student Outcomes Survey is a snapshot of publicly funded VET students training outcomes in May of the year following graduation. Therefore 2008 data relates to students who graduated in 2007.

# ICT Migration

## PERMANENT MIGRATION

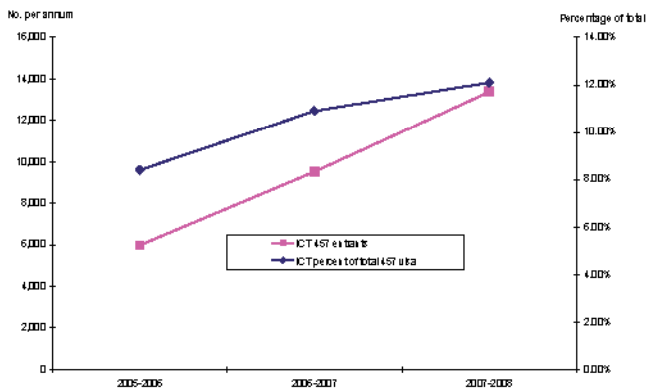
| ICT Professionals <sup>4</sup> | 1997-98      | 1998-99      | 1999-00      | 2000-01       | 2001-02       | 2002-03      | 2003-04       | 2004-05       | 2005-06       |
|--------------------------------|--------------|--------------|--------------|---------------|---------------|--------------|---------------|---------------|---------------|
| Settler Arrival                | 1,302        | 1,496        | 1,992        | 4,228         | 5,040         | 3,674        | 5,491         | 5,536         | 4,268         |
| Long Term Resident Return      | 1,797        | 1,359        | 1,893        | 2,198         | 2,492         | 2,932        | 2,927         | 2,972         | 3,297         |
| Long Term Visitor Arrival      | 1,522        | 2,533        | 2,990        | 3,831         | 3,387         | 3,390        | 3,177         | 2,965         | 4,056         |
| <b>Inwards Migration</b>       | <b>4,621</b> | <b>5,388</b> | <b>6,875</b> | <b>10,257</b> | <b>10,919</b> | <b>9,996</b> | <b>11,595</b> | <b>11,473</b> | <b>11,621</b> |
| Resident Permanent Departure   | 587          | 761          | 697          | 996           | 980           | 989          | 1,163         | 1,302         | 1,336         |
| Long Term Resident Departure   | 2,254        | 2,352        | 2,289        | 3,034         | 2,801         | 2,264        | 2,394         | 2,588         | 2,829         |
| Long Term Visitor Departure    | 869          | 780          | 1,203        | 1,633         | 1,664         | 1,576        | 1,719         | 1,562         | 1,457         |
| <b>Outwards Migration</b>      | <b>3,710</b> | <b>3,893</b> | <b>4,189</b> | <b>5,663</b>  | <b>5,445</b>  | <b>4,829</b> | <b>5,276</b>  | <b>5,452</b>  | <b>5,622</b>  |
| <b>Net Migration</b>           | <b>911</b>   | <b>1,495</b> | <b>2,686</b> | <b>4,594</b>  | <b>5,474</b>  | <b>5,167</b> | <b>6,319</b>  | <b>6,021</b>  | <b>5,999</b>  |

## TEMPORARY MIGRATION

| Period    | Total temporary (457) Visa | ICT occupations cited | ICT % of total | Source  |
|-----------|----------------------------|-----------------------|----------------|---|
| 2005-2006 | 71,150                     | 5,977                 | 8.40%          | <i>DIMIA Population Rows: Immigration Aspects 2005-06 Edition</i> |
| 2006-2007 | 87,310                     | 9,517                 | 10.90%         | <i>DIMIA Population Rows: Immigration Aspects 2006-07 Edition</i> |
| 2007-2008 | 110,570                    | 13,379                | 12.10%         | <i>DIMIA Population Rows: Immigration Aspects 2007-08 Edition</i> |

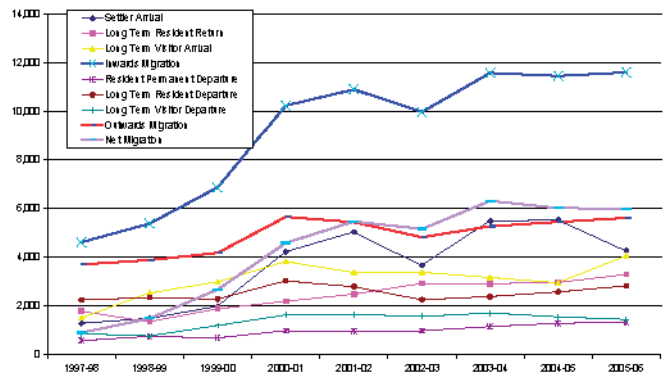
<sup>4</sup> DIMIA

ICT 457 Visatrends 2006-2008



Inwards permanent ICT migration levels have grown slightly since 2000, but have flattened since 2002-3, whilst short-term ICT migration, illustrated by ICT 457 Visa trends, has continued to grow rapidly, both in actual numbers, and as a percentage of total temporary migration.

ICT Long term Migration data 1997-2006



# Where We Work

## ICT EMPLOYMENT BY STATE<sup>7</sup>

| ICT Technical, Professional, and Trade employment in all industry sectors | NSW            | VIC            | QLD           | SA            | WA            | TAS          | NT           | ACT           |
|---|----------------|----------------|---------------|---------------|---------------|--------------|--------------|---------------|
| 1351 ICT Managers   | 13,411         | 11,877         | 10,070        | 961           | 2,730         | 546          | 391          | 3,785         |
| 2232 ICT Trainers   | 1,671          | 1,531          | 1,112         | 259           | 0             | 0            | 0            | 167           |
| 2247 Management and Organisation Analysts                                 | 17,546         | 16,178         | 9,571         | 2,122         | 4,005         | 148          | 275          | 731           |
| 2249 Other Information and Organisation Professionals                     | 5,648          | 3,836          | 1,755         | 819           | 1,279         | 262          | 456          | 320           |
| 2252 ICT Sales Professionals  | 5,906          | 3,183          | 1,956         | 0             | 704           | 261          | 206          | 0             |
| 2324 Graphic and Web Designers, and Illustrators                          | 20,053         | 14,818         | 5,884         | 2,439         | 2,633         | 937          | 226          | 1,470         |
| 2600 ICT Professionals (nfd)  | 2,871          | 5,604          | 2,319         | 0             | 795           | 0            | 189          | 1,594         |
| 2611 ICT Business and Systems Analysts                                    | 8,909          | 7,040          | 2,017         | 1,076         | 1,369         | 102          | 184          | 1,313         |
| 2612 Multimedia Specialists and Web Developers                            | 5,980          | 3,316          | 589           | 291           | 780           | 159          | 0            | 211           |
| 2613 Software and Applications Programmers                                | 27,906         | 22,237         | 10,347        | 3,367         | 4,476         | 1,288        | 215          | 4,729         |
| 2621 Database and Systems Administrators, and ICT Security Specialists    | 19,034         | 10,754         | 4,705         | 2,593         | 2,639         | 1,086        | 150          | 856           |
| 2631 Computer Network Professionals                                       | 8,486          | 5,345          | 3,334         | 2,140         | 2,562         | 516          | 218          | 1,028         |
| 2632 ICT Support and Test Engineers                                       | 4,120          | 1,648          | 2,036         | 284           | 666           | 155          | 0            | 290           |
| 2633 Telecommunications Engineering Professionals                         | 2,798          | 3,016          | 1,177         | 491           | 309           | 0            | 0            | 733           |
| 3124 Electronic Engineering Draftspersons and Technicians                 | 3,500          | 1,696          | 865           | 262           | 1,182         | 588          | 0            | 154           |
| 3131 ICT Support Technicians  | 20,934         | 10,222         | 7,461         | 1,828         | 5,415         | 629          | 203          | 1,682         |
| 3132 Telecommunications Technical Specialists                             | 2,124          | 483            | 856           | 0             | 322           | 169          | 0            | 0             |
| 3420 Electronics and Telecommunications Trades Workers (nfd)              | 0              | 907            | 0             | 0             | 0             | 138          | 0            | 0             |
| 3423 Electronics Trades Workers   | 12,114         | 11,150         | 9,871         | 2,687         | 3,694         | 433          | 321          | 755           |
| 3424 Telecommunications Trades Workers                                    | 4,398          | 2,640          | 2,832         | 742           | 2,487         | 407          | 118          | 333           |
| 6212 ICT Sales Assistants   | 6,941          | 6,753          | 4,521         | 1,695         | 1,432         | 298          | 126          | 155           |
| <b>Total</b>  | <b>194,350</b> | <b>144,234</b> | <b>83,278</b> | <b>24,056</b> | <b>39,479</b> | <b>8,122</b> | <b>3,278</b> | <b>20,306</b> |

<sup>7</sup> Extract from ABS Labour market statistics Feb 2009  
nfd – not further defined  
ABS data available on request

| % of National total  | NSW          | VIC          | QLD          | SA          | WA          | TAS         | NT          | ACT         |
|--|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|
| 1351 ICT Managers  | 30.6%        | 27.1%        | 23.0%        | 2.2%        | 6.2%        | 1.2%        | 0.9%        | 8.6%        |
| 2232 ICT Trainers  | 35.3%        | 32.3%        | 23.5%        | 5.5%        | 0.0%        | 0.0%        | 0.0%        | 3.5%        |
| 2247 Management and Organisation Analysts                              | 34.7%        | 32.0%        | 18.9%        | 4.2%        | 7.9%        | 0.3%        | 0.5%        | 1.4%        |
| 2249 Other Information and Organisation Professionals                  | 39.3%        | 26.7%        | 12.2%        | 5.7%        | 8.9%        | 1.8%        | 3.2%        | 2.2%        |
| 2252 ICT Sales Professionals   | 48.3%        | 26.1%        | 16.0%        | 0.0%        | 5.8%        | 2.1%        | 1.7%        | 0.0%        |
| 2324 Graphic and Web Designers, and Illustrators                       | 41.4%        | 30.6%        | 12.1%        | 5.0%        | 5.4%        | 1.9%        | 0.5%        | 3.0%        |
| 2600 ICT Professionals (nfd)   | 21.5%        | 41.9%        | 17.3%        | 0.0%        | 5.9%        | 0.0%        | 1.4%        | 11.9%       |
| 2611 ICT Business and Systems Analysts                                 | 40.5%        | 32.0%        | 9.2%         | 4.9%        | 6.2%        | 0.5%        | 0.8%        | 6.0%        |
| 2612 Multimedia Specialists and Web Developers                         | 52.8%        | 29.3%        | 5.2%         | 2.6%        | 6.9%        | 1.4%        | 0.0%        | 1.9%        |
| 2613 Software and Applications Programmers                             | 37.4%        | 29.8%        | 13.9%        | 4.5%        | 6.0%        | 1.7%        | 0.3%        | 6.3%        |
| 2621 Database and Systems Administrators, and ICT Security Specialists | 45.5%        | 25.7%        | 11.3%        | 6.2%        | 6.3%        | 2.6%        | 0.4%        | 2.0%        |
| 2631 Computer Network Professionals                                    | 35.9%        | 22.6%        | 14.1%        | 9.1%        | 10.8%       | 2.2%        | 0.9%        | 4.4%        |
| 2632 ICT Support and Test Engineers                                    | 44.8%        | 17.9%        | 22.1%        | 3.1%        | 7.2%        | 1.7%        | 0.0%        | 3.2%        |
| 2633 Telecommunications Engineering Professionals                      | 32.8%        | 35.4%        | 13.8%        | 5.8%        | 3.6%        | 0.0%        | 0.0%        | 8.6%        |
| 3124 Electronic Engineering Draftspersons and Technicians              | 42.4%        | 20.6%        | 10.5%        | 3.2%        | 14.3%       | 7.1%        | 0.0%        | 1.9%        |
| 3131 ICT Support Technicians   | 43.3%        | 21.1%        | 15.4%        | 3.8%        | 11.2%       | 1.3%        | 0.4%        | 3.5%        |
| 3132 Telecommunications Technical Specialists                          | 53.7%        | 12.2%        | 21.6%        | 0.0%        | 8.1%        | 4.3%        | 0.0%        | 0.0%        |
| 3420 Electronics and Telecommunications Trades Workers (nfd)           | 0.0%         | 86.8%        | 0.0%         | 0.0%        | 0.0%        | 13.2%       | 0.0%        | 0.0%        |
| 3423 Electronics Trades Workers  | 29.5%        | 27.2%        | 24.1%        | 6.5%        | 9.0%        | 1.1%        | 0.8%        | 1.8%        |
| 3424 Telecommunications Trades Workers                                 | 31.5%        | 18.9%        | 20.3%        | 5.3%        | 17.8%       | 2.9%        | 0.8%        | 2.4%        |
| 6212 ICT Sales Assistants  | 31.7%        | 30.8%        | 20.6%        | 7.7%        | 6.5%        | 1.4%        | 0.6%        | 0.7%        |
| <b>Total %</b>   | <b>37.6%</b> | <b>27.9%</b> | <b>16.1%</b> | <b>4.7%</b> | <b>7.6%</b> | <b>1.6%</b> | <b>0.6%</b> | <b>3.9%</b> |

ABS data available on request

## ICT Industry by State<sup>8</sup>

| Number of businesses (b)(c) | Manufacturing    | Wholesale trade  | Information media and telecommunications | Computer system design and related services | Electronic and precision equipment repair and maintenance | Total ICT industry |
|-----------------------------|------------------|------------------|--|---|---|--------------------|
| NSW                         | <sup>^</sup> 338 | 1,934            | <sup>^</sup> 1,169                       | 9,013                                       | <sup>^</sup> 544  | 12,998             |
| VIC                         | <sup>^</sup> 382 | 1,290            | <sup>^</sup> 908                         | 6,381                                       | <sup>^</sup> 531  | 9,492              |
| QLD                         | <sup>*</sup> 218 | 959              | 458                                      | 3,090                                       | <sup>^</sup> 427  | 5,153              |
| SA                          | 68               | 328              | 125                                      | <sup>^</sup> 857                            | 135   | <sup>^</sup> 1,514 |
| WA                          | 78               | 482              | <sup>^</sup> 278                         | 1,674                                       | <sup>^</sup> 176  | 2,687              |
| TAS                         | 11               | <sup>^</sup> 71  | <sup>^</sup> 58                          | <sup>^</sup> 209                            | <sup>^</sup> 41   | <sup>^</sup> 391   |
| NT                          | 3                | <sup>*</sup> 32  | 9  | <sup>*</sup> 127                            | <sup>*</sup> 26   | <sup>^</sup> 196   |
| ACT                         | 13               | <sup>^</sup> 122 | <sup>^</sup> 101                         | 1,004                                       | <sup>^</sup> 27   | 1,267              |
| <b>Total</b>                | <b>965</b>       | <b>3,934</b>     | <b>2,785</b>                             | <b>20,794</b>                               | <b>1,835</b>  | <b>30,313</b>      |

<sup>8</sup> ABS 8126.0 2006-7 Selected state and territory indicators, by ICT industry grouping(a)

(a) Refer to the ABS Glossary for ANZSIC classes contributing to each industry grouping

(b) Provided for contextual purposes only, refer to Explanatory Notes 21 and 22.

(c) Multi-state organisations are counted in each state in which they operate. Hence, the counts of businesses for state and territories do not sum to the total for Australia

| Employment   | Manufacturing      | Wholesale trade | Information media and telecommunications | Computer system design and related services | Electronic and precision equipment repair and maintenance | Total ICT industry  |
|--------------|--------------------|-----------------|--|---|---|---------------------|
| NSW          | 6,830              | 32,515          | 30,509                                   | 47,624                                      | <sup>a</sup> 2,498  | 119,976             |
| VIC          | <sup>a</sup> 3,879 | 20,311          | 22,591                                   | 35,146                                      | <sup>a</sup> 1,850  | 83,778              |
| QLD          | <sup>a</sup> 1,472 | 9,004           | 10,099                                   | <sup>a</sup> 19,175                         | <sup>a</sup> 1,212  | 40,962              |
| SA           | 1,626              | 2,636           | 4,755                                    | 6,472                                       | <sup>a</sup> 351  | 15,840              |
| WA           | 1,786              | 4,537           | 5,842                                    | <sup>a</sup> 9,819                          | <sup>a</sup> 571  | 22,554              |
| TAS          | <sup>a</sup> 59    | 545             | 1,504                                    | <sup>a</sup> 922                            | <sup>a</sup> 149  | 3,180               |
| NT           | 5                  | np              | np                                       | <sup>a</sup> 717                            | <sup>a</sup> 63   | 1,427               |
| ACT          | 296                | np              | np                                       | <sup>a</sup> 8,297                          | 196   | <sup>a</sup> 12,089 |
| <b>Total</b> | <b>15,953</b>      | <b>70,653</b>   | <b>78,136</b>                            | <b>128,171</b>                              | <b>6,892</b>  | <b>299,805</b>      |

| Wages and salaries | Manufacturing (\$A Million) | Wholesale trade (\$A Million) | Information media and telecommunications (\$A Million) | Computer system design and related services (\$A Million) | Electronic and precision equipment repair and maintenance (\$A Million) | Total ICT industry (\$A Million) |
|--------------------|-----------------------------|-------------------------------|--|---|---|----------------------------------|
| NSW                | 437.5                       | 2,363.5                       | 2,206.1  | 3,881.6   | <sup>a</sup> 124.6  | 9,013.4                          |
| VIC                | 202.0                       | 1,526.5                       | 1,488.3  | 2,794.0   | <sup>a</sup> 82.3   | 6,093.0                          |
| QLD                | <sup>a</sup> 68.5           | 482.0                         | 724.8  | <sup>a</sup> 1,207.1                                      | <sup>a</sup> 39.7   | 2,522.1                          |
| SA                 | 97.3                        | 165.5                         | 310.9  | <sup>a</sup> 400.8  | <sup>a</sup> 10.3   | 984.8                            |
| WA                 | 84.7                        | 237.6                         | 358.6  | <sup>a</sup> 595.4  | <sup>a</sup> 17.3   | 1,293.7                          |
| TAS                | <sup>a</sup> 2.0            | <sup>a</sup> 26.0             | 92.2   | <sup>a</sup> 38.8   | <sup>a</sup> 3.6  | 162.5                            |
| NT                 | np                          | np                            | np   | <sup>a</sup> 35.9   | <sup>a</sup> 1.4  | 82.6                             |
| ACT                | np                          | np                            | np   | <sup>a</sup> 707.3  | 11.4  | <sup>a</sup> 968.7               |
| <b>Total</b>       | <b>912.1</b>                | <b>4,889.4</b>                | <b>5,367.4</b>   | <b>9,660.9</b>  | <b>290.8</b>  | <b>21,120.7</b>                  |

<sup>a</sup> ABS 8126.0 2006-7 Selected state and territory indicators, by ICT industry grouping<sup>(a)</sup>

(a) Refer to the ABS Glossary for ANZSIC classes contributing to each industry grouping

(b) Provided for contextual purposes only, refer to Explanatory Notes 21 and 22.

(c) Multi-state organisations are counted in each state in which they operate. Hence, the counts of businesses for state and territories do not sum to the total for Australia

| Sales of goods and services | Manufacturing (\$A Million) | Wholesale trade (\$A Million) | Information media and telecommunications (\$A Million) | Computer system design and related services (\$A Million) | Electronic and precision equipment repair and maintenance (\$A Million) | ICT related income (\$A Million) |
|-----------------------------|-----------------------------|-------------------------------|--|---|---|----------------------------------|
| NSW                         | 2,057.4                     | 22,393.0                      | 15,833.7   | 11,065.7  | <sup>^</sup> 498.5  | na                               |
| VIC                         | <sup>^</sup> 995.8          | 14,571.5                      | 11,245.4   | 7,518.6   | <sup>*</sup> 416.3  | na                               |
| QLD                         | <sup>^</sup> 337.2          | 6,845.7                       | 4,792.0  | 2,680.4   | <sup>^</sup> 172.7  | na                               |
| SA                          | 422.4                       | 1,907.1                       | 2,664.4  | 1,112.9   | <sup>^</sup> 50.2   | na                               |
| WA                          | 347.5                       | 3,519.3                       | 2,465.1  | <sup>^</sup> 1,212.6                                      | <sup>^</sup> 70.9   | na                               |
| TAS                         | <sup>^</sup> 5.9            | np                            | np   | <sup>^</sup> 117.6  | <sup>^</sup> 12.3   | na                               |
| NT                          | <sup>*</sup> 0.6            | np                            | np   | 230.5   | <sup>*</sup> 6.8  | na                               |
| ACT                         | 68.4                        | np                            | np   | <sup>^</sup> 1,613.9                                      | 35.3  | na                               |
| <b>Total</b>                | <b>4,235.2</b>              | <b>50,376.8</b>               | <b>39,552.9</b>  | <b>25,552.2</b>   | <b><sup>^</sup>1,262.9</b>  | <b>97,753</b>                    |

<sup>^</sup> estimate has a relative standard error of 10% to less than 25% and should be used with caution

<sup>\*</sup> estimate has a relative standard error of 25% to 50% and should be used with caution

np not available for publication but included in totals where applicable, unless otherwise indicated

(a) Refer to the ABS Glossary for ANZSIC classes contributing to each industry grouping

(b) Provided for contextual purposes only, refer to Explanatory Notes 21 and 22

(c) Multi-state organisations are counted in each state in which they operate. Hence, the counts of businesses for state and territories do not sum to the total for Australia

# What We Do

## ICT USAGE

**Households with Access to a Home Computer, the Internet and Broadband, 1998 to 2007-08<sup>9</sup>**

| Proportion of all households (%)  | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004-05 | 2005-06 | 2006-07 | 2007-08 |
|-----------------------------------|------|------|------|------|------|------|---------|---------|---------|---------|
| With access to a home computer    | 44   | 47   | 53   | 58   | 61   | 66   | 67      | 70      | 73      | 75      |
| With access to the internet       | 16   | 22   | 32   | 42   | 46   | 53   | 56      | 60      | 64      | 67      |
| With broadband internet access(a) | na   | na   | na   | na   | na   | na   | 16      | 28      | 43      | 52      |

**Use of the Internet, Selected Characteristics, by Location of Access, 2007-08(a)**

| State/Territory              | Number of persons aged 15 years or over ('000) | Home (%)  | Work (%)  | Any location (%) |
|------------------------------|--|-----------|-----------|------------------|
| New South Wales              | 5,501  | 64        | 32        | 71               |
| Victoria                     | 4,165  | 64        | 32        | 71               |
| Queensland                   | 3,241  | 66        | 33        | 72               |
| South Australia              | 1,255  | 60        | 31        | 69               |
| Western Australia            | 1,639  | 65        | 35        | 75               |
| Tasmania                     | 389  | 55        | 30        | 67               |
| Northern Territory           | 118  | 63        | 47        | 76               |
| Australian Capital Territory | 261  | 78        | 51        | 87               |
| <b>Total</b>                 | <b>16,570</b>                                  | <b>64</b> | <b>33</b> | <b>72</b>        |

<sup>9</sup> ABS 8146.0 - Household Use of Information Technology, Australia, 2007-08

(a) Data on access to broadband was not collected prior to 2004-05  
na - not available

| Summary of use of information technology by Australian businesses, by selected business characteristics – 2006–07 <sup>10</sup><br>(a) More than one site may be nominated. | Estimated number of businesses | Businesses with internet access | Businesses with web presence | Businesses with internet access and broadband as main type of internet connection | Businesses which placed orders via the internet or web | Businesses which received orders via the internet or web |
|---|--------------------------------|---------------------------------|------------------------------|---|--|--|
|   | '000                           | %                               | %                            | %   | %  | %  |
| Mining  | 3                              | 91.0                            | 45.6                         | 90.4  | 34.6   | 15.3   |
| Manufacturing   | 52                             | 86.8                            | 43.3                         | 88.5  | 40.9   | 34.4   |
| Electricity, Gas, Water and Waste Services  | 3                              | 84.9                            | 29.6                         | 88.0  | 21.6   | 12.0   |
| Construction  | 124                            | 85.9                            | 16.4                         | 92.3  | 27.6   | 16.9   |
| Wholesale Trade   | 41                             | 94.0                            | 48.4                         | 90.8  | 45.1   | 37.8   |
| Retail Trade  | 77                             | 81.1                            | 37.5                         | 92.4  | 43.5   | 30.7   |
| Accommodation and Food Services   | 53                             | 68.3                            | 34.1                         | 84.4  | 29.7   | 18.2   |
| Transport, Postal and Warehousing   | 41                             | 80.5                            | 14.3                         | 79.6  | 21.4   | 13.0   |
| Information Media and Telecommunications  | 8                              | 97.8                            | 65.3                         | 95.0  | 67.6   | 40.4   |
| Financial and Insurance Services  | 23                             | 95.3                            | 44.5                         | 97.1  | 45.5   | 20.3   |
| Rental, Hiring and Real Estate Services   | 30                             | 85.2                            | 52.6                         | 93.4  | 44.8   | 26.0   |
| Professional, Scientific and Technical Services   | 108                            | 98.4                            | 45.7                         | 92.8  | 63.3   | 29.7   |
| Administrative and Support Services   | 35                             | 91.6                            | 36.5                         | 93.5  | 37.2   | 23.1   |
| Health Care and Social Assistance   | 52                             | 88.5                            | 23.6                         | 94.3  | 35.6   | 13.2   |
| Arts and Recreation Services  | 13                             | 85.5                            | 53.6                         | 85.1  | 44.1   | 26.8   |
| Other Services  | 47                             | 76.7                            | 24.3                         | 81.4  | 32.8   | 15.6   |
| <b>Region</b>   |                                |                                 |                              |   |  |  |
| Capital cities  | 483                            | 87.7                            | 36.9                         | 92.5  | 39.8   | 24.7   |
| Other areas   | 225                            | 83.9                            | 27.8                         | 86.1  | 40.5   | 21.3   |
| <b>Total</b>  | <b>708</b>                     | <b>86.5</b>                     | <b>34.0</b>                  | <b>90.5</b>   | <b>40.0</b>  | <b>23.6</b>  |

<sup>10</sup> ABS 816600001\_200607 Summary of IT Use and Innovation in Australian Business, 2006-07

| Summary of use of information technology by Australian businesses, by selected business characteristics—2006–07 <sup>11</sup><br>(a) More than one site may be nominated. | Estimated number of businesses | Businesses with Internet access | Businesses with web presence | Businesses with Internet access and broadband as main type of Internet connection | Businesses which placed orders via the Internet or web | Businesses which received orders via the Internet or web |
|---|--------------------------------|---------------------------------|------------------------------|---|--|--|
| Employment size   |                                |                                 |                              |   |  |  |
| 0-4 persons   | 443                            | 83.5                            | 24.5                         | 89.0  | 34.3   | 20.0   |
| 5-19 persons  | 207                            | 89.5                            | 44.3                         | 92.6  | 48.4   | 29.1   |
| 20-199 persons  | 55                             | 98.4                            | 68.2                         | 93.5  | 52.6   | 31.1   |
| 200 or more persons   | 3                              | 99.9                            | 95.0                         | 98.6  | 69.1   | 25.9   |

<sup>11</sup> ABS 81660DO001\_200607 Summary of IT Use and Innovation in Australian Business, 2006-07

# ICT Exports

**Australia's Total ICT Exports, 1996 to 2008 (\$A Million)<sup>12</sup>**

|                             | 1996   | 1998    | 2000    | 2002    | 2004    | 2006    | 2008    |
|-----------------------------|--------|---------|---------|---------|---------|---------|---------|
| <b>EQUIPMENT</b>            |        |         |         |         |         |         |         |
| Re-exports                  | 912    | 1,172   | 1,710   | 1,635   | 1,202   | 1,146   | 1,552   |
| Local Exports               | 1,572  | 1,905   | 2,011   | 1,730   | 1,763   | 1,868   | 2,019   |
| Communications              | 457    | 722     | 1,193   | 579     | 596     | 587     | 697     |
| Computer                    | 1,440  | 1,396   | 1,206   | 1,480   | 978     | 1,007   | 1,058   |
| Audiovisual                 | 99     | 200     | 222     | 229     | 246     | 253     | 410     |
| Components                  | 161    | 298     | 493     | 342     | 353     | 350     | 521     |
| Other ICT-related           | 321    | 413     | 571     | 657     | 697     | 719     | 885     |
| Software Products           | 7      | 47      | 37      | 78      | 95      | 98      | Na      |
| Total ICT Equipment         | 2,485  | 3,076   | 3,721   | 3,365   | 2,965   | 3,014   | 3,571   |
| <b>SERVICES</b>             |        |         |         |         |         |         |         |
| Communications              | 976    | 1,309   | 1,533   | 992     | 818     | 871     | 924     |
| Computer & Information      | 219    | 626     | 855     | 1,176   | 1,275   | 1,343   | 1,673   |
| Audiovisual & related       | 137    | 169     | 478*    | 170     | 178     | 211     | 214     |
| Software royalties & fees   | 202    | 276     | 314     | 150     | 186     | 276**   | 195     |
| Total ICT Services          | 1,534  | 2,380   | 3,180   | 2,488   | 2,457   | 2,701   | 3,006   |
| <b>TOTAL</b>                |        |         |         |         |         |         |         |
| Total ICT Exports           | 4,019  | 5,456   | 6,901   | 5,853   | 5,422   | 5,715   | 6,557   |
| Australian ICT Exports***   | 3,106  | 4,285   | 5,191   | 4,218   | 4,220   | 4,569   | 5,025   |
| Total ICT Equipment         | -7,151 | -11,979 | -17,202 | -14,261 | -16,882 | -19,816 | -26,149 |
| Total ICT Services          |        |         | -791    | -1,355  | -1,044  | -1,060  | -1,891  |
| Total ICT Balance (Deficit) |        |         | -17,992 | -15,616 | -17,926 | -20,876 | -28,039 |

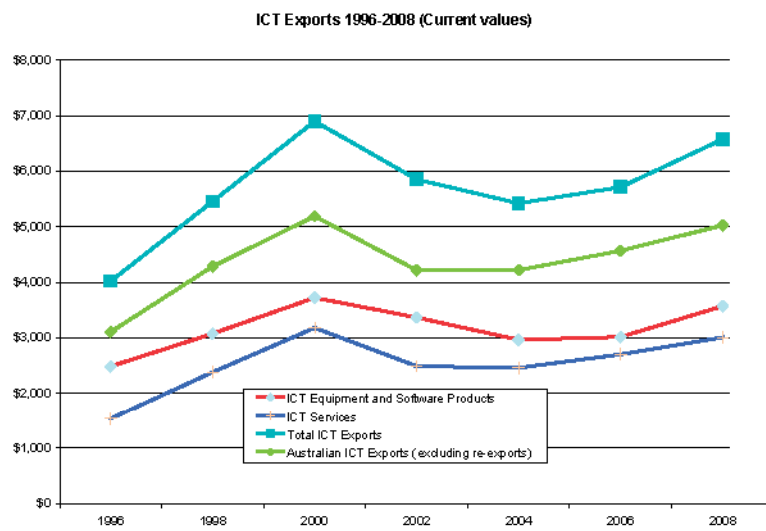
*Note:* All data are current prices. Total includes re-exports; Australian total excludes them.

\*Audiovisual services for 2000 exclude the one-off impact of the Sydney Olympic Games on content exports.

\*\*Software royalties and fees for 2006 are estimated, based on previous financial year shares.

\*\*\*Excludes re-exports.

<sup>12</sup> TradeData ([www.tradedata.net](http://www.tradedata.net)), CSES Analysis



# ICT Research

Gross expenditure on R&D, by sector – by socio-economic objective<sup>13</sup>

| GOVERNMENT |                           |                               |                                  |                                   |                                   |                                     |                        |
|------------|---------------------------|-------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|------------------------|
|            | Business<br>(\$A Million) | Commonwealth<br>(\$A Million) | State/territory<br>(\$A Million) | Government Total<br>(\$A Million) | Higher Education<br>(\$A Million) | Private non-profit<br>(\$A Million) | TOTAL<br>(\$A Million) |
| 1992-3     | \$368                     | \$30                          | \$3                              | \$33                              | \$35                              | \$0                                 | \$436                  |
| 1994-5     | \$495                     | \$35                          | \$6                              | \$41                              | \$37                              | \$0                                 | \$573                  |
| 1996-7     | \$550                     | \$35                          | \$12                             | \$47                              | \$46                              | \$0                                 | \$644                  |
| 1998-9     | \$923                     | \$54                          | \$13                             | \$67                              | \$62                              | \$0                                 | \$1,052                |
| 2000-1     | \$1,405                   | \$52                          | \$2                              | \$54                              | \$129                             | \$1                                 | \$1,588                |
| 2002-3     | \$1,207                   | \$50                          | \$3                              | \$53                              | \$162                             | na                                  | \$1,475*               |
| 2004-5     | \$1,239                   | \$66                          | \$2                              | \$68                              | \$217                             | \$0                                 | \$1,523                |
| 2006-7     | \$1,915                   | \$121                         | \$2                              | \$123                             | \$249                             | na                                  | \$2,410*               |

Gross expenditure on R&D, by sector – by research field<sup>14</sup>

| GOVERNMENT |                           |                               |                                  |                                   |                                   |                                     |                        |
|------------|---------------------------|-------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|------------------------|
|            | Business<br>(\$A Million) | Commonwealth<br>(\$A Million) | State/territory<br>(\$A Million) | Government Total<br>(\$A Million) | Higher Education<br>(\$A Million) | Private non-profit<br>(\$A Million) | TOTAL<br>(\$A Million) |
| 1996-7     | \$1,222                   | \$166                         | \$15                             | \$181                             | \$139                             | \$1                                 | \$1,543                |
| 1998-9     | \$1,408                   | \$102                         | \$12                             | \$115                             | \$134                             | \$1                                 | \$1,658                |
| 2000-1     | \$1,307                   | \$185                         | \$30                             | \$214                             | \$114                             | \$3                                 | \$1,639                |
| 2002-3     | \$1,894                   | \$165                         | \$17                             | \$182                             | \$144                             | \$5                                 | \$2,224                |
| 2004-5     | \$2,283                   | \$131                         | \$11                             | \$142                             | \$208                             | \$2                                 | \$2,635                |
| 2006-7     | \$3,166                   | \$180                         | \$32                             | \$212                             | \$239                             | \$1                                 | \$3,617                |

<sup>13</sup> ABS 8112.0DO008\_200607 Research and Experimental Development, All Sector Summary Australia, 2006-07

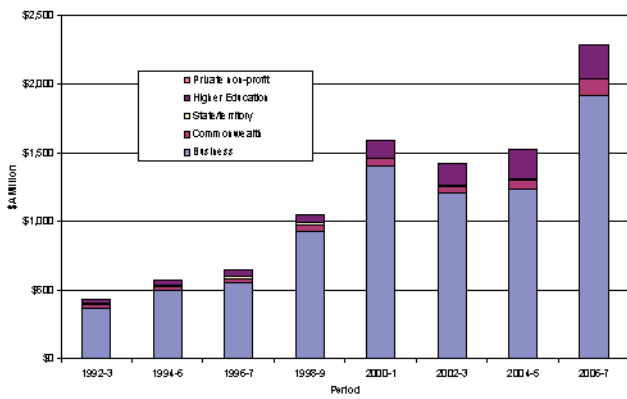
<sup>14</sup> ABS 8112.0DO007\_200607 Research and Experimental Development, All Sector Summary Australia, 2006-07

\* Excluding non-profit

Socio-economic objectives from Australian Standard Research Classification (ASRC), 1998 apply from the 2000-01 reference period

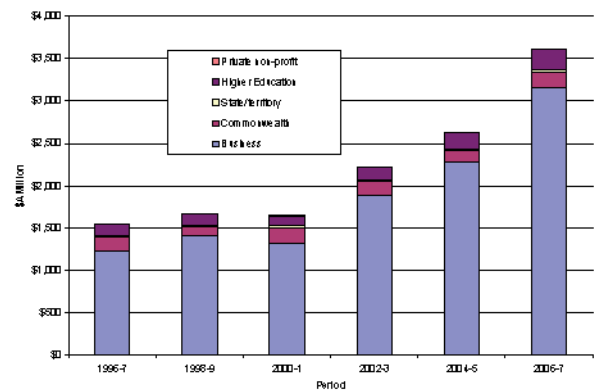
Prior to this, ASRC 1993 socio-economic objectives were used. Implementation of ASRC 1998 resulted in a break in the socio-economic objective series

ICT R&D by socio-economic objective



ICT research has grown, led by business ICT research expenditure. State Government contributions are still below the levels of 2,000.

ICT R&D by field of study



# ICT Revenue

It should be noted that these estimates vary because they relate to different time periods, and to different ways of looking at ICT industry revenue. The ABS estimate for this period includes electronic maintenance and a larger proportion of office equipment wholesale trade. CIER estimates correlate to the previous ABS definitional structure. The IDC estimate excludes telecommunications, but is otherwise similar in total to the CIER estimate, but is focussed on particular client groups, rather than ICT operational sectors.

| ABS Estimates 2006-7 <sup>15</sup>   | ICT Income (\$A Million) | Total income (\$A Million) <sup>16</sup> |
|--|--------------------------|--|
| Manufacturing  | 2,499.8                  | 4,404.0                                  |
| Wholesale trade  | 30,966.0                 | 50,902.8                                 |
| Information media and telecommunications   | 38,938.8                 | 40,207.8                                 |
| Computer system design and related services  | 24,459.3                 | 26,049.4                                 |
| Electronic (except domestic appliance) and precision equipment repair and maintenance* | 889.4                    | 1,274.7                                  |
| <b>Total ICT industry</b>  | <b>\$97,753.3</b>        | <b>\$122,838.7</b>                       |

| IDC Estimates 2008 (excludes telecommunications) | ICT Income (\$A Million) | IDC Forecast (\$A Million) |
|--|--------------------------|----------------------------|
|  | 2007                     | 2012                       |
| Banking Finance and Insurance                    | \$8,400                  | \$8,870                    |
| Government                                       | \$5,640                  | \$6,170                    |
| Telco and Media                                  | \$5,010                  | \$5,340                    |
| Other  | \$20,390                 | \$26,520                   |
| <b>Total</b>                                     | <b>\$39,440</b>          | <b>\$46,900</b>            |

| CIER Estimates                            | Jul-08 (\$A Million) |
|---|----------------------|
| Consulting                                | \$1,627.20           |
| Distribution of Hardware and Software     | \$17,088.04          |
| Manufacture of Hardware and Components    | \$2,699.95           |
| Software Services and Software Products   | \$16,113.04          |
| Telecommunications and Telecoms Value-Add | \$47,293.09          |
| <b>Total</b>                              | <b>\$84,821.32</b>   |

<sup>15</sup> ABS 8126-0 2006-7  
<sup>16</sup> Includes non-ICT income  
 \* Estimate has a relative standard error of 10% or less than 25% and should be used with caution

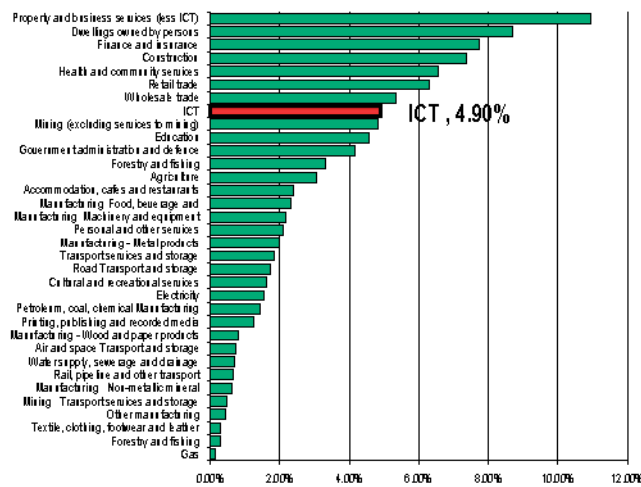
# ICT Economic Contribution

ICT accounts for 4.9% of economic contribution (GVA), more than many other Australian industry sectors, including Mining Electricity, Gas and Water supply; Banking and Finance; and TV, Radio, Media<sup>17</sup>.

Centre for Innovative  
Industry Economic  
Research Inc.

## Industry sector contributions to the Australian Economy 2006 (Gross Value Add),

Source : ABS 52060, ABS 5259.0, CIER)



ABS Satellite Account 2003, published 2006

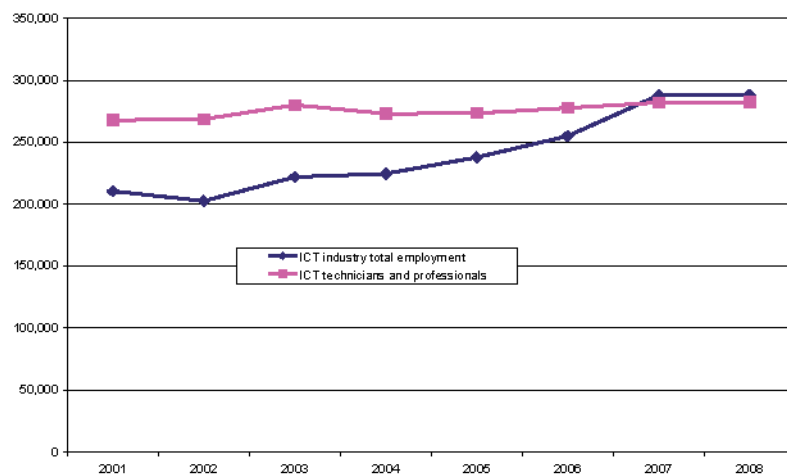
<sup>17</sup> ABS Cat. no. 5259.0 - Australian National Accounts: Information and Communication Technology Satellite Account, 2002-03.

# Where Have We Come From?

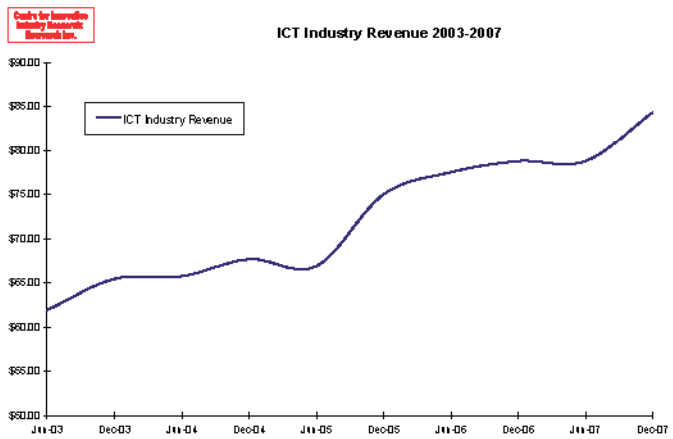
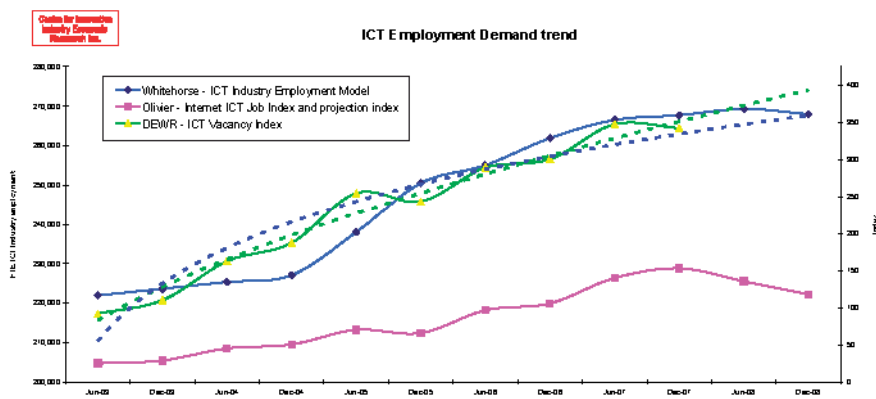
Longitudinal employment and economic data.

| Employment Estimates<br>DEEWR/ABS/CIER | Jun-01  | Jun-02  | Jun-03  | Jun-04  | Jun-05  | Jun-06  | Jun-07  | Jun-08  |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| ICT industry*                          | 210,686 | 202,766 | 222,136 | 224,830 | 237,979 | 255,086 | 287,829 | 288,372 |
| ICT technicians and professionals**    | 267,900 | 268,700 | 280,100 | 273,100 | 273,400 | 277,700 | 282,000 | 282,533 |

Total staff employed in the ICT Industry, and ICT technical and Professional staff across all industries



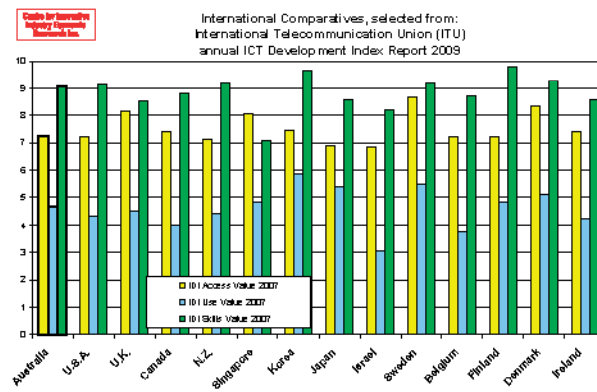
\* GIER/Witelbase Top250 Survey  
 \*\* ABS Labour market Survey for 5 main ICT occupations



# How Do We Compare?

## INTERNATIONAL RANKINGS

| International Telecommunication Union (ITU) Annual ICT Development Index Report 2009 |           |        |      |        |      |
|--|-----------|--------|------|--------|------|
|  | Australia | U.S.A. | U.K. | Canada | N.Z. |
| ICT development Index Rank 2007  | 14        | 17     | 10   | 19     | 16   |
| IDI 2007   | 6.58      | 6.44   | 6.78 | 6.34   | 6.44 |
| IDI access sub-index Rank 2007   | 19        | 22     | 10   | 15     | 25   |
| Access score 2007  | 7.24      | 7.2    | 8.16 | 7.43   | 7.11 |
| IDI use sub-index Rank 2007  | 12        | 16     | 14   | 21     | 15   |
| Use score 2007   | 4.68      | 4.32   | 4.51 | 4.01   | 4.4  |
| IDI skills sub-index Rank 2007   | 13        | 11     | 28   | 20     | 7    |
| Skills score 2007  | 9.05      | 9.13   | 8.53 | 8.81   | 9.2  |



| ICT price basket 2008 <sup>18</sup> | Rank      | ICT Price Basket Value | Fixed<br>(% of GNI per capita) | Mobile<br>(% of GNI per capita) | Broadband<br>(% of GNI per capita) |
|-------------------------------------|-----------|------------------------|--------------------------------|---------------------------------|------------------------------------|
| Singapore                           | 1         | 0.4                    | 0.3                            | 0.2                             | 0.8                                |
| U.S.A.                              | 2         | 0.4                    | 0.5                            | 0.4                             | 0.4                                |
| Finland                             | 10        | 0.6                    | 0.5                            | 0.4                             | 1                                  |
| U.K.                                | 14        | 0.7                    | 0.8                            | 0.6                             | 0.8                                |
| Canada                              | 15        | 0.7                    | 1                              | 0.6                             | 0.6                                |
| Ireland                             | 21        | 0.8                    | 1.1                            | 0.5                             | 1                                  |
| Korea                               | 23        | 0.8                    | 0.4                            | 0.9                             | 1.2                                |
| Japan                               | 24        | 0.9                    | 0.6                            | 1                               | 1                                  |
| Belgium                             | 25        | 0.9                    | 1.1                            | 0.7                             | 0.9                                |
| <b>Australia</b>                    | <b>26</b> | <b>0.9</b>             | <b>0.9</b>                     | <b>0.9</b>                      | <b>0.9</b>                         |
| N.Z.                                | 33        | 1.2                    | 1.4                            | 1                               | 1.3                                |

| ICT Access 2007  | Fixed telephone lines per<br>100 inhabitants 2007 | Mobile cellular<br>subscriptions per 100<br>inhabitants 2007 | Proportion of households<br>with internet 2007 |
|------------------|---|--|--|
| Korea            | 46.4  | 90.2   | 94   |
| Sweden           | 60.4  | 113.7  | 79   |
| Singapore        | 42  | 133.5  | 74   |
| Canada           | 55.5  | 61.7   | 72.1   |
| Finland          | 33  | 115.2  | 69   |
| U.K.             | 55.4  | 118.5  | 67   |
| N.Z.             | 41.8  | 101.7  | 65.9   |
| <b>Australia</b> | <b>47.1</b>                                       | <b>102.5</b>   | <b>64</b>                                      |
| Japan            | 40  | 83.9   | 62.1   |
| U.S.A.           | 53.4  | 83.5   | 61.7   |
| Ireland          | 49.1  | 115.9  | 57   |
| Israel           | 44.4  | 128.5  | 44.7   |

<sup>18</sup> *International Telecommunication Union (ITU) annual ICT Development Index Report 2009*  
GNI – Gross National Income

# Sources & Acknowledgments

The ACS and CIIER express our grateful thanks to the organisations which have contributed to this project, by allowing access to data (either direct to the ACS or via CIIER) including:

- Australian Bureau of Statistics
- Australian Department of Education Employment and Workplace Relations
- Australian Department of Immigration and Citizenship
- Centre for Strategic Economic Studies (Victoria University)
- Innovation & Business Skills Australia
- IDC
- International Telecommunication Union
- National Centre for Vocational Education Research
- Olivier
- Tradedata

We especially wish to thank the following people for their generous assistance, advice and for sharing data.

#### **Australian Bureau of Statistics**

Barbara Sidwell, Gabrielle Robbie, Glyn Prichard, Philip Foster and Siddhartha De.

#### **Australian Computer Society**

Simon Kwan, Len Joynson and Yve Dougall.

#### **CIIER and Whitehorse**

Ian Dennis, Karl Sohn and Liz Dennis.

## About the Centre for Innovative Industries Economic Research Inc

CIIER is an Asia-Pacific think-tank developing and analysing consistent, competently researched, up-to-date data on employment, markets, revenue streams, R&D, processes and management methods, for high technology, innovative, and emerging industries. CIIER produces the *'Top 250' ICT Industry Research Report*, which has been recognised as a leading indicator of trends in the Australian ICT industry, and conducts analysis and reporting on Information Technology and other high technology industries.

Whitehorse Strategic Group Ltd assisted with the analysis for this publication. Whitehorse is an Australian owned management

consulting practice specialising in Information Management, ICT policy and strategy, e-Government, Governance, and Economic Development.

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