



Australian ICT Statistical Compendium 2009



ICT Professionals Shaping Our Future



**AUSTRALIAN
COMPUTER
SOCIETY**

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 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 ¹
Total ICT workers in Australia	532,500	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	517,103	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	397,800	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	7,839	2007	DEEWR	Continuing decline
Total temporary ICT migrants to Australia	13,379 per annum	2007-8	DIMIA, CIIER calculation	Has been increasing rapidly to start of 2009
Estimated ICT skills shortage	11,225	2008	CIIER 2008	Growing
Employees in ICT Industry	268,000	2007-8	CIIER T250 2008, and ABS 8126-0 2006-7	Slowing but continued growth, major state and sectoral variations
Revenue of ICT Industry	\$85-\$98 Billion	2008-9 CIIER, 2006-7 ABS ²	CIIER T250 2008, and ABS 8126-0 2006-7	Significant growth, sectoral variations
ICT R&D	\$3,165 Million	2006-7	ABS Oct 2008	Recovery from long-term decline, led by business R&D
ICT exports (excluding re-exports)	\$5,025 Million	2007-8	CSES 2009, ABS Tradedata	Gradual recovery to 1999-2000 export levels, but with an increasing trade deficit

¹ CIIER trend assessments

² 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 GROUP³

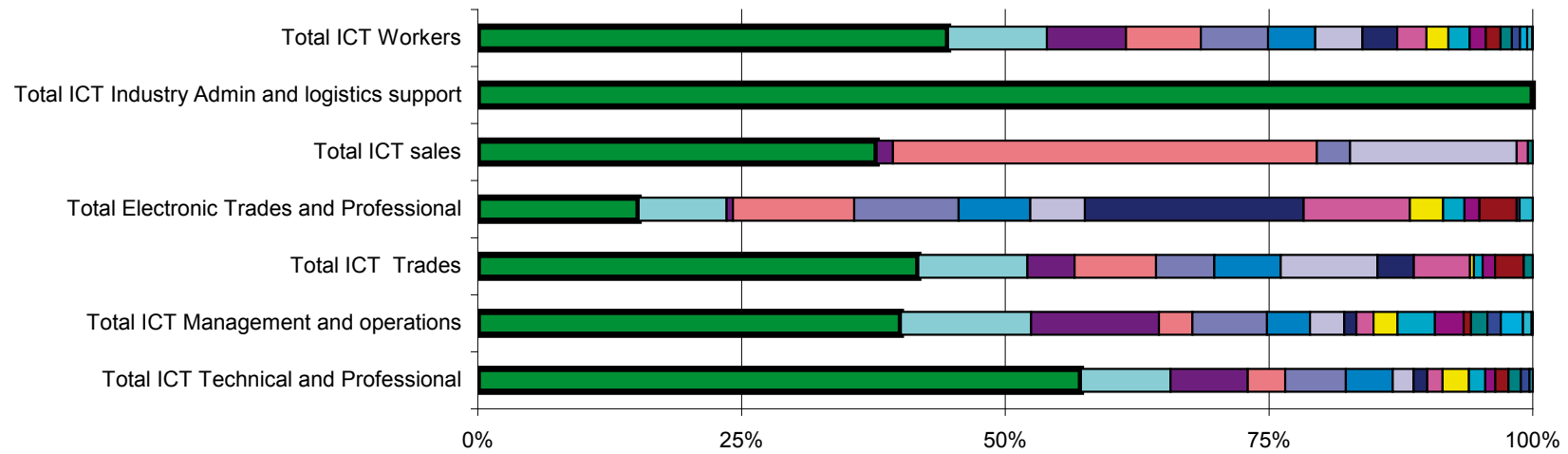
Employing Industry Sector	ICT Technical and Professional	ICT Management and Operations	ICT Trades	Electronic Trades and Professional	ICT Sales	ICT Industry Admin/Logistics Support (CIER Data)	ICT Workers (ACS Definition)*
Professional, Scientific and Technical Services/Information Media and Telecommunications	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
Total	205,840	164,478	62,331	49,272	34,137	58,273	532,564

³ Extract from ABS Labour market statistics Feb 2009, analysed by CIER.

*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, eg 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.



- Professional, Scientific and Technical Services/Information Media and Telecommunications
- Public Administration and Safety
- Financial and Insurance Services
- Retail Trade
- Manufacturing
- Education and Training
- Wholesale Trade
- Other Services
- Construction
- Transport, Postal and Warehousing
- Health Care and Social Assistance
- Electricity, Gas, Water and Waste Services
- Arts and Recreation Services
- Administrative and Support Services
- Mining
- Rental, Hiring and Real Estate Services
- Accommodation and Food Services
- Agriculture, Forestry and Fishing

ICT Employment Demographics

Age Demography of ICT Workers⁴				
ANZSCO Job-Type	% 40 & Over	% 55 & Over	Grand Total	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

⁴ Extract from ABS Labour market statistics Feb 2009. The median age has been estimated by CIIER 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 Statistics⁵

- 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 Masters	State total Grad Diploma or Certificate	State total 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
Total	1007	463	4,136	5,606

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

⁵ DEEWR 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
New South Wales								
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	-	-
State Sub-total	2,306	94,459	2,667	34,422	4,973	128,881	3.86%	46.37%

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
Victoria								
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	-	-
State Sub-total	2,371	63,481	4,023	39,457	6,394	102,938	6.21%	37.08%

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
Queensland								
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	-	-
State Sub-total	1,476	55,078	1,884	23,239	3,360	78,317	4.29%	43.93%

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
Western Australia								
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	-	-
State Sub-total	741	26,792	830	14,009	1,571	40,801	3.85%	47.17%

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
South Australia								
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	-	-
State Sub-total	385	18,716	407	9,025	792	27,741	2.85%	48.61%
Tasmania								
University of Tasmania	163	5,618	394	1,574	557	7,192	7.74%	29.26%
Institutions Not Offering ICT Courses	-	762	-	170	-	932	-	-
State Sub-total	163	6,380	394	1,744	557	8,124	6.86%	29.26%
Northern Territory								
Charles Darwin University	63	2,584	10	185	73	2,769	2.64%	86.30%
Institutions Not Offering ICT Courses	-	435	-	-	-	435	-	-
State Sub-total	63	3,019	10	185	73	3,204	2.28%	86.30%

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
Australian Capital Territory								
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	-	-	-	-	-	-	-	-
State Sub-total	268	7,658	124	2,699	392	10,357	3.78%	68.37%
Multi-State								
Australian Catholic University	66	5,183	45	1,900	111	7,083	1.57%	59.46%
Institutions Not Offering ICT Courses	-	859	-	29	-	888	-	-
State Sub-total	66	6,042	45	1,929	111	7,971	1.39%	59.46%
Total	7,839	281,625	10,384	126,709	18,223	408,334	4.46%	43.02%
Total 2006	8,198	270,236	10,087	111,463	18,285	381,699	4.79%	44.83%
% change on 2006	-4.4%	4.2%	2.9%	13.7%	-0.3%	7.0%	-6.8%	-4.1%

Publicly Funded VET Enrolments and Awards 1999-2007

Source: NCVER 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. NCVER 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 eg. Completing Cert. III, followed by a Cert. IV then perhaps a Diploma, only ever receiving a qualification for the final qualification they undertake). The NCVER 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

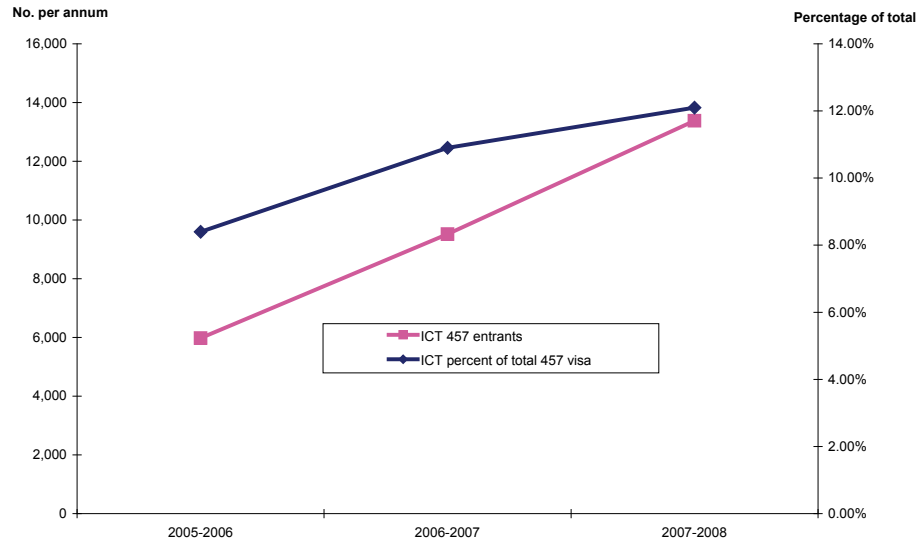
ICT Professionals ⁶	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Settler Arrival	1,302	1,496	1,992	4,228	5,040	3,674	5,491	5,536	4,268
Long Term Resident Return	1,797	1,359	1,893	2,198	2,492	2,932	2,927	2,972	3,297
Long Term Visitor Arrival	1,522	2,533	2,990	3,831	3,387	3,390	3,177	2,965	4,056
Inwards Migration	4,621	5,388	6,875	10,257	10,919	9,996	11,595	11,473	11,621
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
Outwards Migration	3,710	3,893	4,189	5,663	5,445	4,829	5,276	5,452	5,622
Net Migration	911	1,495	2,686	4,594	5,474	5,167	6,319	6,021	5,999

TEMPORARY MIGRATION

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

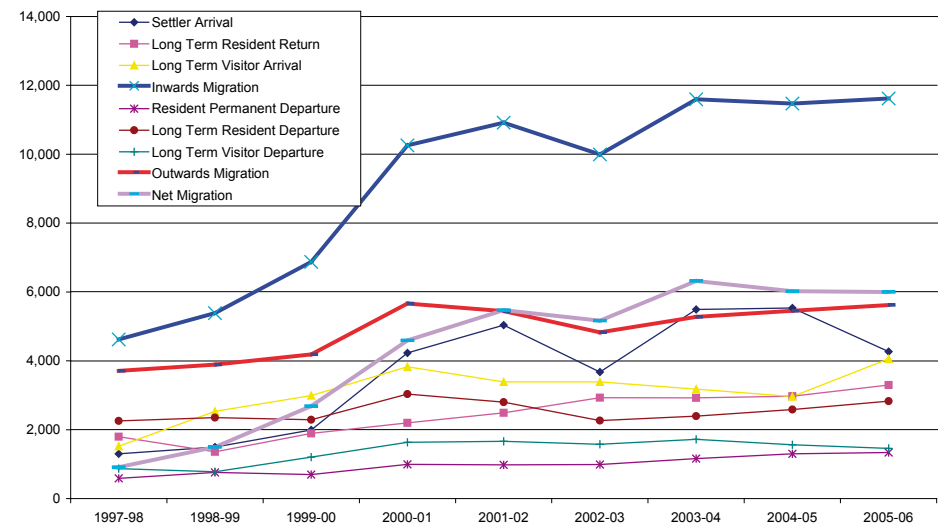
⁶ DIMIA

ICT 457 Visa trends 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 STATE⁷

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
Total	194,350	144,234	83,278	24,056	39,479	8,122	3,278	20,306

⁷ 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%
Total %	37.6%	27.9%	16.1%	4.7%	7.6%	1.6%	0.6%	3.9%

ABS data available on request

ICT Industry by State⁸

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	^338	1,934	^1,169	9,013	^544	12,998
VIC	^382	1,290	^908	6,381	^531	9,492
QLD	*218	959	458	3,090	^427	5,153
SA	68	328	125	^857	135	^1,514
WA	78	482	^278	1,674	^176	2,687
TAS	11	^71	^58	^209	^41	^391
NT	3	*32	9	*127	*26	^196
ACT	13	^122	^101	1,004	^27	1,267
Total	965	3,934	2,785	20,794	1,835	30,313

⁸ 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	^2,498	119,976
VIC	^3,879	20,311	22,591	35,146	^1,850	83,778
QLD	^1,472	9,004	10,099	^19,175	^1,212	40,962
SA	1,626	2,636	4,755	6,472	^351	15,840
WA	1,786	4,537	5,842	^9,819	^571	22,554
TAS	^59	545	1,504	^922	^149	3,180
NT	5	np	np	^717	*63	1,427
ACT	296	np	np	^8,297	196	^12,089
Total	15,953	70,653	78,136	128,171	6,892	299,805

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	^124.6	9,013.4
VIC	202.0	1,526.5	1,488.3	2,794.0	^82.3	6,093.0
QLD	^68.5	482.0	724.8	^1,207.1	^39.7	2,522.1
SA	97.3	165.5	310.9	^400.8	^10.3	984.8
WA	84.7	237.6	358.6	^595.4	^17.3	1,293.7
TAS	^2.0	^26.0	92.2	^38.8	*3.6	162.5
NT	np	np	np	^35.9	^1.4	82.6
ACT	np	np	np	^707.3	11.4	^968.7
Total	912.1	4,889.4	5,367.4	9,660.9	290.8	21,120.7

⁸ 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

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	^498.5	na
VIC	^995.8	14,571.5	11,245.4	7,518.6	*416.3	na
QLD	^337.2	6,845.7	4,792.0	2,680.4	^172.7	na
SA	422.4	1,907.1	2,664.4	1,112.9	^50.2	na
WA	347.5	3,519.3	2,465.1	^1,212.6	^70.9	na
TAS	^5.9	np	np	^117.6	^12.3	na
NT	*0.6	np	np	230.5	*6.8	na
ACT	68.4	np	np	^1,613.9	35.3	na
Total	4,235.2	50,376.8	39,552.9	25,552.2	^1,262.9	97,753

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

* 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 ⁹										
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
Total	16,570	64	33	72

⁹ 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 ¹⁰ (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
Region						
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
Total	708	86.5	34.0	90.5	40.0	23.6

¹⁰ ABS 81660DO001_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–2006–07¹¹ (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

¹¹ 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) ¹²							
	1996	1998	2000	2002	2004	2006	2008
EQUIPMENT							
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
SERVICES							
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
TOTAL							
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

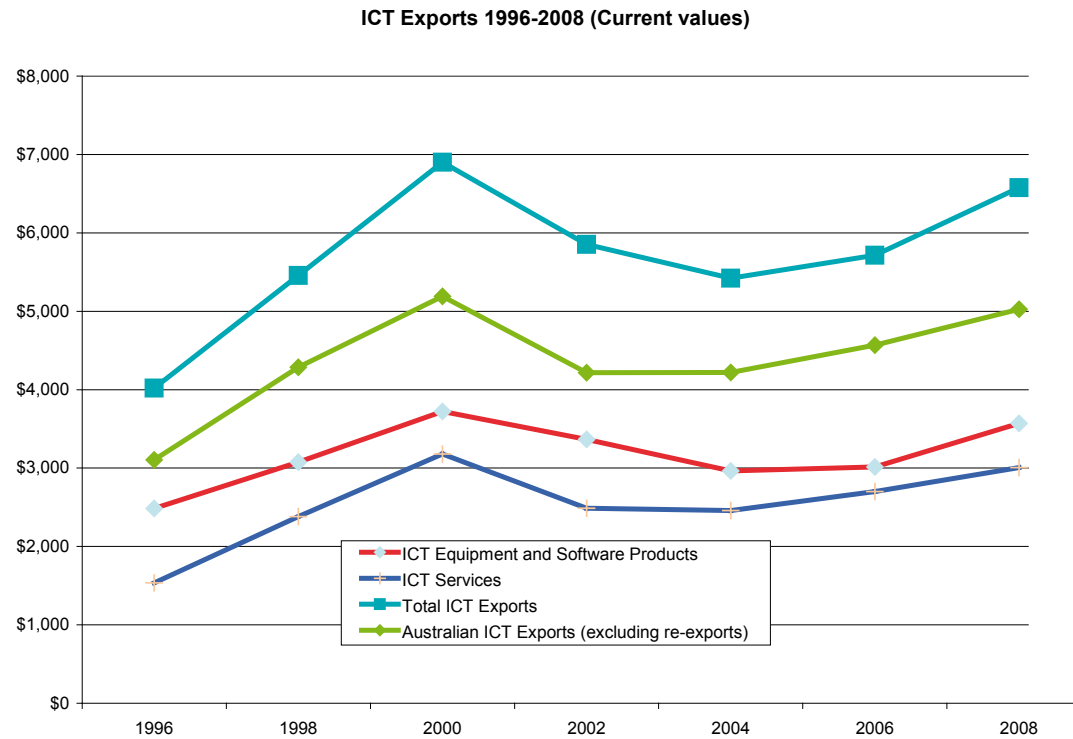
Notes: All data are current prices. Total includes re-exports, Australian total excludes them.

*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

¹² TradeData (www.tradedata.net), CSES Analysis



ICT Research

Gross expenditure on R&D, by sector – by socio-economic objective¹³

GOVERNMENT							
	Business (\$A Million)	Commonwealth (\$A Million)	State/territory (\$A Million)	Government Total (\$A Million)	Higher Education (\$A Million)	Private non-profit (\$A Million)	TOTAL (\$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 field¹⁴

GOVERNMENT							
	Business (\$A Million)	Commonwealth (\$A Million)	State/territory (\$A Million)	Government Total (\$A Million)	Higher Education (\$A Million)	Private non-profit (\$A Million)	TOTAL (\$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

¹³ ABS 81120DO008_200607 Research and Experimental Development, All Sector Summary, Australia, 2006-07

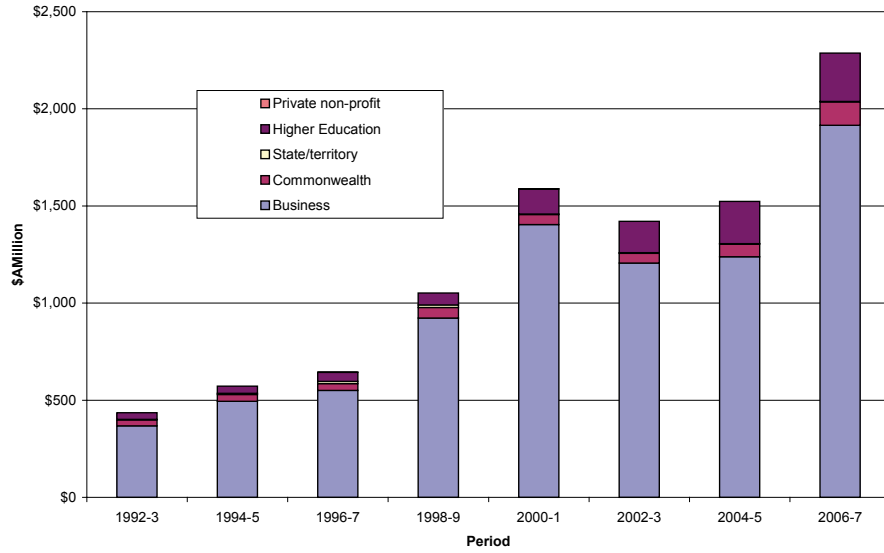
¹⁴ ABS 81120DO007_200607 Research and Experimental Development, All Sector Summary, Australia, 2006-07

* Excluding non-profit

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

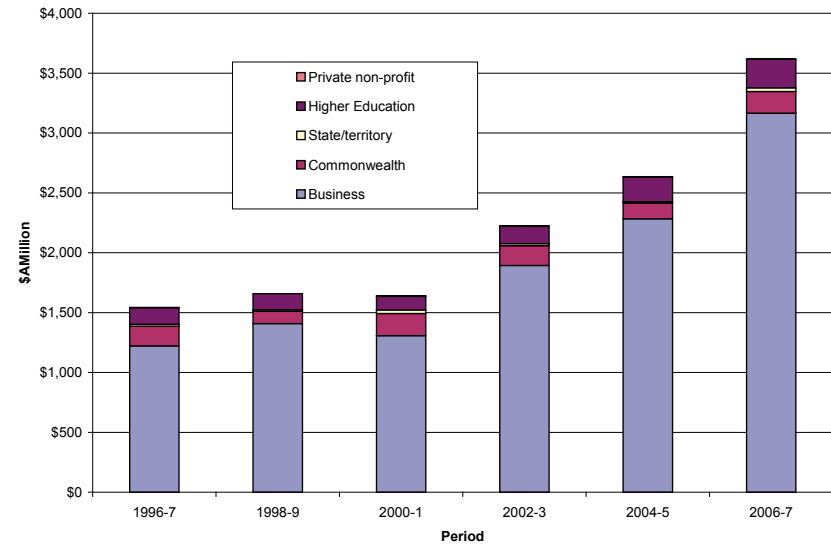
Prior to this, ASRC 1993 socio-economic objectives were used. Implementation of ASRC 1998 resulted in a break in the socio-economic objective series.

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 2000.

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 2006-7¹⁵	ICT Income (\$A Million)	Total income (\$A Million)¹⁶
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
Total ICT industry	\$97,753.3	\$122,838.7

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
Total	\$39,440	\$46,900

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
Total	\$84,821.32

¹⁵ ABS 8126-0 2006-7

¹⁶ Includes non-ICT income

* Estimate has a relative standard error of 10% to less than 25% and should be used with caution

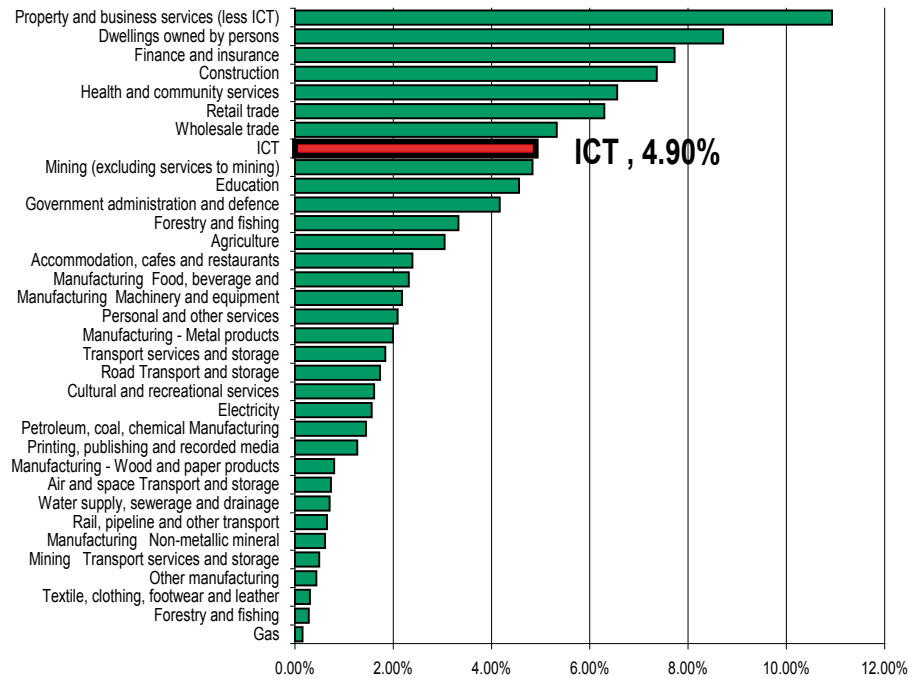
ICT Economic Contribution

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, Media¹⁷.

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

Source : ABS 52060, ABS 5259.0, CIER



ABS Satellite Account 2003, published 2006

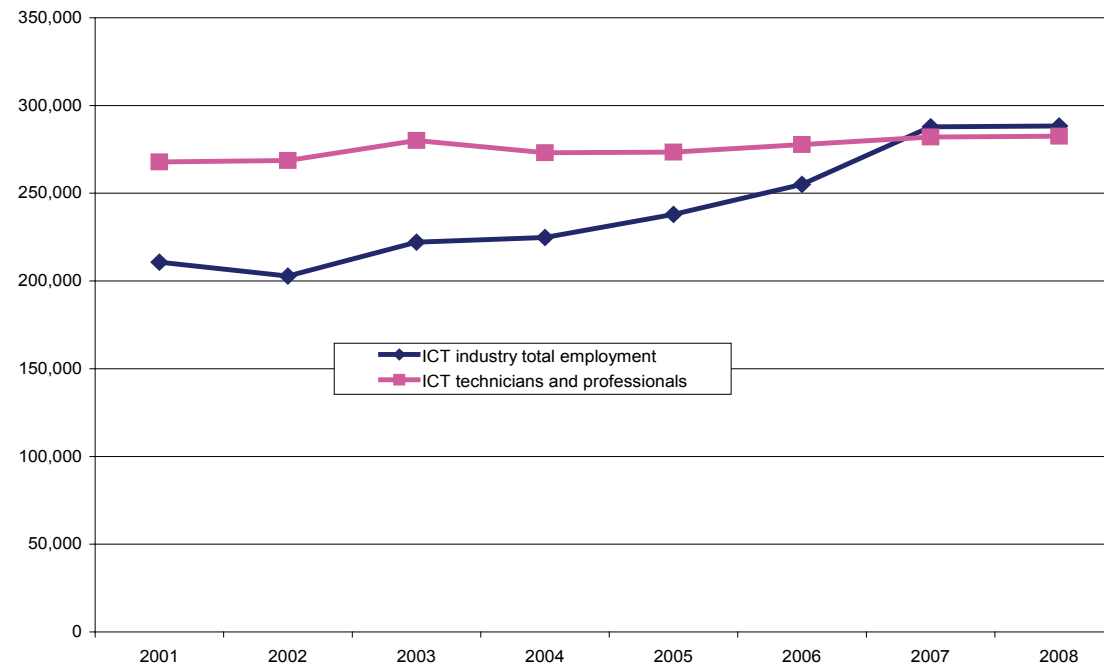
¹⁷ ABS Cat. no. 5259.0 - Australian National Accounts: Information and Communication Technology Satellite Account, 2002-03.

Where Have We Come From?

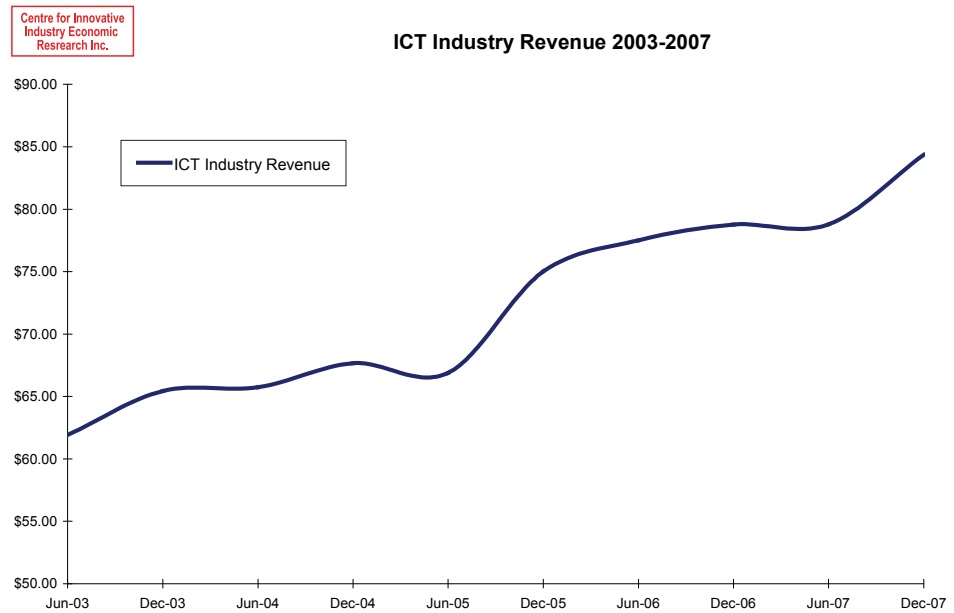
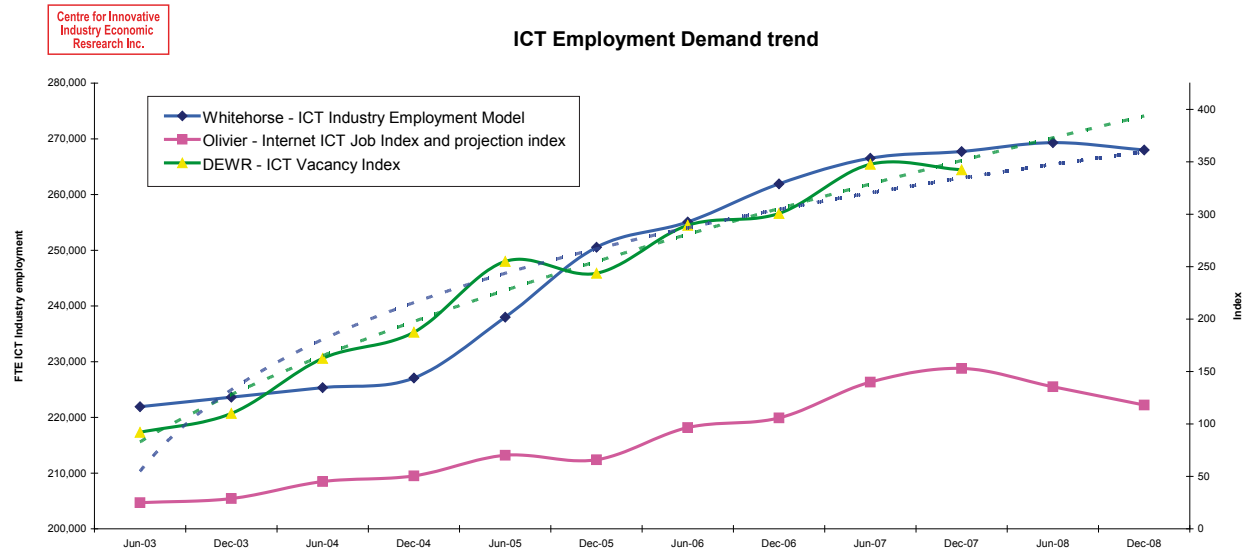
Longitudinal employment and economic data.

Employment Estimates DEWR/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



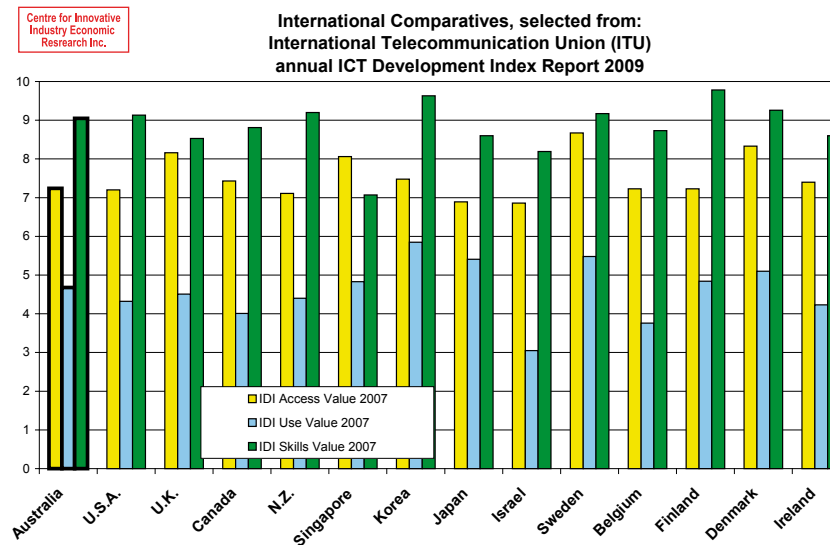
* CIER/Whitehorse Top250 Survey
 ** ABS labour market Surveys for 5 main ICT occupations



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 ¹⁸	Rank	ICT Price Basket Value	Fixed (% of GNI per capita)	Mobile (% of GNI per capita)	Broadband (% 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
Australia	26	0.9	0.9	0.9	0.9
N.Z.	33	1.2	1.4	1	1.3

ICT Access 2007	Fixed telephone lines per 100 inhabitants 2007	Mobile cellular subscriptions per 100 inhabitants 2007	Proportion of households 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
Australia	47.1	102.5	64
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

¹⁸ International Telecommunication Union (ITU) annual ICT Development Index Report 2009
GNI – Gross National Income

Sources and Acknowledgments

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- IDC
- International Telecommunication Union
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- Olivier
- Tradedata

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About the Centre for Innovative Industries Economic Research Inc

CIER 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. CIER 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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