



**AUSTRALIAN
COMPUTER
SOCIETY**

**ECONOMIC AND INDUSTRY
POLICY HANDBOOK**

JANUARY 2008

As the professional body for practitioners in the ICT industry, the ACS plays a critical and growing role in establishing and promoting professionalism and professional standards of excellence by providing continued professional development for members and through the Code of Conduct and Code of Professional Conduct and Professional Practice to which all members must adhere.

There are around 255,000 ICT professionals employed in Australia, with over 60% of those directly employed within the ICT industry, and the balance interacting with the ICT industry from their roles in business, government, and academia.

ICT has developed to a point where it now underpins almost every aspect of our home and work lives. Technology has become ubiquitous and pervasive. There is virtually no product that does not in some way depend on technology for its manufacture, production, commercialisation or distribution. ICT is a vital part of all of and is driving productivity in all other economic sectors in Australia.

The continued, sustainable growth and prosperity of the ICT industry is therefore vital to the Australian economy and a strong, vibrant ICT profession is critical to ensuring Australia has the capacity to support the ICT needs of its industries and maintain ongoing and sustainable economic growth.

ICT professionals join the ACS as part of their commitment to professionalism. They benefit from a broad range of professional development activities, our industry-leading Certification Program, networking opportunities, information resources and ongoing education and training opportunities to ensure they have the most up to date information at hand. They also enjoy the status and recognition that is afforded the ACS as a member of the Australian Council of Professions. The ACS became the first professional ICT society in the world to achieve a full professional status in its own right when it was admitted into the Australian Council of Professions in 1999 - an achievement of which the industry is justifiably proud.

ACS Believes that:

- **Australia needs a strong and sustainable ICT profession and industry in order to achieve and maintain its economic growth and independence.**
- **Maintaining and sustaining an ICT profession and industry requires high quality ICT people, a dedication to professionalism, world-class ICT infrastructure, and mature and growing ICT markets.**
- **Australia can be the major ICT services supplier, and a significant ICT goods supplier, in our geographic region.**
- **Australian ICT professionals should enjoy a culturally and professionally rewarding, working life.**

To do this:

4. SKILLS - we need to constantly improve our ICT skills and the supply of well trained Australian ICT professionals

1. POLICY FOR PROFESSIONALISM IN ICT, 2001

The ACS believes professionalism is essential within the ICT sector, particularly where high consequence systems are involved and encourages employers to prefer ACS members. ACS members have their qualifications and experience formally assessed against a core body of knowledge and adhere to a Code of Ethics and Code of Professional Conduct and Practice. Hiring professional practitioners can mean the difference between project success and failure.

2. POLICY FOR ICT SKILLS AND EDUCATION, 2001

5000 additional university places are needed to alleviate skills shortages in the ICT sector. These need to be supported with appropriate ICT educational staff and infrastructure. Government should fund places for non IT professionals wanting to transition to IT. Additionally, the ACS supports ICT migration, work experience in ICT for school students to encourage them into ICT careers and actively encouraging women into the ICT sector.

3. SKILLED MIGRATION POLICY, 2005

The ACS considers the ICT skilled migration program needs to be better aligned and more responsive to the current ICT job market to improve employment outcomes for new graduates and those migrating to Australia on temporary and permanent visas. The ACS recommends reducing the intake of new graduates under the General Skilled (permanent) Migration Program and increasing the granularity for ICT occupations on the Skilled Occupations List, used for 457 (temporary residency) visa applicants, so that ICT job specialties can be removed or added (depending on the local employment market).

4. COMPUTER LITERACY, 2005

All school students should be fluent in the use of ICT and able to use it to their advantage in learning. ICT should be integrated into the school curriculum at all levels across all disciplines. To facilitate this, governments need to develop a national standard for ICT literacy, promote and encourage ICT literacy for teaching staff and immerse students in

technology rich teaching environments. ICT literacy standards should be tested in the same way as numeracy and literacy. Schools need access to up to date hardware and software, ongoing technical support and access to quality on line content and services.

5. SKILLS FORESIGHTING, 2006

While Australia allocates considerable resources to predicting, analysis and planning for roads, schools and other essential infrastructure, it allocates very little to predicting and building equally its essential ICT skill capability and human infrastructure. The ACS believes that government must develop a stronger skills foresighting capability, knowledge and data and linkages to feed this information to ICT higher education providers, employers and employees so that we have the people with the necessary skills to underpin future technology assisted growth.

6. TRAINING AND SKILLS DEVELOPMENT, 2007

Skill shortages are emerging in areas of the ICT employment market and are predicted to worsen over the next 5 years or so. The ACS believes that employers and government should give greater emphasis to addressing their skills needs by retraining and upskilling their current ICT employees by providing training and skills development to new or recent graduates and their current ICT workers. Governments should lead the way in establishing best practice graduate recruitment programs and in retraining their current ICT employees.

7. USE OF 457 VISA APPLICATIONS, 2007

The ACS believes that 457 Visa are an important source of labour for the Australian labour market and should be used wherever particular skill shortages are impeding productivity and development and the appropriate skill sets cannot readily be sourced from the Australian labour market within a reasonable time frame.

The ACS considers that skill searches should be in the following order:

- Skills available within the domestic market;
- Cross training or upskilling of existing staff;
- Use of 457 Visas to source appropriately skilled labour from overseas where those skills are not readily available domestically.

In deciding which of the above options to take, employers should consider the time and cost needed for upskilling or cross training in comparison to sourcing applicants from overseas. The ACS also advocates verification of

the skills possessed by 457 visa applicants in a similar way skills for permanent visa applicants are assessed.

INFRASTRUCTURE - we need to establish and maintain the best ICT infrastructure throughout Australia

1. POLICY FOR INTERNET AND ECOMMERCE, 2001

The ACS believes that community ICT literacy is fundamental for successful exploitation of the internet and ecommerce and appropriate ICT literacy standards need to be set for all courses for primary, secondary, vocational and undergraduate students. Additionally, SMEs need to be ICT literate to ensure increased productivity and global competitiveness. Governments need to ensure adequate bandwidth and infrastructure to take advantage of ecommerce opportunities.

2. POLICY FOR ICT COMMUNITY ISSUES, 2001

This policy addresses privacy concerns associated with ID cards and Tax File Number usage and the need for development of comprehensive and enforceable guidelines to address privacy and linkage between systems. It supports computers and networks being made available free in public places, schools and libraries to facilitate public access to information and the adoption by government of the ICDL. ISO standards on usability should be adopted.

3. POLICY ON OPEN SOURCE SOFTWARE, 2004

The ACS encourages companies and government to consider open source software as a competitive alternative to proprietary software products and as a means of preventing vendor lock in. To facilitate the process Federal and state government should develop a joint open source software website to allow source code sharing amongst private and public sector agencies and implement policies that encourage departments to consider open source products.

4. POLICY ON ICT RESEARCH, 2006

ACS supports the need to conduct ICT research in Australia with commercialisation in mind. The ACS also supports industry sponsored research as the output of such research will be of greater relevance to the industry.

ACS supports the Australian Research Council's linkage grant program as it fosters research with industrial links in a university environment.

The ACS policy states a need to continuously improve communication

of research outputs through quality refereed publications, conference presentations and international book publications.

5. UNIVERSAL SERVICE OBLIGATION, 2007

The ACS believes that essential services for personal and business purposes now encompass voice communications, email and high speed broadband across both fixed and mobile platforms to allow delivery of essential services, critical information and social networking.

All Australians need these services in order to play their part in society and to access information and services delivered by health and education providers, governments and businesses.

The ACS believes that the Universal Service Obligation should therefore be expanded to cover email, high speed broadband and mobile platforms for the delivery of communication services, in addition to fixed line voice communications.

EXPORT MARKETS - we need to proactively access and increase our exposure to international ICT markets

1. ONSHORING ICT BASED ANALYTICS, 2005

Australia has the infrastructure, capability and cost advantage to become an offshoring destination of choice for the US, Japan, UK and Europe for ICT based activities and analysis in the areas of financial services, strategic business intelligence, risk and quality management and research and development. ACS considers the Government should sponsor a national ICT 10 year plan and marketing initiative, developed in collaboration with state government and industry, to exploit this opportunity.

2. THE IMPORTANCE OF ICT EXPORTS, 2006

Australia has a growing ICT production capability that can improve our ICT trade balance. The companies that provide this ICT production capability are often undervalued domestically, despite their global success.

Growing ICT trade deficits are an indicator of decline of the local ICT industry and of competitiveness in ICT production, reducing Australia's ICT deficit by improving exports of ICT goods and services is good policy.

ACS encourages ICT production and services companies to develop and service export markets. ACS believes growing Australia's ICT exports is integral to growing our ICT industry and the ICT economy. Government should support such growth as a high priority, in consultation with the domestic ICT industry.

3. POTENTIAL FOR EXPORTS, 2006

Australia has high potential for ICT exports in, computer services, specialist electronics and high-quality software. Targeted export programmes should be developed and implemented by government, in consultation with the domestic ICT industry, for each of these sectors, and for others as they arise.

4. TARGETS FOR EXPORTS, 2006

Whilst North America and Europe are traditional export target destinations, opportunities for significant growth of ICT exports are found in India, China, and Southeast Asia. ACS considers that the government should support continued regionally focused ICT export missions and programmes, in consultation with the Australian ICT industry, to maximise such opportunities.

5. FREE TRADE AGREEMENTS, 2006

ACS endorses the findings of the CIIER report to DCITA on the Software Industry "Free trade agreements (FTAs) can assist in reducing barriers to trade between nations, but their impact can vary depending upon the terms of the agreement and the market status of the two nations. In the case of software products in particular, an FTA can be of most value to the Australian producer where the target country market is growing quickly and there are fewer dominant suppliers."

ACS considers that FTA's can present useful support to strategies for the development of Australian ICT exports, but are not of prime importance to such strategies.

DOMESTIC MARKETS - we need to ensure maximum possible cost-effective retention of our domestic ICT markets

1. POLICY FOR GOVERNMENT OPERATIONS, 2001

ACS recommends that the government boost the involvement of Australian SMEs in its procurement process by reducing the cost threshold from which mandatory procurement guidelines apply; breaking contracts down into smaller sizes and increasing target purchases from SMEs to 50%.

2. POLICY STATEMENT ON OFFSHORING, 2004

Firms should consider any decision to offshore functions carefully on the basis of issues such as currency fluctuations, IP and governance risk, security, overstated cost savings, loss of core competencies and managing globally distributed teams and projects. The ACS has prepared a cost-benefit check list for companies to consider prior to committing to an offshoring decision.

Where offshoring occurs, firms and government should ensure that displaced workers have adequate opportunity and access to reskilling and retraining programs.

Australia presents as a favourable offshoring destination and government should actively market Australian capability.

ENVIRONMENT FOR GROWTH - we need a business, taxation, and regulatory environment that encourages and rewards ICT economic growth

1. POLICY FOR NATIONAL ICT STRATEGY, 2001

The government should develop a long term national ICT strategy to position Australian ICT globally. ICT should be the responsibility of a senior Minister (state and federal governments) and under a specific portfolio and targets should be for ICT to contribute at least 7% of the Australian economy, in line with the current OECD average. The government should provided improved R & D incentives to the Australian ICT sector to help achieve this.

2. POLICY FOR ICT FUNDING, 2001

ARC funding needs to be more proactive, the funding process refined and there should be greater involvement of industry (ACS) to speed up project approval processes. Funding levels should be increased, approved projects should be subject to peer review and high performance researches should be considered for preferential treatment.

3. POLICY ON INTERNET USE, 2004

The internet provides the potential for significant productivity gains for business and employee job performance. The ACS considers employers should review and implement internet policies and provide training and guidance to employees on internet use, including company expectations, personal and inappropriate use issues and privacy considerations.

4. SOFTWARE QUALITY ACCREDITATION, 2004

Australian software developers should consider adopting process improvement methodologies to help them remain competitive in the international software development market. The ACS recommends a multi faceted approach to achieving a total quality approach to software development, based on: process (adopting an appropriate quality assurance process); product (product standards and testing); and people (ICT practitioners subject to the rigors of a professional association).

5. POLICY ON BROADBAND, 2004

The Government should adopt a national broadband strategy that will see all Australians and Australian businesses with access to affordable true (at least 10mb/s) broadband regardless of their location and without download quotas. This strategy should be benchmarked against metrics that would put Australia into the top 5 OECD broadband access ranking.

6. ENERGISING AUSTRALIAN INNOVATION, 2007

The ACS has spearheaded the development of a national 10 year vision for the Australian ICT sector in conjunction with the National ICT Industry Alliance. It covers national marketing and branding, innovation, procurement, skills, global integration, entrepreneurship, ICT infrastructure, ICT literacy, standards and conduct and regulatory policy.

The ACS is calling on the government to adopt and develop a national 10 year ICT vision for Australia based on the NICTIA 'Energising Australian Innovation' document.

ENVIRONMENT FOR PROFESSIONAL SATISFACTION - we need a lifestyle, learning and cultural environment that encourages and rewards ICT professional achievement.

1. WORK LIFE POLICY, 2005

The ACS has proposed a series of work life options for consideration by employers to improve participation rates of women in the ICT workforce, accommodate family needs, attract new talent and assist in retaining skilled people in the ICT sector. Initiatives include: Flexible working hours; Work location options; job sharing and part time work; options for paid parental leave; and promoting healthy life styles.

2. UNCOLLARED WORKFORCE, 2006

The next generation of workers will be the first to adapt to the work/life

options made available by new communication technologies and will seek employers who best meet their needs and work/life requirements. Gen Y has a strong desire for career mobility, integrating technology into work and home life, to work collaboratively and to customise their work arrangements. The ICT sector needs to harness these preferences to attract young workers if it is to avoid future skill shortages.

3. GREEN ICT POLICY, 2007

The ACS has undertaken an audit of the carbon dioxide emissions generated by the use of ICT by Australian businesses and developed a series of recommendations to help ICT professionals reduce carbon dioxide emissions for their firms. In addition, the ACS has established a Green ICT special interest group to discuss issues associated with ICT and climate change.

The ACS believes that leveraging technological solutions will be the key to reducing our domestic and commercial carbon dioxide emissions.

As well as designing ICT equipment and technologies that are more resource efficient, the innovative development of power and other resource use algorithms and programs for commercial and domestic application is a key area where ICT professionals can constructively contribute to reducing energy use and achieve significant cost savings for commercial operations and domestic consumers.

4. POLICY ON WORKFORCE PARTICIPATION, 2007

The ACS believes that the Australian ICT sector must lead the way in using communications and other technological solutions to create dynamic work environments that allow and actively encourage development of a diverse and productive workforce that facilitates participation by anyone who has the technical capability, or interest and desire to acquire the technical capability, to work in the sector.

This includes using technological and communications solutions to facilitate active and increased participation by women, people with disabilities, graduates and young workers, older experienced workers and others for whom the traditional work environment and work arrangements may not be suitable.

The ACS urges all Australian governments to put programs and policies into place to assist industry in achieving these workforce participation goals.