

2 May 2005

Mr Peter Georgiou MP  
Chair  
House of Representatives Science  
and Innovation Committee  
Parliament House  
Canberra ACT 2600

Dear Mr Georgiou

**INQUIRY INTO AUSTRALIAN TECHNOLOGICAL INNOVATION**

Please find attached the ACS submission to the Inquiry into Australian Technological Innovation being conducted by the House of Representatives Science and Innovation Committee.

The ACS would be more than happy to attend the Inquiry to formally transmit its submission, discuss issues and answer questions. Should you require any additional information or require clarification on any of the points made in the ACS submission please do not hesitate to contact me on (02) 9299 3666.

Yours sincerely

**Dennis Furini**  
Chief Executive Officer  
Australian Computer Society  
cc:

## INQUIRY INTO AUSTRALIAN TECHNOLOGY INNOVATIONS

The ACS considers that the prosperity of Australia depends critically on its ability to invest in and use ICT knowledge and skills to apply and create intellectual property.

ICT has developed to a point where it now underpins almost every aspect of our work and home lives. It forms the backbone on which Australian industry functions, facilitating production and efficient resource use. As a result, the well being of corporate Australia, its economic performance and our standard of living are dependent on the ICT industry. In turn, our ICT industry cannot flourish without support for ICT SMEs by government and the private sector, investment in research and development and the successful commercialization of the outcomes of this investment.

### **The Australian ICT Sector**

The Australian ICT sector is virtually entirely composed of SMEs and has very few domestic international operations. Compared to other OECD countries, Australia has been spectacularly unsuccessful in producing, commercialising and marketing, both nationally and internationally, its ICT innovations. The result is that Australia is an increasingly strong user of other countries ICT innovations and a poor exporter of its own.

This is reflected in Australia's current ICT trade deficit which stands (as at 2005) at around \$19 billion, with \$24.4 billion in imports while our ICT exports are \$5.4 billion. (Australian ICT Trade Update 2005, John Houghton).

This growing ICT trade deficit can be seen as an indicator of a decline in the local ICT industry and a sign of declining local competitiveness in many areas of ICT production. This has implications for using ICT innovations that we import as well as for ICT producing industries. The Framework for the Future Steering Committee stated in its 2003 report that:

“World class ICT capabilities are fundamental to the ability to apply ICT in other industries and achieve broader national economic and social goals. A significant ICT production capability in the economy creates a symbiotic relationship between users and producers. Without an industry producing such products and services it would be more difficult for Australia to keep up internationally in terms of their adoption and use.”

To redress this situation, the ACS believes that local industry and government in particular, need to change their purchasing policies and culture so that local SMEs can better compete with multinationals in tendering for ICT contracts. As the largest purchaser of ICT products and services in Australia, government (local, state and federal) is uniquely positioned to ensure that local ICT companies benefit from its business to establish reference sites for products and services so that in turn, SMEs can attract investment, develop and commercialise innovations and win international contracts.

Boosting the ICT SME sector will improve Australian ICT capability, skills development and innovation with flow on benefits to the economy as a whole particularly in terms of improved exports and employment opportunities in the ICT sector.

The ACS acknowledges recent government initiatives to address purchasing policy vis a vis SMEs, but believes more needs to be done. In line with the Governments election promise, the GITC could be simplified and specifically designed to assist SMEs to tender for government business.

#### **Investment in ICT R&D and SMEs**

The ACS believes that strong investment in local ICT research and development is necessary to generate breakthrough technologies, facilitate new and improved industry processes and the efficient use of human and natural resources.

The benefits of R & D are highlighted in the Australian Innovation Scorecard 2004, published by the Department of Education, Science and Training which indicates (p36) that for every dollar invested under the R&D Start programme, the community received benefits amounting to \$4.50 in return.

#### **Research and development:**

- Provides the information for innovation and new initiatives;
- Boosts adaptation of new technologies to industry sectors;
- Generates employment, enhances skills and the development of a sustainable ICT industry;
- Generates economic return through exports;
- Provides the basis for informing policy, decision making and strategy for industry and government.

Rather than simply providing additional funds to universities or other research institutions, the ACS believes that boosting our ICT innovation, IP development and commercialisation can best be achieved by developing programmes to promote partnering between research institutions and government with local SMEs. Such programmes provide the essential mix of the theoretical with practical application and development.

The ACS considers that policy and strategy to improve conditions for commercialisation of innovations needs to focus on the early stages of the commercialisation lifecycle such as:

- Identification of Angel investors;
- Matching firms/people looking to sponsor innovation with those who have the ideas. This could be a show case site for innovators to put forward their ideas for investors to review; and
- Business planning to help innovators plan out a commercialisation and marketing and sales strategy for their innovation.

One way of facilitating such programmes could be for government to allow departments to invest, say, 0.5% of their technology acquisition budget to pilot installations of Australian innovations. This would allow innovations to be fully developed, the SME to gain real practical experience in implementing their innovation and provide reference sites for commercialisation and to attract investors.

The ACS is not suggesting a 'hand out' strategy for SMEs or that government relax probity requirements in any way. Rather, when upgrading ICT systems and equipment, Government departments should look at whether there are any Australian innovations that might be suitable and can be piloted to demonstrate viability. If viability is proven, there could be some scope for assistance in responding to tenders and putting together appropriate business plans.

Businesses that have gained Australian government reference sites will have a much stronger basis upon which to promote their products to overseas government.

The Australian Innovation Scorecard 2004 (p13) indicates that while the level of Government spending on R&D is comparable with other OECD countries, the level of business expenditure is significantly below other OECD countries. This suggests that Australia needs to create a better financial proposition to encourage private sector investment in R & D.

#### **Business Skills Development to Exploit Local Capabilities**

The ACS believes it essential that Australia better develop the business skills of our ICT professionals and SMEs. While Australia creates some great innovations, it struggles to exploit them.

Fundamentally, successful commercialisation of innovation is about marketing and sales.

A clear differentiator between Australian SMEs and many multinationals – US ICT firms in particular, is the latter's exceptional sales and marketing skills. Selling and marketing of products is often given as high a priority as innovation and development. In Australian SMEs it is usually the CEO and development team that also play amateur sales and marketing reps. Without fundamental skills and experience in this area they are simply no match for the professionals employed by multinationals.

Development of marketing and business planning skills will allow our ICT professionals to better attract investment to exploit their innovations rather than sell them off to foreign companies. While practical business planning skills can be learnt on the job, the ACS considers that the basics of these skills need to be included in the syllabi of ICT courses offered by universities and colleges.

Additionally, grants and awards provided by the Government to help SMEs must allow (and encourage) part of the assistance package to be used for sales and marketing and not insist that it be used for research and development purposes alone.

Australian ICT business has a tendency to small scale investment to only supply the local market. Australia has failed to attract significant export oriented investment that links local producers with global production systems.

The ACS considers that the Government should be looking to develop policies and programmes that allow it to exploit its ICT strengths through a more fine grained view of local capabilities, competitive and comparative advantages. Local industry must link into global ICT production systems and focus on attracting export oriented investment while supporting and boosting local ICT capabilities.

#### **Support and Guidance from our Successful Business People**

The ACS considers that there would be considerable benefit for ICT start ups if the Government were to develop a mentoring programme that could match Australia's mature and successful business people who may be interested in being on Boards of Start up ICT firms to provide guidance and the benefit of their business acumen.

The ACS believes that there are many experienced or retired business people who would be happy to work for stock options rather than salary. A Government programme could be developed in association with the relevant industry associations to bring together parties interested in exploring this option. Successful partnerships could be used as champions to demonstrate the benefits to SMEs.

#### **Facilitation of Future Productivity Gains**

An additional urgency associated with boosting our ICT capability is that we know the rate of growth of Australia's working age population is slowing. Any further gains from reducing unemployment are therefore limited.

This means that more than ever Australia's future economic growth will be driven by gains in productivity. These productivity gains will be driven by the ICT sector which, with the rapid roll out of technology over the past 20 years, has been one of the key enablers of Australia's good economic performance over that time.

Experience has shown that countries that are large net producers of ICT goods and services have achieved strong productivity gains. If Australia is to continue to benefit from the ICT revolution, it must develop its capabilities as a creator and producer of ICT and related product technologies, rather than simply being an adopter of other countries technologies.

New product technologies tend to create jobs. General purpose technologies like ICT can form the basis of innovative clusters that spawn a process of continual innovation and contribute to local and regional development.

By strengthening its R & D capability and partnering and providing greater business to SMEs, the government can improve Australia's ICT innovation and export opportunities,

creating new streams of high value employment and the ongoing, sustainable productivity gains that have been associated with the ICT industry in other OECD countries.

### **Long Term ICT Strategy**

The Government has not articulated a long term (10 – 15 year) strategy for the Australian ICT industry. Without such a strategy, the industry has been relatively fragmented, at both the state and federal levels, often spread across a number of portfolios. This has resulted in a series of well intentioned but uncoordinated programmes with the consequence that the full potential of the ICT industry has not been harnessed.

An example of this fragmentation is the many programmes in place to support ICT R&D and SME development such as R&D Start (now called Commercial Ready), NICTA, COMET, the Pre-Seed Fund, BITS and the Information Technology Online Programme. The ACS acknowledges the significant funding contributions made by the Government under these programmes but believes that greater synergies could be generated if these individual programmes were incorporated under the one portfolio and integrated into the proposed Australian ICT industry long term strategy.

Additionally, the ICT sector has many representative agencies making the process of developing a collaborative national approach to ICT difficult.

The ACS believes the Federal Government should spearhead the development of a national 10 to 15 year ICT strategy through the development of a new body that will unify all ICT associations and stakeholders at the national level to form one voice that can give the industry the mandate to set its own destiny.

This new body could communicate nationally and internationally the benefits, capabilities and cost advantages of the Australian ICT industry – attracting investment and raising awareness of the local industry. It could use as its model similar bodies established for the wine and tourism industries which have been very successful in uniting these industries and gaining significant recognition internationally for their products.

The ACS believes such a body could:

- Unite the ICT industry under a national banner;
- Develop an industry framework, policy and practices designed to promote R&D, innovation, commercialisation of IP and export;
- Integrate and develop synergies between the various ICT programmes being undertaken across federal government portfolios;
- Increase multinational participation and local collaboration;
- Create and market an Australian ICT brand;
- Develop ICT sales and marketing growth strategies;
- Encourage investment in Australia; and

- Develop and report annually on a global comparative checklist for the ICT industry in taking into account investment, grants, incentives, taxation initiatives, venture capital, trade balances etc.

## **Conclusion**

The ACS believes that implementation of the above initiatives and in particular, the development of an appropriately constituted and funded ICT industry unifying body would provide extraordinary impetus to the Australian ICT sector and should be a high priority for the Government.

The development and implementation of a long term strategy for the Australian ICT sector could encompass all the initiatives outlined in this paper and would significantly improve investment, innovation and commercialisation within the Australian ICT sector.

Through this process, by its deeds, the Government could facilitate a strong catalytic effect in ICT R and D and commercialisation without the input of large amounts of Tax payer's dollars.