

Australian Computer Society Inc. (ACT)  
ARBN 160 325 931

Level 11, 50 Carrington Street  
Sydney, NSW 2000  
T 02 9299 3666



## **SUBMISSION TO THE REVIEW OF THE DEMAND DRIVEN FUNDING SYSTEM**

The Secretary  
Review of the Demand Driven Funding System  
[DDSreview@education.gov.au](mailto:DDSreview@education.gov.au)

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## **SUBMISSION TO THE REVIEW OF THE DEMAND DRIVEN FUNDING SYSTEM**

The Australian Computer Society (ACS) is appreciative for the opportunity to provide a submission into the Review of the Demand Driven Funding System.

As a professional society, the ACS is the only independent - vendor and technology agnostic – voice in Australia’s Information Communications Technology (ICT) sector.

The ACS has a unique insight into ICT skills and education supply issues as we accredit every high value undergraduate university ICT course in Australia and we have unique insights into the demand side of ICT skills through our partner arrangements with ICT employers. In the middle of these foci we also provide professional development opportunities for over 22,000 members who work in every sector and industry vertical in Australia - and indeed the world - and represent deep expertise across the entire ICT ecosystem. We are also a registered assessing authority for skilled permanent migration and, through our public policy advocacy, partner with Federal and State and Territory governments as a trusted and independent advisor to improve ICT outcomes and inform public policy development.

To contextualise the importance of ICT higher education in Australia’s national interest it is worth reflecting that ICT is now embedded within every sector of our economy and in every part of our lives as an opportunity and as a risk.

ICT is now so prevalent that our digital economy can be estimated with confidence at over \$100bn and, depending on ABS classifications, between 6.9 per cent and 16.8 per cent of GDP.<sup>1</sup>

Agriculture and Mining, which receive far more attention, economic support and subsidies, even when they are statistically combined with utilities and a number of other, smaller industries, contribute only one per cent more GDP to the Australian economy. Manufacturing, with the third largest level of government assistance, after mining and agriculture, contributes just over 8.3 per cent of GDP. Furthermore, ICT directly and indirectly employs over 597,000 people in Australia which is much more than many other sectors combined.<sup>2</sup>

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<sup>1</sup> The ACS 2012 Statistical Compendium

[http://acs.org.au/\\_data/assets/pdf\\_file/0014/13541/2012\\_Statcompendium\\_final\\_web.pdf](http://acs.org.au/_data/assets/pdf_file/0014/13541/2012_Statcompendium_final_web.pdf)

<sup>2</sup> Ibid



But if our digital economy is to be nurtured and sustained, as other sectors decline, ICT skills issues must be addressed. For the ACS, given the ubiquity and importance of ICT to Australia, there is a clear policy imperative to rapidly support ICT higher education.

Australia's ICT skills issues can be summarised as:

- Insufficient numbers of domestic students study ICT to meet industry demand, noting that over 100,000 jobs were created in ICT over the last decade but that domestic ICT undergraduate completions have declined to approximately 4000 per year with only 37 per cent of these choosing to work in ICT after graduation.
- ICT enrolments in higher education halved over the last decade and in the VET sector by 40 per cent.

Not only is our digital economy of such significance to the future prosperity of Australia that skills issues are prominent and immediate, but the rapidly shifting and evolving nature of ICT itself is disrupting almost every part of the broader Australian economy and society, requiring much improved digital literacy across every other industry vertical.<sup>3</sup>

For example, IBISWorld noted in 2012 that 13 of 19 industry sectors in Australia are set to be totally disrupted by technology change.<sup>4</sup> Indeed, many are already fundamentally challenged in responses to technology such as Retail, Health and Education.

This means that not only does Australia need to provide real incentives for domestic students to study ICT, but more support for schools will be required to ensure effective adoption of the ICT components in the National Curriculum.

A key conclusion from the above points is that the quantity of engaged, capable – and indeed gifted – students choosing to study ICT at university needs to be increased significantly if the requirements of the Australian economy (employers) and society (community) engaged in the global attraction for, and dependency on, ICT talent is to be met by Australian ICT graduates.

Low enrolments in ICT subjects in Years 11 and 12 around Australia, especially amongst students who proceed to achieve high ATAR scores, indicate the disdain of ICT study commences while at school and is compounded when making university enrolment decisions.

The ACS commends the Australian Council of Deans of ICT (ACDICT<sup>5</sup>) submission to this Review, noting that the demand driven funding system for universities is essentially one aimed at meeting the needs of students. We agree that while this has benefited many lives, it has failed to meet the needs of Australian industry particularly in the ICT skills required to raise national productivity, lead innovation, and meet the disruptive challenges, opportunities and risks the digital economy presents.

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<sup>3</sup> For example, less than half Australian business have an online presence:

[http://www.techworld.com.au/article/533780/training\\_critical\\_australia\\_tapping\\_broadband\\_potential\\_csiro/?fp=16&fpid=1](http://www.techworld.com.au/article/533780/training_critical_australia_tapping_broadband_potential_csiro/?fp=16&fpid=1)

<sup>4</sup> [http://www-07.ibm.com/au/pdf/1206\\_AustDigitalFuture\\_A4\\_FINALonline.pdf](http://www-07.ibm.com/au/pdf/1206_AustDigitalFuture_A4_FINALonline.pdf)

<sup>5</sup> The Australian Council of Deans of ICT <http://www.acdict.edu.au/>



The ACS believes that the demand driven funding system should be modified to strategically guide the development of ICT skills. If the Australian Government were to identify priority disciplines and provide incentives for students to study those disciplines, the predicted future shortfall of necessary skills would be mitigated.

The ACS and ACDICT have both contributed significantly to the Draft Technologies (K-10) curriculum being developed by ACARA<sup>6</sup> to help improve ICT teaching in the future, but more immediate needs can be addressed by the government in providing current students with incentives to study ICT at university.

The ACS supports the principle of demand driven system because fundamentally it increases competition between universities to attract students. This has resulted in increased offers and enrolments.<sup>7</sup> It has also driven innovation evident in increased online education market offerings by universities. As we have stated in our submission, increased tertiary enrolments and continued innovation in ICT are critical for the ongoing competitiveness and health of the economy.

However, most of the recent demand under the system has been in the disciplines of health, science and engineering<sup>8</sup> whereas growth in ICT applicants has barely moved. This is a serious concern for the economy. An initiative which may help remedy this is to consider making the price universities receive for providing courses more flexible.

Currently commonwealth contribution per undergraduate is fixed and the HECS fee component is also regulated, which means there is no true market force system where the course provider can alter their fees to ensure they make a surplus on the course being offered.

In relation to ICT courses, it is suggested the costs of ICT courses for universities are above revenues received from the Commonwealth and HECS.<sup>9</sup> Hence rational universities, if they are making a loss on certain ICT courses, lack incentives to offer or promote those courses. In this respect the ACS believes, as we recommended above, the government has value in considering reform to the financial incentives for universities to supply certain courses, especially ICT.

Our key recommendation to the government in the important review of the demand driven funding system is that ICT higher education should be publicly acknowledged as a priority discipline and that the government work with the ACS and ACDICT to develop incentives or such encouragements for its study in reference to the recommendations of the Australian Workplace Productivity Agency recent report on ICT workforce<sup>10</sup>, particularly noting the early benefits of the "GroupX" initiative in Queensland in improving ICT enrolments.<sup>11</sup>

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<sup>6</sup> [http://www.acara.edu.au/curriculum/learning\\_areas/technologies.html](http://www.acara.edu.au/curriculum/learning_areas/technologies.html)

<sup>7</sup> <http://grattan.edu.au/static/files/assets/205fbc0e/195-Keep-the-caps-off.pdf>

<sup>8</sup> <http://grattan.edu.au/static/files/assets/205fbc0e/195-Keep-the-caps-off.pdf>

<sup>9</sup> Ibid.

<sup>10</sup> The Australian Workforce Productivity Agency, ICT Workforce Report 2012 <http://www.awpa.gov.au/our-work/sector-specific-skill-needs/Pages/Professional%2c-Scientific-and-Technical-Services.aspx>

<sup>11</sup> <http://groupx.edu.au/>



Such incentives may include government encouragement for ICT studies at the very least and further support of a financial nature such as reduced HECS or other appropriate financial inducements.

Thank you for the opportunity to provide this submission. We commend the government's focus on improving education. If you require any further information regarding this submission, please contact Mr Adam Redman, ACS Head of Policy and External Affairs at [adam.redman@acs.org.au](mailto:adam.redman@acs.org.au)

Yours Sincerely

A handwritten signature in black ink, appearing to read 'Alan Patterson', is positioned below the 'Yours Sincerely' text.

Alan Patterson (MACS Snr)  
Chief Executive Officer, ACS