AWPA ICT Workforce Issues Paper
Response to Questions for Discussion

Please submit responses to these questions, or any other comments on the issues in this paper, to the AWPA Secretariat at ictstudy@awpa.gov.au by 8 February 2013.

Note: Please expand boxes as needed to fit your responses

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1. Are there any gaps in the definition of the ICT workforce provided in this Issues Paper?

ACPET believes that the Issues Paper is clear on the definition of the technically trained ICT workforce. However we believe that the universally incidental characteristic of ICT capability has as yet, been well defined, ie. most employees are required to have a basic level of ICT capability to be able to work, use the technology, develop tools and resources, trouble shoot and even innovate. ACPET believes that it would be useful through this study to also acknowledge and define the ‘incidental’ yet critical capabilities – in a way, suggesting that there are two Tiers which make up the modern workforce: Tier one made up of those employed with business sector expertise, who are expected to have a level of ICT knowledge and skills, and Tier 2 being the ICT specialists with advanced knowledge and skills. Through this exercise, it may provide a better understanding as to why, in many cases, ICT professional expertise and capability are ill-defined and employers have often ‘made do’ with the capability/expertise that exists already within the organisation, with some top-up assistance from external sources. This lack of clarity is understandable but clarification between this ‘incidental’ capability and specific expertise would be useful.

2. How can government, industry, professional associations and the training sector collaborate to collect and share data on ICT skills demand and supply?

Given that the evidence on skills shortages is conclusive, there is a gap in information on how and where shortages are being met.

Private training institutions are now arguably the ‘engine room’ of the Australian training sector. The contribution of the many private providers is under-acknowledged and invisible because much of their training delivery (including workforce development with enterprises) is fee-for-service rather than publicly funded. Statistical collections generally focus on training funded by Governments. Given that fee-for-service training is not recorded, maybe anecdotal and case study evidence collecting can provide a qualitative basis for more robust evidence.
ACPET is uniquely placed to be involved in this collection, given its strong links with industry, government and its representation of private VET and higher education provision, as the peak national association for the tertiary sector.

3. How can industry partner with schools to improve the provision of ICT education and career pathways?

ACPET acknowledges the importance of accessibility to career information for students and their career ‘linkers’, such as career practitioners, teachers and parents, in order to support informed pathway decisions by school leavers. In such a dynamic sector, resolving the challenge of ensuring currency and timeliness of information is paramount.

ACPET strongly recommends that a balanced picture be provided that reflects broad outcomes, such as completions but also cautions government on the potential for increasing the business costs to RTOs of increased data collection and reporting. Getting the balance right will be critical.

Of concern however is the Paper’s findings that “there is a drop in entry-level positions for ICT graduates indicating that industry is demanding higher level experience and specialist skills” (p.9). This poses as a further challenge for the industry, whereby messages for school leavers should clearly be focused on longer term career aspirations, which may in turn, make this sector unattractive.

On the recent Baillieu Super Trade Mission to China (October 2012), ACPET visited the Chengdu Polytechnic College, where ICT companies reside within the College premises and offer the students real work as part of their studies. The companies ranged from ICT hardware to software and design. Over 85% of graduates who had studied through this ‘reverse traineeship’ model were employed by the company. ACPET strongly recommends that this model be further explored for its applicability to the Australian environment. ACPET would be pleased to share further details, if required.

4. What is working well in relation to partnerships between industry and schools?

ACPET is not in a position to comment as this activity is outside of our scope.

5. How can education and training providers produce ‘work ready’ graduates?

Given the diversity of the ICT sector, it is important to realise that a one size fits all approach to developing a more effective system is not necessarily the model that should be pursued.

In addition to delivering full accredited qualifications, skill sets and embedding of vendor certification into qualifications should be promoted, given that these are highly sought by industry in graduates (refer to ACPET’s best practice case study).
Also, ACPET advocates for traineeships, which would go some way to address the time lag around education, provide employment and a trajectory through lower skilled to higher skilled work. This is considered a viable way of attracting more female candidates, who are more likely to go for non-traditional traineeships than apprenticeships. However, traineeships overall need to be better understood, promoted and supported, in particular, providing assistance to workplace supervisors in their role.

A large proportion of VET is now delivered to meet employer, employee and future worker needs through arrangements with private RTOs, as noted in 2010 by Heather Ridout, (former) CEO of the Australian Industry Group: “... so many of our members go to private providers because they have more of the flexibility to actually come and deliver the way companies want it (training) delivered.” The private education and training sector is uniquely placed to understand industry needs around ‘work ready’ candidates and offer wrap around training or gap skills training which university graduates may not otherwise have.

Ensuring appropriate Government funding levels for these skills of national importance is critical. For example, the rationale of the VIC State Government’s decrease of hourly SCH rates from $6.93 to $6.50 in May 2012 for the Certificate IV in Information Technology is perplexing. In turn, a lack of government supported places may also be one of the factors that is contributing to the lower number of equity groups enrolling in ICT qualifications. This assertion requires further testing through this study.

ACPET strongly advocates that measures, which support quality training experiences and outcomes, are in place through our regulatory system. Training providers, both public and private, which do not abide by these quality measures, must be sanctioned.

ACPET believes the Australian Government reforms recognise that to achieve strong outcomes, higher levels of government support and partnerships are needed. A priority is support for professional development for VET trainers and assessors so they have the skills to provide a supportive learning environment for less advantaged clients.

6. How can industry make career pathways to specialised ICT careers more transparent to prospective workers?

ACPET believes that individuals, as potential students at various stages of their life and as family or friends guiding decisions, as well as employers, should have access to clear information on education choices and delivery options.

Prospective workers already have a range of information sources to help them assess work and education interests. These include jobs on offer, pay levels, conditions and whether types of work promise futures they seek if they invest time and money in post-school education.
The job marketplace, for instance, is a telling indicator of employment outlook. It is important that career advice and work information provided by agencies align with signals from work advertisements and experience relayed by families and peers. Websites stating types of skills needed would best be backed by evidence on jobs of reasonable interest, pay and conditions by industry.

Efforts to better coordinate career advice, career information and consumer information should assist individuals in understanding and selecting the career path and related training services they want.

7. How can small to medium enterprises (SMEs) be supported to provide entry level opportunities?

Supporting enterprise to invest in knowledge and skill development of their existing and future workforce will increase national ICT capability and productivity. The traineeship system can be improved by directing investment and incentives towards employers who are committed to their trainees and demonstrate this commitment through mentoring, providing diversity of tasks, engage quality RTOs and who strategically use the traineeship system as part of their workforce development plan. ACPET is aware of some initiatives that have been piloted through the years, however these need to be made systemic. A significant role of the Australian Apprenticeships Centres (AACs) is to provide support to employers and apprentices/trainees including monitoring apprentices/trainees. AACs should be funded so that they can carry out this role at a level that produces the desired outcomes. It is also imperative that a flexible funding system is in place that can meet the unique needs of all types of enterprises. Small businesses will require different levels of support than larger businesses.

ACPET therefore believes that working more closely with enterprises, and supporting them to invest in knowledge and skill development of their existing and future workforce will increase national productivity and capability as well as create entry level positions. Employers who run businesses of all sizes need to be given assistance in workforce planning. Workforce development is more than delivering skills sets or qualifications. It includes identifying the skills of their current team and planning up-skilling/training initiatives for their current team, conducting an analysis/review of their current business and planning future human capital needs, ACPET acknowledges the national Workforce Development Fund (NWDF) as a key enabler to supporting SMEs to better identify and address their workforce development needs. It would be useful to source outcome data of NWDF projects linked to the ICT sector through this Study and to promote these findings to other SMEs.

8. What can be done to boost engagement in ICT apprenticeships and traineeships and to create more entry-level opportunities?

Participation in the apprenticeship system by small business needs to be more actively and appropriately encouraged. Large employers proving multiple sign-ups for the AAC provide a
better business model. Meaningful and easy to access support and information for small to medium employers, would result in significant increases in participation rates.

There is a lack of clarity around the ultimate ownership of responsibility for the wellbeing of apprentices and trainees, essentially key entry level opportunities, and the quality of the Australian Apprenticeship experience. ACPET recommends that the Australian Government should support employers to provide high quality on-the-job and off-the-job training. However ACPET contends that support should be focussed on the entire apprenticeship system, including RTOs and not just segments of the system. Part of Government support should focus on professional development for RTOs to the level of public benefit.

The essential problem with Australian Apprenticeships in the current environment is the main requirement of this model - an employer willing to take on or retain an apprentice and the wage rates for apprentices. The financial return on the investment in Australian Apprentices does not appear to an employer until a significant portion of the apprenticeship is completed i.e. when the apprentice becomes a productive employee. At the same time, the wages paid to apprentices serve as a substantial disincentive to pursue this form of skills development, particularly at times of severe skills shortages when higher wages are on offer elsewhere.

The AWPA should consider the key messages from the National Centre of Vocational Education and Research (NCVER) report Cost of Training Apprentices to develop a systematic approach to the factors which significantly impact on employers initially engaging and then retaining Australian Apprentices particularly during difficult financial times. The key messages from the report are:

- the apprenticeship model involves a substantial financial commitment from employers. The numbers currently involved in training apprentices attests to apprentices’ value to employers.
- the highest costs to employers are for supervision, as apprentice wages are more or less equal to their productivity.
- the effect of government incentives on employers’ decisions to train apprentices is minimal, as they do not represent a significant discount to employers.
- apprentices also incur costs, based on the loss of potential wages (opportunity cost). The opportunity cost is very sensitive to the alternative wage available to the apprentice, and
- apprenticeships are more attractive to young people (because of lower opportunity costs) and will be unattractive to older people, unless the premium paid to qualified trades people is substantial.

9. Which existing training courses, across higher education and VET, are successful in creating ‘T-shaped’ graduates with both technical and ‘soft skills’?

1 NCVER report: Cost of Training Apprentices, 2009, pg3
The VET system and associated regulatory and funding framework should ensure that RTOs are focussed on delivering training to students which is supported by:

- access to high quality training and learning materials
- appropriate learning infrastructure, and
- highly skilled trainers and assessors that have industry currency and are committed to professional development.

10. **How important is skilled migration to meeting the needs of the ICT sector?**

ACPET is not in a position to comment as this activity is outside of our scope.

11. **How can ICT businesses draw on the mature aged workforce to support new and emerging skills demands?**

ACPET promotes social inclusion and diversity among its members and are encouraged to incorporate socially inclusive practices into each stage of their business. ACPET providers have a record of developing programs that do not exclude or unfairly disadvantage potential learners, and a number of providers cater especially for groups with different needs. The higher costs of special attention for some to achieve skills outcomes, need to be recognised in student and provider funding arrangements. This is vital for less-advantaged individuals venturing into training pathways. The challenge is to achieve quality meaningful outcomes for all.

12. **What methods can be utilised to improve participation in the ICT workforce from women, Indigenous Australians, people with disabilities and retirees? What support is required to enable the increased participation of these groups in the ICT workforce?**

ACPET recognises the Australian Government wants to advance learning and work pathways for all citizens, including less advantaged groups, Indigenous Australians, and young people unemployed or not engaged in study to assist life-long work and income. In addition to difficulties for individuals, the economy faces higher support costs and lost productivity.

The higher costs of special attention for some to achieve skills outcomes need to be recognised in student and provider funding arrangements. Funding models need to take into consideration the cost of the provision of “soft skills” and “support” to students who experience difficulties in the learning process or who come from disadvantaged backgrounds. Whilst this would be a challenge to administer it could provide real benefits in ensuring that students that received additional support “got the support”.

13. **By what mechanisms can government and industry and professional associations encourage and support SMEs to engage with skills development?**
The strength of employment-based training, in pedagogical terms, lies in the provision of experiential learning in workplaces that complements experiences in educational institutions. The five main elements which make this an effective approach to developing vocational competence are experiences of the vocational practice, the duration of the learning contract, expert support, the link to formal education, and assessment and certification.

As stated in the report *Effective Models of Employment-based Training*[^2], although Australian Apprenticeships continue to make a significant contribution to the Australian workforce, the full potential of the model is limited by persistent issues such as:

‘Inconsistent regulatory arrangements, non-compliance by employers and registered training organisations, poor audit processes, variations in the interpretation and practice of competency-based training, and wages and awards’.

Success could be achieved through a compendium of models to be used for ICT Australian Apprenticeships and other employment-based training rather than the one size fits all approach.

14. What strategies can be employed to encourage employers to invest in upskilling and lifelong learning for their workforce? How can industry and training providers collaborate to provide these opportunities?

ACPET believes that work/professional integrated learning associated with higher level qualifications may be one up-skilling option. The use of employment-based models in enhancing quality learning for higher-level qualifications is considered a more convenient alternative to traditional institute-based learning.

15. What can be done to address the ICT industry’s concerns regarding the retention of skilled workers?

ACPET is not in a position to comment as this activity is outside of our scope.

16. What are the implications for the Australian ICT sector and workforce of the increasing globalisation of both the ICT sector and the ICT workforce?

ACPET is not in a position to comment as this activity is outside of our scope.

17. How can government, industry, and the training sector work together to ensure that the Australian ICT workforce is able to adopt and contribute to new technology across all industry sectors?

Supporting enterprise to invest in knowledge and skill development of their existing and future workforce will increase national capability and productivity across all industry sectors.

For one thing, less promotion and more guidance would be helpful. For instance, a lot of money has been spent on advertising the NBN but there is extremely little that concretely educates people about how they can use it, and how to use it.

Also, not mentioned in the study is the capacity of the private VET and higher education to respond to industry’s needs and to draw on its close connections with industry. The evolution of the private higher education sector is particularly favourable to this; with future possible scenarios of organisations developing HE/VET branches which provide a direct source of employment (See also Ernst and Young University of the Future report) and which specialise in particular areas of study, as has already been the case overseas, such as in Chengdu (refer Question 3). This could provide a very specific source of expertise and employment, and importantly, be immediately responsive to industry’s needs because it is already effectively embedded in industry.