ICT Industry Training Profile Update

Current Key Skill Shortages

As in previous years, suitably skilled and qualified ICT professionals are in demand across all sectors of the economy in Australia and around the world.

Industry has identified key skills shortages to be:

- Support (Help Desk);
- Programming;
- Testing;
- IP Networking;
- Network Security;
- Customer access networks ;
- Communications equipment, installation and maintenance;
- Communications cabling;
- Communications linespersons;
- Testing and fault finding techniques;
- Compliance familiarisation;
- Project management skills;
- Language and communication skills;
- Customer service skills;
- Customisation systems integration.

Industry Developments and Issues

The following issues have been highlighted by industry:

- **Workforce Development Planning**

  There is an overriding need for workforce development planning in the ICT industry due to fast evolving and rapidly emerging technologies. A workforce development plan that aligns the needs of ICT businesses with those of its workforce should also address the challenges arising from globalisation and Australia's population demographics, accommodating a diverse and mobile workforce, an aging workforce and social change.

  It would be of huge benefit to develop a more precise understanding and regular measures of the size and impact of the ICT sector in WA, skills supply chains and trends in the marketplace.

  The provision of consistent and accurate quantifiable labour market data for the ICT industry is paramount, from which further steps can be taken towards identifying areas of skill shortages.

  Objectively collected, relevant data does not appear to be available and that which is available does not accurately reflect what is happening in the industry, revealing inconsistencies between anecdotal advice and multiple economic analyses. This impacts upon accessing funding for areas of training need.

In addition:

- the ageing of the workforce in the ICT sector continues to be an issue, compounded by the lack of younger people and women entering the sector. This is an issue which must be quantified and further addressed, as does the issue of succession planning.
- There is also a lack of research into the identification of training and employment opportunities for Indigenous people in ICT.
- Strategies need to be developed to better inform Career advisors on the variety of work opportunities in the ICT industry and the realistic employment opportunities that are available to students post study.

- **Re-skilling and Up-skilling Existing Workforce**

  - The return of labour from the mining industry in respect of electricians and IT workers is creating a likely area of need for re-training.
  - ICT-related occupations are continually emerging, evolving, and merging across occupational industry boundaries to reshape the requirements for employment and possible career pathways.
  - There needs to be focus not just on technical (hard) skills but also on soft skills such as communication, customer service etc).

- **Industrial Relations - Award Modernisation Process**

  The Award Modernisation Process will see numerous Federal and State Awards simplified and reduced in number, as well as an award covering Information and Communications Technology. Modern awards will replace every current award covered by the federal industrial relations system.

  If a new modern award will apply, (and a current workplace agreement doesn't override it), employers will need to provide their workers with the modern award's minimum wages and conditions, as well as the National Employment Standards, after 1 January 2010.

- **Infrastructure Development**

  The development of the national broadband network (NBN) may create auxiliary skills shortages in the sector, in areas such as Communications Cabling. At this stage the tender has gone out for companies to provide backhaul for certain regions around the nation, including Geraldton in WA. There is an abundance of contractors applying to work on this stage coming out of the mining industry.

  The next stage after the backhaul infrastructure is set up will require an increase in the size of the workforce for the project. Industry is confident that the ICT09 Telecommunications Training Package will address the training needs for this project.

The NBN will open doors for a wide uptake of video conferencing, wireless technologies, Skype, VoIP and e-health, particularly in the instance that we remain in a period of financial uncertainty and following the Global Economic Crisis. It will also have a significant effect in the government sector.

The Square Kilometre Array is a potential ICT industry infrastructure development in WA for the near future.

- **Updates to Existing Qualifications**

  The Open Cabling Registration Course should more accurately reflect current industry needs. This and other Telecommunications competencies and qualifications are being addressed in the national refresh of the ICT02 Telecommunications Training Package currently underway, which will hopefully see a technologically relevant, endorsed Training Package by early 2010.

  Industry recommends that the ICA05 Information Communications Technology Training Package needs to be reviewed in the near future.

- **ICT Industry Image**

  There is a need to improve the image of ICT as a profession by marketing the industry to schools and parents, and presenting industry support and the legitimacy of career pathways in ICT.

  Without defined and consistent boundaries outlining what falls within the ICT Industry, it is difficult for industry to present a unified approach to promoting a positive industry image. It also makes data collection difficult, as previously mentioned.

  Differentiation needs to be highlighted to students between “IT Literacy” and “IT Careers”. This will help augment the industry in students mind as having legitimate career pathways.

Item 3: Industry Identified Priorities

The following are the recommended training priorities:

- **Competencies in Technology**

  Common competencies need to be identified across the Training Packages (ICT, Telecommunications, Screen and Media, and Printing and Graphic Arts) to promote retention and pathways into further ICT-related careers.

  Technology across these areas may be converging however the industries are fragmented and it is not always evident to students which pathways their careers can take.

- **Focus on fundamental knowledge**

  Fundamental knowledge components need to be introduced into the Telecommunications Training Package at the Cert II and Cert III levels, including basic electronics, IT literacy, basic maths and science, electrical principles, radio fundamentals, civil and construction skills.

- **Occupational Health, Safety and Environment**

  There is a need to focus training on the importance of OHS&E and sustainable practices across the industry. As is the case across many industries, the need for realistic training specific to environmental sustainability and climate change has become fundamental.

- **Career and Training Promotion**

  The importance of identifying clear training pathways and professional career opportunities in ICT is recognised by industry, and has been acted upon by associations such as the Australian Computer Society, who have developed an ICT Careers Portal. Careers in the industry need to be positively promoted to schools, students, teachers, career guidance councillors, VET coordinators and parents to increase industry awareness and ultimately achieve school, industry, RTO, student and traineeships.

  Strategies to address this issue would include: better informing Career Advisors on the variety of work opportunities in the industry; ensuring that career advice is appropriate, and that it accurately reflects available employment opportunities; and continual collaboration between the education and training sector and the ICT industry should take place regarding the appropriate number of skilled people being trained in ICT.

- **Telecommunications Training Package Delivery**

  There is still the need to increase further the number of RTOs with a scope of delivery that includes qualifications from the Telecommunications Training Package, particularly with the advent of the National Broadband Network rollout.

- **Future Growth Areas**

  Review future growth areas, such as remote mobile computing, wireless technologies, the need for supported improved services to community, data centre consolidation and information security, storage and back up of information, Green IT and sustainability. In addition, students entering the ICT Industry should have an awareness of RFID and Electro-technology.