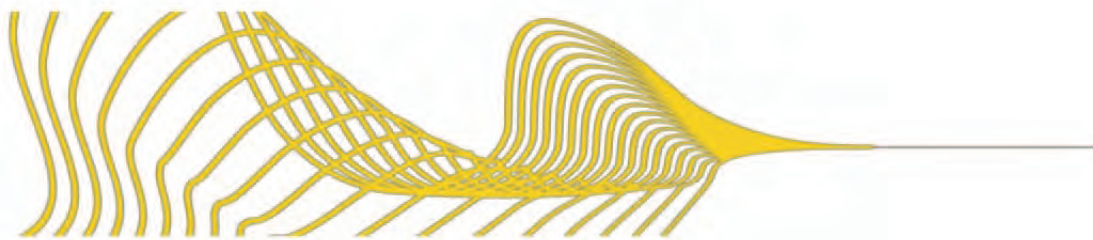


Environment Scan – 2011



Skilling diverse workforces

Innovation, leadership and beyond



Acknowledgments

IBSA's Environment Scan 2011 has been produced with funding assistance provided by the Australian Government through the Department of Education, Employment and Workplace Relations (DEEWR).

About this report

This environment scan (Escan) provides Innovation and Business Skills Australia (IBSA) with an opportunity to combine direct industry intelligence with statistical data on training and workforce participation. Through this process, skill needs and workforce development priorities are identified for Australia's innovation and business industries. The information is used by IBSA to advise government on refinements to training packages to meet the needs of industry and identify investment priorities for Australia's VET system.

This is the fourth year in which DEEWR has required Industry Skills Councils (ISCs) to prepare an Escan. The Escan aims to give readers an understanding of the factors currently shaping and impacting on the IBSA industries and their workforce development. IBSA's industry coverage comprises enabling skills and functions that are relevant across a wide range of industries. The Escan is consequently an important contribution to thinking on skills and workforce development across-the-board and will be of interest to many readers within government and industry.

The development of the Escan has drawn on a range of sources including industry, enterprise and Government research, recent publications and websites, and most importantly on IBSA's ongoing engagement with employers, workers and industry representatives. DEEWR is specifically interested in the accurate targeting of Industry Skills Councils' efforts in developing and maintaining Training Packages. A summary of IBSA's Training Package activity February 2010 to January 2011 is provided in Appendix A.

This Escan was compiled between October and December 2010 and is a product of the available information and prevailing environment of that period. The methodology used for the Escan is described in Appendix B.

Disclaimer

IBSA has produced this Environment Scan as a resource for its stakeholders without any form of assurance. While IBSA tries to provide high quality content, it does not guarantee the accuracy of this information and therefore will not be liable in any capacity for damages or losses to the user that may result from the use of this information.

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From the chair



As IBSA's fourth environment scan (Escan) is released I have the opportunity not only to thank most warmly our industry stakeholders who contributed to consultations and validation forums, but also to comment on the scope and depth of information provided in IBSA's 2011 Escan.

The wider environment in which this Escan is being released has shifted from 'the year after the financial downturn' to one where businesses and services are again expecting or experiencing skills needs.

The 2011 Escan has given IBSA an opportunity to provide up-to-the-minute intelligence on local and global factors affecting productivity in the six industries for which IBSA is responsible. The Escan identifies workforce skills needs that apply broadly across many industries and sectors, as well as the industry specific skills and occupations that are in demand.

Each of IBSA's six industries has specific skilling challenges that are reported throughout this Escan. IBSA's strategic approach to workforce development, including maintaining contemporary resources and training products, will assist in addressing these.

The consultations undertaken by IBSA in developing this Escan highlighted a number of key areas that businesses and services across the Australian landscape are monitoring – firstly, business and environmental sustainability with their increasing importance in shaping our future industries. Secondly, technology and digital literacy skills required to harness the benefits of access to highspeed broadband services. Thirdly, supporting the build of the VET workforce to deliver the vocational skills needed in the second decade of this century and finally the facilitation of improved VET and higher education pathways to support the education and skills of current and future working Australians.

These are immediate imperatives for IBSA in supporting our industries to innovatively address their productivity and workforce development needs.

John Vines OAM
Chair, IBSA Board

Chapter 1 – Overview

Training Packages and the national VET system remain crucial to the ongoing development and productivity of the Australian workforce. The continuing rise of the digital economy – spurred on by general access to a high speed broadband through the National Broadband Network (NBN) rollout – will intensify the interconnectedness of all industries within IBSA's scope and highlight the need for the closer integration of ICT, business and creativity and design capabilities.

Key messages

Over 2009-10 IBSA has undertaken applied research in a number of areas that continue to be of significant interest to the specific industries for which IBSA has responsibility, and that are applicable to all Australian industries. Examples of the research are the report into broader skilling impacts of the NBN – *Impact of the digital economy and NBN on Skills*; outworking of the Karpin Report, *Karpin report revisited*, which considers progress of Australian industry with management and leadership practices; *Australian Cultural Imprints at Work* that considers the effect of workplace and business cultures on skills, workforce and business outcomes. IBSA also anticipates work following the review by the Productivity Commission into the VET sector workforce.

In establishing the industry consultation framework for this Escan, IBSA was conscious of the discussion being lead by Skills Australia, considering skilling issues of enduring or emerging importance to Australian industry; these are reflected in its October 2010 paper, *Creating future directions for Australian VET*. That paper looks at how the vocational education and training system might meet the objectives of increasing Australia's workforce skills along with business productivity and achieving higher levels of workforce participation.

Following the initial laying of the 'pipe' and build of the physical network through which the highspeed broadband capacity will be delivered to business and homes, the key skills will be in network engineering and architecture from which business and information systems will be established. The significance of the business opportunities arising from general access to high speed broadband and a sharper focus on the digital economy are still being conceptualised but are emerging as significant in two areas:

- technology development, management and maintenance of systems, and
- business skills arising from new business opportunities and methods.

Sustainability, both business and environmental, along with increased business sensitivity to the economy emerge as prevailing issues. Skilling specifics include a strong emphasis on digital readiness consistent with new business opportunities from access to high speed broadband

This Escan reports that there is a key challenge for Australia's VET sector to respond nimbly to the shifting skills needs of Australia's economy, businesses and workforce. Also reported is that variations in programs and administrative arrangements at the jurisdictional level, while continuing to provide region specific skilling initiatives, also challenge the engagement of major enterprises in national skilling programs.

Appendix D of this report provides case studies that are 'live' examples of businesses, large and small, achieving the benefits of deliberately engaging in workforce planning and development in order to deal with productivity challenges.

Delivering valued, high quality training products to industry users of the national VET system remains a priority for IBSA; particularly through the twelve training packages for which it has responsibility. Chapter 5 highlights priorities that can be considered by government and industry stakeholders as well as offering a focus for training providers in specific areas.

Appendix A highlights the extensive work achieved by IBSA, in partnership with industry stakeholders, in realigning key training packages with contemporary skills needs. IBSA is increasingly confident that the balance of industry input into training package development and timeliness in delivering fresh and contemporary training products, consistent with industry skilling requirements, is being achieved.

The Occupations and Qualifications in Demand list located in Appendix C translates the industry commentary gathered as part of IBSA's ongoing engagement processes, as well as the Escan specific consultations undertaken throughout 2010, into the occupations in which businesses have increased demand. This list is organised on the basis of the IBSA industries and their training packages.

While there are strong elements of consistency with advice on industry skilling priorities reported in IBSA's previous Escans, 2011 suggests the important areas are business sustainability, particularly through supporting development of leadership, innovation and risk management skills along with learning cultures; digital and new technology skills; and flexibility in the national VET system to respond to industry skilling needs as they emerge.

Chapter 2 – Industry Intelligence

The global economy remains a key factor impacting on workforce planning and decision-making in all industries. The continued rise of the digital economy and increasing demand from employers for digital foundation skills are another significant macro factor influencing business and workforce planning decisions across the board. Impacting to varying degrees on all industries within IBSA's scope are moves toward environmental sustainability and predictions for a tightening labour market accompanied by demand for skills.

Increased economic awareness

While most commentators agree¹ that Australia has survived the global financial downturn relatively unscathed, the business community has entered a new era of watchfulness resulting from an increased appreciation of the fragility and interconnectedness of global markets.

The industries within IBSA's scope are integrated into all parts of the Australian economy making them vulnerable to market forces, but also insulated from them. Individual workers with financial, business, creative or ICT skills can move across industries as skill demand within particular sectors shifts.

During 2010 Australian GDP growth out-performed earlier predictions, achieving a rate of around 3.0 percent, and forecasters agree that growth will further increase, to around 3.5 percent in 2011.² Business confidence stabilised during 2010³ and a surge in national income, driven largely by the mining sector, has Australia poised for an investment boom.⁴ Investment plans in the mining industry are at record levels but significant investment is also expected in technology infrastructure and ICT projects.⁵

Renewed business confidence has influenced hiring strategies with permanent hires increasingly preferred⁶ and a noticeable shift toward fulltime positions.⁷ The unemployment rate surpassed economists' expectations by peaking earlier and lower than anticipated, at 5.8 percent in mid-2009. The rate steadily declined throughout 2010 to just over 5 percent in September 2010.⁸ Workforce participation increased throughout 2010 and the labour market is expected to become even tighter in 2011 with analysts predicting a return to pre-2008 skill shortage woes in some industries.

The Australian dollar reached parity with the US dollar in October 2010 and has continued to trade in record-high ranges against international currencies. Some businesses within IBSA's industries benefit from reduced input costs due to the decreased cost of imports. However, many others are adversely affected due to the reduced competitiveness of Australian exports and increased competition from cheaper imports.

1 NAB Monthly Business Survey September 2010, IMF World Economic Outlook October 2010, ANZ Research Quarterly October 2010.

2 International Monetary Fund, World Economic Outlook, October 2010.

3 National Australia Bank, Monthly Business Survey, September 2010.

4 ANZ Research Quarterly, October 2010.

5 Advantage Job Index, Australian Market Report, September 2010.

6 Advantage Job Index, Australian Market Report, September 2010.

7 Australian Bureau of Statistics, Labour Force Australia, September 2010.

8 Trading Economics, Australia Unemployment Rate, September 2010, www.tradingeconomics.com.

Impacts on IBSA industries

Many **businesses** recognise that one of the main causes of revenue loss was a focus on short term revenue generation. There is now a move to more sustainable, long term approaches to profitability and value creation. **Finance functions** will play a critical role in promoting this more balanced approach to risk and reward.

IT employers report one of the strongest levels of economic confidence nationally with 42 percent planning to increase their permanent staff levels in the short term. Major technology projects are underway in both government and commercial sectors. It appears that projects put on hold during the global downturn are now being restarted or ramped up.⁹

Printing companies reported a 'staggering drop in work' in 2008–09 with a decline of up to 25 percent.¹⁰ While there has been improvement during 2010, particularly in the digital segment, the recovery has been described by industry experts as 'soft' and 'patchy'.¹¹

Arts and entertainment industries experienced subdued growth in audience numbers and reduced government and business support during the global downturn. However, some sectors are performing strongly, eg mainstream musical and theatre production is described as being 'in a growth phase of its lifecycle'.

Education providers in the tertiary sector experienced a significant reduction in international student enrolments during 2010 – with commencements declining by 8.6 percent in the VET sector.¹² While largely a result of changes to Australian immigration regulation, the strong Australian dollar has also adversely affected the international competitiveness of Australian education offerings.

Continuing rise of the digital economy

Ongoing developments in digital infrastructure, products and services are providing a platform for continuing development of the digital economy in Australia. As many commentators predict, the digital economy continues to change the business we do and the way we do it.

The industries in which the digital economy is likely to expand most rapidly, through business and service takeup of the capacity offered by the high speed broadband network, are e-health, education services, e-finance and business services, logistics and transport and media and entertainment.

The challenge for both the VET system and business users will be to understand and pitch skills acquisition accurately to meet the needs of businesses, services and individuals. The demand for digital literacy is expected to shadow business engagement with high speed broadband and related user skills development.

9 The Hudson Report, Employment and HR Trends, July–September 2010.

10 Proprint survey reference from sector report.

11 Printing Industries Association of Australia (September 2010), 'Official Data Confirms June Quarter Softness', press release, www.printnet.com.au, accessed 7 September 2010.

12 Department of Education, Employment and Workplace Relations 2010, Monthly Summary of International Student Enrolment Data: Australia YTD July 2010, Australia

The increased bandwidth offered by the NBN will underpin new approaches to work and to community and social interaction. Changes that have been felt throughout society since the emergence of the internet will continue to have influence. All businesses will be impacted to some degree by:

- increasingly informed and demanding consumers with expectations of online service availability and access to products and services in a global marketplace
- increasingly mobile and dispersed workforce with expectations of flexible, technology-enabled working arrangements
- availability of cloud computing services providing on-demand access to applications with vendor support and reduced need for inhouse specialist IT services
- information security threats reinforcing the need to protect digital content and intellectual property
- ongoing need to upgrade workforce skills in line with the introduction of new technologies, eg skills in content and records management, copyright and intellectual property protection, and
- the need for innovation and leadership to capitalise on opportunities arising from the availability of new technologies and new organisation and business models.

Impacts on IBSA industries

The NBN will trigger innovations in the ways businesses operate by making teleworking, outsourcing and online services easier to access. A range of new **Business Services** offerings will emerge in the online environment, eg epayment gateways.¹³

The Library **workforce** is changing with a steady move away from clerical staff involved in filing and sorting information. Trends toward automation of services and collection management will continue and the range and sophistication of knowledge services provided to online users will continue to increase. With shifts to online usage, **Museums, Libraries** and **Information Services** will grapple with the definition of a 'visitor' as an indicator of activity.

The significance of the internet is increasing for engaging participants and attracting new audiences in the **Arts**, eg promotion, bookings, reviews, research, audience participation and feedback.¹⁴ Two thirds of artists use the internet to research creative practice in their field and almost one third promote their work using the internet, while 60 percent of artists believe that new technologies are likely to improve their income.¹⁵

The **Printing and Graphic Arts** industry is being significantly impacted on by the increasing use of online services by business and the community for access to and distribution of information. There is now reducing dependence on traditional methods of ink on paper – newspapers, magazines, sales catalogues, billing statements, etc.

The majority of **Printing** companies see growth potential in digital printing with many adding digital to their service offerings in the last 12 months.¹⁶ While offset technology still dominates, the digital share of the market will continue to increase as output quality improves, operation costs drop and market awareness grows. Additionally, changes in the industry triggered by the adoption of digital technologies may result in increasing its attractiveness to new and younger workforce entrants.

Convergence between the **Telecommunications, Entertainment** and **IT industries** has enabled new product development, particularly smart phone products. However, employment in clearly defined sectors, such as **Satellite, Television and Radio Relay Operations** is expected to decline as a result of sector convergence.¹⁷

Training and Education providers will need to make effective use of technology and elearning to maintain and attract both clients and skilled staff. Although the impact of the NBN is likely to be both rapid and profound it is not yet gaining substantial VET policy or provider interest at management level.¹⁸

13 IBSA Research Report – Telecommunications Industry, December 2009.

14 Australia Council, More than Bums on Seats: Australian Participation in the Arts, 2010.

15 Australia Council, Artist Careers, 2010.

16 Ref Proprint survey from sector report.

17 IBIS World Industry Report, Satellite, Television and Radio Relay Operations in Australia, February 2010,

18 TAFE Directors Australia, Victorian TAFE Association and TAFE Development Centre, August 2010, Joint TAFE Associations' Submission to the Productivity Commission study into the VET Workforce, Australia.

Demand for digital foundation skills

Employers are becoming increasingly aware of the impact of language, literacy and numeracy issues in the workplace and on productivity.¹⁹ Industry consultation on the issue generally reveals a collective sense among employers that the education system has not adequately delivered the broad foundation skills required by employers and workforce participants.²⁰

Employers and industry sectors that have not been troubled by low levels of foundation skills in the past are concerned that competition associated with a tightening labour market may reduce the caliber of new industry entrants.

Digital literacy was also raised during IBSA Escan consultations as being of particular importance in the current industry environment. The ability to use technology effectively for communication and other work processes is now regarded as basic underpinning skills, but for many existing workers these skills are acquired in a haphazard manner often relying on their level of interaction with technology outside of work.

While digital technologies are often perceived as simplifying and automating work functions, some workers who have, for many years, performed effectively in the workplace with limited literacy skills can be significantly challenged by the introduction of new 'technology-enhanced' systems.²¹

Impacts on IBSA industries

Training and Education providers will be increasingly expected to accommodate learner requirements for digital and foundation skills as part of vocational preparation.

In shifting to digital technologies **Printing and Graphic Arts** industry employers are likely to expose deficiencies in the digital foundation skills of existing, particularly mature, workers.

Moves toward environmental sustainability

In the eyes of many employers environmental sustainability is closely linked to business sustainability.²² Reducing waste and energy consumption and safeguarding the future supply of business inputs is recognised as good business practice. However, the current uncertain regulatory and legislative environment is unsettling for many businesses. There are ongoing concerns about potential cost increases and lack of clarity around performance measures.

For businesses with their eyes on the bottom line, environmental sustainability will not be fully addressed until it is clearly legislated – much like Occupational Health and Safety in earlier decades. The introduction of measurable asset value through carbon accounting and water licences will enable businesses to address environmentally sustainable practices in a more focussed way and encourage them to develop the skills to monitor, manage and improve these practices.

19 Australian Industry Group, May 2010, National Workforce Literacy Project: Employer views on workplace literacy and numeracy skills, their impact on business and the most effective measures for improving skills, Australia.

20 IBSA consultation, August/September 2010.

21 Educational Testing Service, Digital Transformation: A Framework for ICT Literacy, A Report of the International ICT Literacy Panel, USA, 2002.

22 Ref to views expressed at IBSA consultation forums.

Impacts on IBSA industries

Communications networks are playing an increasing role in managing overall power load and usage. Wider deployment of technologies such as smart metering applications and smart grid systems will demand new skills in network design. The **Business** community will also require skills in using the systems to monitor and manage energy usage.

Artists and Arts organisations often regard environmental sustainability as an ethical issue and are keen to identify and implement good environmental practices. There are trends toward zero waste management practices at festivals and performing arts venues, and electronic forms of marketing and information dissemination.

The **Printing** industry is progressively rolling out an industry certification program, Sustainable Green Print, assisting businesses to introduce environmentally sustainable practices.

The **Paper Bag and Sack** sector of the **Printing** industry has benefited from government and consumer pressure to reduce plastic bag use, although it is facing competition from textile bags.

Predictions for a tightening labour market

As is the case in all other advanced economies, the Australian workforce is ageing. The ageing of Australia's population is expected to continue – the result of low levels of fertility combined with increasing life expectancy and shifts in the level and composition of migration²³.

Across the IBSA industries, the age profiles of individual sectors and occupations varies significantly with some occupations traditionally the domain of older, more experienced workers eg merchant banking, and other occupations more commonly filled by younger workers eg share trading. Workforce ageing is being felt most severely in sectors that have been through a period of time where new entrants to the workforce were limited. This has occurred for a variety of reasons including reduced employer demand eg school education sector, reduced employment based training opportunities eg Telecommunications, and limited opportunities or attractiveness of the industry eg the Printing industry. Recruitment in a number of these sectors has since recovered but the industry is left with an age profile that is now skewed toward older employees.

Labour market pressures vary across regions with a shortfall in labour supply currently most acute in Western Australia. The state is experiencing low rates of unemployment, high rates of labour participation, strong employment growth, emerging wage pressures and a multiplicity of major projects coming on stream. A major shortfall in labour supply is predicted in the medium term.²⁴

Over recent years the skilled migration program and overseas student program were seen by successive governments as instrumental in contributing to Australian economic growth, particularly in the context of skills shortages, an ageing population and global competition for talent.²⁵ Skills Australia has emphasised the ongoing importance of skilled migration in contributing to overall skills needs.

23 Australian Bureau of Statistics, Predictions of population, 2008.

24 Department of Training and Workforce Development, September 2010, Where the jobs are in Western Australia, Western Australia.

25 Koleth, E, Overseas students: immigration policy changes 1997 – May 2010, Parliamentary Library, 2010.

Among IBSA industries, the ICT industry has been the largest employer of skilled migrants. However, adjustments to skilled migration will affect employers across many industries. The effect of these ongoing adjustments has yet to be fully analysed, but some employer groups²⁶ predict they will contribute to skill shortages by restricting access to skilled workers.

Changes to migration programs also have major implications for Australia's international education market and these are already being felt in declining international student enrolments throughout 2010.²⁷

Impacts on IBSA industries

The **ICT workforce** is male dominated and overwhelmingly full-time (between 70 and 95 percent). There is scope for the industry to meet future workforce requirements by tapping into female workers and reviewing workforce practices to increase part time work opportunities.²⁸

Business Administration Managers and **Accountants** have been identified by Australian CEOs as skilled vacancies that employers are struggling to fill.²⁹

The **Training and Education workforce**, with a median age of 45 years, is considerably older than the Australian workforce as a whole (median age 39 years). Managing the anticipated retirement of a significant proportion of the workforce will be a major challenge for the industry, and in particular for public training institutions.³⁰

Prior to the economic downturn, **Financial Services** organisations had been targeting mature age recruits from outside the sector to address projected skills shortages – workers aged 55-64 years increased by 164 percent in the 10 years to 2009.³¹ The resumption of this strategy is likely as the economy recovers, which will serve to increase labour market pressures on other industries.

26 Australian Industry Group and Australian Chamber of Commerce and Industry, Changes to skilled migration program a 'threat to recovery', The Australian, 9 February 2010.

27 Department of Education, Employment and Workplace Relations 2010, Monthly Summary of International Student Enrolment Data: Australia YTD July 2010, Australia.

28 Environment Scan 2011, Information and Communications technologies & Telecommunications Industries, Chapter 3, Draft November 2010.

29 Australian Industry Group, 9 July 2010 Media Release.

30 Ibid.

31 IBSA Sydney Consultation Forum, August 2010.

Micro factors

Macro issues and emerging trends have an impact on all industries, although their effect can be felt differently in different industries, sectors and organisations. Highlights of significant micro factors that are impacting on the industries within IBSA's scope follow.

Business Services

- Increasing trends towards outsourcing and franchising contributing to growth in the number of SMEs.

Cultural and Creative Industries

- Competition for discretionary spending from sections of the sport/leisure industry
- Fluctuations in disposable income and travel/tourism patterns
- Globalisation, copyright and IP protection for content producers, and
- Declining revenue from advertising and from Government funding.

Financial Services

- Changing regulatory requirements, and likely future changes, eg recommendations from the Super System Review Final Report³² and establishment of the Tax Practitioners' Board.
- Changes to visa arrangements for international students holding Australian degrees may reduce the numbers of graduates available to satisfy employer demand.

Information and Communication Technologies and Telecommunications

- Short skill life span due to rapid changes in technology
- Business sustainability in the face of IT, telecommunications and utilities industry convergence
- Increasing reliance of all industries on ICT to deliver sophisticated, integrated technology and systems solutions for complex problems, and
- National Broadband Network (NBN) rollout and accompanying demand for telecommunications skills in supply, demand and innovation segments of the market and e-business skills in all industries.

Printing and Graphic Arts

- Declining market for some printing and publishing sectors, eg newspaper and advertising printing
- Competition from overseas suppliers in the packaging, book printing and ink manufacture sectors
- Opportunities within the converging digital industry – but these are not yet well understood by potential workforce entrants, and
- Limited post entry training culture.

Training and Education

- Impact of skilled migration reforms on international education market

³² Australian Government, Super System Review Final Report, 2010.

- Changing regulatory requirements and quality assurance arrangements
- Increasing expectations from government and employers for services beyond training, eg workforce planning, and
- Additional demand for capability to support workforce LLN and higher skills learning capabilities.

VET market factors

The challenges of skilling Australia's workforce have been largely unchanged for a decade. Skill needs, the ageing workforce, technological change and environmental sustainability are not new issues and the national VET system and its stakeholders have been grappling with them for some time. The continued improvement and maintenance of Training Packages is an important mechanism for addressing these challenges. However, there are features of the national VET system that present challenges of their own. Many of these have been identified in recent work by the Productivity Commission and by Skills Australia. Participants at IBSA Escan consultations also identified VET system obstacles to effective workforce development.

Specific VET system challenges include:

- Regulation of the VET system is seen to be onerous and while the intent of quality assurance processes is widely supported, too often compliance requirements place an unnecessary burden on training providers and their industry clients
- Full qualifications are not regarded by employers as the only answer to their workforce development needs. Often skill sets or individual units are preferred for their greater flexibility in meeting exact workplace requirements. This is especially important for SMEs and for upskilling existing and mature workers, and
- VET workforce capability is being questioned, particularly in relation to the currency of industry knowledge and skills.

Chapter 3 – Identified workforce development needs

Each of IBSA's six industries has specific workforce development needs that are reflected in the commentary and tables following. At the global level there are core needs that have wide application across these and other industries. There is cross industry applicability with the industries for which IBSA has responsibility incorporating a range of functional business skills that are used widely. These functional business skills include financial services and bookkeeping, leadership and supervision or frontline management, use and support of information and communications technologies, workplace training and assessment and project management, among others,

Both these global and industry specific needs are reflected in the Occupations in Demand listed in Appendix C. Where there is a direct and known link to an occupation that is made clear in this List; where skills needs cross occupations, such as leadership and supervision or support of ICT, a link is made to a relevant occupation but should be considered indicative. Some occupations in Appendix C are in 'bold' to indicate that they have been recently identified as in demand through IBSA's Escan 2011 consultations.

Business Services

Business Services is the largest industry in Australia, with total national income³³ of approximately \$100 billion. Business Services has been one of the fastest growing service industries in recent years, benefitting from long term trends toward the outsourcing of business functions throughout other industries, such as manufacturing.

The outsourcing of services such as accounting, marketing, customer response and contact and IT support has been aided by improvements in communications technology. Outsourcing has encouraged competition in the provision of business services, which in turn inspires uptake of the competitively priced services by a larger range of customers.³⁴ The employment outlook for Business Services occupations is fairly strong with solid job vacancies and increasing interest in hiring.³⁵ In particular, business coaching and relationship management, change management facilitators and disaster management functions are predicted to be in demand.³⁶

33 http://www.business.nsw.gov.au/industry/business_services.htm.

34 Bulletin, Structural Change in the Australian Economy, September quarter 2010.

35 <http://www.smartcompany.com.au/finance/20100726-frugal-consumers-tipped-to-stunt-australian-economy-over-next-12-months-as-wa-named-fastest-growing-state.html>.

36 IBSA Melbourne Consultation Forum, September 2010.

TABLE 1: BUSINESS SERVICES WORKFORCE DEVELOPMENT CHALLENGES

Workforce development challenge:	Impact on:	Critical future skills:
Maximising opportunities from government investment in skills development	Small and medium business operators	<ul style="list-style-type: none"> workforce planning and development
Meeting the needs of industry	Existing workers and new skilled employees	<ul style="list-style-type: none"> business coaching relationship management change management and facilitation disaster management risk management knowledge management innovation
New technologies and new models of operation	All businesses	<ul style="list-style-type: none"> business analysis managing outsourcing and franchising compliance community engagement partnership broking marketing
Business sustainability	Leaders and managers	<ul style="list-style-type: none"> leadership and management implementing and monitoring sustainable work practices social responsibility
Access to suitable applicants	Businesses Training providers LLN teachers	<ul style="list-style-type: none"> flexible recruitment skills LLN remediation

Cultural and Creative industries

Cultural and Creative industries are the lifeblood of a vibrant and inventive society. The arts are strongly supported by the Australian community with 48 percent of the population engaging 'creatively' in the arts through creative writing, music and other forms and 90 percent engaging 'receptively' as consumers.³⁷

Broad industry sectors within the Cultural and Creative industries are entertainment; screen and media; museums, libraries and information services; music; and creative arts (encompassing visual arts, crafts and design).

The Cultural and Creative industries are very diverse, incorporating both 'traditional' activities/organisations (libraries, museums) and new activities (multimedia). However, industry boundaries are blurring in this digital period, making many historically discrete sectors – and training for them – obsolete.

³⁷ Australia Council, More than Bums on Seats. Australian Participation in the Arts, 2010. www.australiacouncil.gov.au/participation. Accessed 15.7.10.

While the size of the workforce is difficult to assess using ABS and DEEWR data sources, IBISWorld Industry Reports suggest a workforce of around 107,000 in 2009–10. However, one third of artists put their artistic skills to use in other industries³⁸ eg visual artists working in web design, dancers working as fitness instructors.

While some sections of the Cultural and Creative industries are benefiting from the advancing digital economy, as reported in the previous chapter, declining employment has been forecast in radio, sound production and music retailing.

TABLE 2: CULTURAL & CREATIVE INDUSTRIES WORKFORCE DEVELOPMENT CHALLENGES

Workforce development challenge:	Impact on:	Critical future skills:
Developing business capability	All artists who earn all or part of their income from performance or creative activities, or working in arts-related environment	<ul style="list-style-type: none"> Wide range of skills related to running an arts business (micro, small, medium or large): arts specific business skills eg promotion, marketing, and small enterprise management. administrator/management skills specific to the arts environment
Sustainability	Arts administrators, venue operators, events managers, individual artists and designers	<ul style="list-style-type: none"> e-marketing and promotions communications and business practices waste and resource management technical skills relevant to specific art forms
Technology	All sectors of the industry	<ul style="list-style-type: none"> converging technologies largely using internet and digital skills intellectual property and copyright skills relevant to specific art forms or jobs
Building a learning culture	<p>Workforce with low skills and no/low formal qualifications (may include volunteers)</p> <p>Workforce needing administration or management skills</p>	<ul style="list-style-type: none"> support for formal skills recognition administration and running an arts business (see above)
Global economy and global mobility	All sectors reliant on government funding and/or exposed to global competition	<ul style="list-style-type: none"> intellectual property/licensing marketing commercialisation

Financial Services

The Financial Services industry is largely composed of finance and insurance businesses. Together finance and insurance contribute significantly to the Australian economy, generating

38 www.australiacouncil.gov.au/artistcareers.

\$81 billion annually and achieving an average annual growth rate of 4.8 percent between 1999 and 2009 – well above the all industries average. The strong expansion of the Financial Services industry over recent years has aided growth in related sectors such as communications, property and business services.

The importance of the industry is expected to increase, driven by growing household wealth and an ageing population using an increasing array of financial services and products. In the five years to June 2015, Financial Services revenue is expected to grow at an average rate of 5.3 percent to reach \$212.5 billion.³⁹

Currently the industry employs a workforce of more than 408,000 people – around 3.7 percent of the total Australian workforce. Employment has been volatile over the last 20 years reflecting the sensitivity of financial services to the macroeconomic environment, financial regulation, the global economic environment, industry policies and changes in technology. The Australian Government is forecasting employment growth of 8.4 percent for the five years to 2015.⁴⁰

From a supply perspective, government changes to visa requirements for international students holding accounting and financial services relevant degrees will make it more difficult for these graduates to obtain permanent residence and eventually enter the Australian workforce. These changes, which took effect from 01 July 2010, effectively oblige students to demonstrate higher levels of English language competence than was previously required.

TABLE 3: FINANCIAL SERVICES WORKFORCE DEVELOPMENT CHALLENGES

Workforce development challenge:	Impact on:	Critical future skills:
Maximising opportunities from government investment in skills development	Small and medium businesses	<ul style="list-style-type: none"> workforce planning workforce development leadership management
Meeting the needs of industry	Business	<ul style="list-style-type: none"> communication innovation management market and product development product and services pricing contract and other negotiations
Changing regulations and market operations	All businesses impacted by regulation – small, medium and large	<ul style="list-style-type: none"> monitoring, interpreting and implementing standards auditing compliance risk management financial planning taxation services
Capitalising on new technologies	New entrants and existing workers	<ul style="list-style-type: none"> specialised application developers outsourcing, franchising and contracting

39 IBISWorld Report Industry Report, Finance in Australia, March 2010.

40 DEEWR, Australian Jobs 2010.

Workforce development challenge:	Impact on:	Critical future skills:
Risk management	All businesses	<ul style="list-style-type: none"> • underwriting • analytical risk management • operational risk assessment management • strategic risk management
Business sustainability	New entrants and existing workers	<ul style="list-style-type: none"> • carbon trading pricing • implementing and monitoring standards • implementing and assessing sustainable work practices • identifying and implementing socially responsible work practices
Access to suitable applicants	HR practitioners Training providers Employers	<ul style="list-style-type: none"> • LLN remediation • alternate recruitment modelling • skills gap analysis

ICT including telecommunications

The influence of the Information and Communications Technologies and Telecommunications (ICT) industries on Australia’s economy and the global economy is now commonly agreed. ICT industry revenue for 2009–10 is estimated at \$82 billion. The industry employs a direct workforce of 283,000 with a further 260,000 ICT workers employed throughout other industries.⁴¹

The ICT industry is made up by five major sectors: IT services, systems integration and software support; Internet services and telecommunications; software and digital content development; wholesale and retail distribution of software and hardware; and manufacture of ICT products and components.

ICT industry employment growth has varied considerably by industry sector, with most growth over the long term taking place in those companies engaged in wholesale distribution of mostly imported hardware and software products. Continued growth is expected for the industry, particularly in the games and internet service providers sub-sectors. Convergence between the telecommunications, entertainment and IT industries has enabled new product development and stimulated the provision of new services.

Skills shortages have been specifically reported in IT systems architecture, information management strategy development, e-security and in the management of IT services.⁴²

Skilling in the telecommunications sector in the short term is substantially dependent on the style and nature of the NBN build and implementation. Immediate skills needs for the ‘roll past’ of the fibre, may be met through heightened government and industry recruitment and training, however the skills to effectively connect, support and integrate business and household

41 Australian Computer Society, CIER, Australian ICT Statistical Compendium, 2010.

42 IBSA, Scoping Review of the ICA05 Information and Communications Technology Training Package v3.0, December 2009.

functions, using the highspeed broadband capacity, remains a significant issue for the IT and telecommunication sectors.

TABLE 4: ICT AND TELECOMMUNICATIONS WORKFORCE DEVELOPMENT CHALLENGES

Workforce development challenges:	Impact on:	Critical future skills:
Meeting the needs of Australian employers	All industries and government	<ul style="list-style-type: none"> • business skills • business analysis • enterprise and solutions architecture • project management
Business sustainability	All industries	<ul style="list-style-type: none"> • innovation • green ICT for small business • ICT sustainability • systems security and data protection
National Broadband Network Rollout	Telecommunications workers	<ul style="list-style-type: none"> • trades (joiners, linesmen) • cablers (data and telecommunications) • applications developers • ICT in health management • ICT in supply chain management
Growth of digital economy	All industries and government	<ul style="list-style-type: none"> • systems analysis • computer and digital literacy • information security • database and systems administrators • software and applications programmers • multimedia specialists • web developers • graphic and web designers • illustrators • digital reception and network integration
Maximising opportunities from government investment in skills development	Small and medium businesses	<ul style="list-style-type: none"> • innovation • application developers • ICT micro-business management • management of virtual or outsourced ICT services

Printing and Graphic Arts

Australia's Printing and Graphic Arts industry provides critical services to businesses and organisations across all sectors of the nation's economy. It produces the printed material, such as newspapers, magazines, catalogues, books and packaging, which are the familiar items of everyday life with a relatively small workforce of between 100,000 and 120,000 people, mainly employed in small to medium businesses.

The industry comprises a number of distinct sectors: printing; newspaper printing or publishing; book and telephone directory publishing; graphic arts; corrugated paperboard; magazine

publishing; solid paperboard; services to printing; paper bag and sack; ink manufacturing; and mail houses.

The industry was severely impacted by the economic downturn as businesses cut back on advertising and reduced sales saw correspondingly reduced demand for packaging. There are now indications of a recovery, although demand has yet to reach pre-downturn levels and slower growth is predicted for the industry than for the economy as a whole.

The industry is responding to the reduced demand for traditional printing services by expanding into print management and customer relations and service.

TABLE 5: PRINTING AND GRAPHIC ARTS WORKFORCE DEVELOPMENT CHALLENGES

Workforce development challenge:	Impact on:	Critical future skills:
Environmental sustainability	All sectors in the industry	<ul style="list-style-type: none"> aligning with Industry certification skills updates through ICP10
Speed of technological change	All sectors in the industry	<ul style="list-style-type: none"> skilling/upskilling to new equipment and processes in digital printing advanced IT skills
Structural change in the industry	All sectors in the industry	<ul style="list-style-type: none"> full production and communication services capabilities in technical, business-related and customer service skills
Ageing workforce and industry appeal	All sectors in the industry, especially traditional production sectors	<ul style="list-style-type: none"> promoting digital technology attractiveness to new industry entrants
Post-entry training culture	All sectors in the industry	<ul style="list-style-type: none"> contemporary skilling in digital technology business-related and customer service skills
Global economy	All sectors in the industry	<ul style="list-style-type: none"> contemporary skilling in digital technology business-related and customer service skills
Language literacy and numeracy	All sectors in the industry	<ul style="list-style-type: none"> improving occupational health and safety systems digital literacy

Training and Education

The Training and Education industry is the fourth largest industry in Australia, employing 829,800 people, which is 7.6 percent of the total workforce.⁴³ In recent years it has been one of Australia's fastest growing export sectors, contributing \$18.6 billion in export income to the Australian economy in 2009.⁴⁴ However, this level of export activity has been curtailed in 2010

43 SkillsInfo, February 2010, Employment Outlook for Education and Training, Australia.

44 Australian Education International, May 2010, Research Snapshot: Export Income to Australia from Education Services in 2009, Australia.

as a result of changes in Australian immigration policy, negative perceptions of the quality of Australian education offerings and the safety of living in Australia for international students.

The industry can be divided into four broad sectors consisting of: preschool education; school education; tertiary education; and other education.

With its responsibility for skilling the current workforce and preparing future generations for work and community participation, the Training and Education industry is subject to intense public and political scrutiny and to frequent waves of policy change and review. Steady employment growth is predicted for all sectors of the industry, particularly in view of the imminent retirement of large numbers of the relatively older tertiary and school education workforces.

TABLE 6: TRAINING AND EDUCATION WORKFORCE DEVELOPMENT CHALLENGES

Workforce development challenge:	Impact on:	Critical future skills:
Meeting changing client needs and expectations for holistic workforce development	Managers, workforce planners, specialists and general VET practitioners	<ul style="list-style-type: none"> business analysis and development of business solutions customisation of training programs language, literacy and numeracy support and skill development specialist support for disadvantaged learners
Balancing, maintaining and building workforce skills	Managers, workforce planners and general VET practitioners	<ul style="list-style-type: none"> pedagogical skills appropriate to different disciplines and learner cohorts human resource management and planning
Effectively implementing new technologies	VET practitioners, managers and support staff	<ul style="list-style-type: none"> strategic leadership capability application of learning and assessment design principles to new technologies
Dealing with an ageing workforce and labour shortage	Managers and workforce planners	<ul style="list-style-type: none"> workforce management and planning
Overcoming minimalist approaches to workforce development planning	Managers and workforce planners	<ul style="list-style-type: none"> long-term strategic planning

Chapter 4 – Current impact of Training Packages

IBSA maintains and continuously improves eleven Training Packages on behalf of its industries. The publicly funded use of IBSA Training Packages captured in national data collections reflects only part of their uptake. Significant amounts of training occur outside of the publicly funded VET system.

Publicly funded delivery

NCVER data collections report on publicly funded VET activity and fee-for-service delivery by public and community providers. Fee-for-service delivery by private providers is not included, nor is in-house delivery by enterprise RTOs. Variations in administrative arrangements can also limit the capture of VET activity data. Public institutes are contractually bound to report all training activity via AVETMISS but private RTOs do not yet have the same contractual obligations.

In 2009 there were 304,700 students undertaking IBSA Training Packages, more than that for any other ISC and an increase of 2.9 percent over student numbers for 2008.⁴⁵ The Business Services Training Package is the most highly used of all national Training Packages and in 2009 participation increased to 145,400, representing 12.9 percent of all Training Package participation.⁴⁶ Of IBSA's Training Packages, the Training and Assessment; Visual Arts, Craft and Design; and Music Training Packages recorded the most significant increases in participation in 2009 with increases of 12–13 percent over 2008 participation.⁴⁷

TABLE 7: PUBLICLY FUNDED TRAINING EFFORT 2009, 'IN TRAINING'

Code	Training Package	Persons in training 2009	In training trend from 2008
BSB	Business Services	145,373	+7,332
CUE	Entertainment	3,364	+65
CUF	Screen and Media	8,260	+347
CUL	Museum and Library/Information Services	3,443	+156
CUS	Music	5,453	+584
CUV	Visual Arts, Craft and Design	12,739	+1,430
FNS	Financial Services	39,867	+3,857
ICA	Information and Communications Technology	47,225	-1,841
ICP	Printing and Graphic Arts	2,786	-32
ICT	Telecommunications	5,551	-6,972*
TAA	Training and Assessment	30,684	+3,612
Total activity		304,745	+8,538

Source: NCVER, VET Provider Collection, 2009.

* The decline in participation in the Telecommunications Training Package in 2009 is due to the relocation of Customer Contact qualifications to the Business Services Training Package. There were more than 6,000 students enrolled in BSB Customer Contact qualifications in 2009, increasing from 500 students in 2008. By the same token, student enrolments in ICT Customer Contact qualifications declined from 11,000 in 2008 to 4,000 in 2009.

45 NCVER, Pocket Guide: Australian Vocational Education and Training Statistics, 2010.

46 NCVER, Students and Courses: Australian Vocational Education and Training Statistics, 2009.

47 NCVER, VET Provider Collection, 2009

TABLE 8: PUBLICLY FUNDED TRAINING EFFORT, 2008 COMPLETIONS

Code	Training Package	2007	2008	% change
BSB	Business Services	42,807	46,859	9.5
CUE	Entertainment	310	310	0.0
CUF	Screen and Media	2,997	2,771	-7.5
CUL	Museum and Library/Information Services	993	820	-17.4
CUS	Music	1,715	1,677	-2.2
CUV	Visual Arts, Craft and Design	1,996	2,133	6.9
FNS	Financial Services	9,465	10,363	9.5
ICA	Information and Communications Technology	12,711	13,615	7.1
ICP	Printing and Graphic Arts	705	797	13.0
ICT	Telecommunications	3,202	4,134	29.1
TAA	Training and Assessment	13,167	14,010	6.4
Total activity		90,068	97,489	8.2

Source: NCVET, VET Provider Collection, 2009.

Privately funded Training Package use

The results reported by the Australian Council of Private Education and Training (ACPET) following a national survey of members in 2010 suggests that the use of Training Package qualifications and skill sets beyond that reported by NCVET may be significant. A particular emphasis in the reported results is the quantity of part qualification training delivered through fee-for-service purchasing.⁴⁸

Quantifying the extent of post-entry level training that takes place in any industry is extremely difficult. Surveys⁴⁹ conducted by IBSA have consistently revealed considerable organisational expenditure on in-house training solutions. However, the nature of these solutions is not clearly defined and may include training delivered by private RTOs, hardware and software training delivered by vendors, non-accredited training such as the Sustainable Green Print courses used in the Printing industry, as well as enterprise specific training. When government funding is not involved many employers are unclear about how or whether their workforce training relates to the national training system.

Employers understand that informal training has a significant place in the Australian workplace⁵⁰ but increasingly they are looking to training and education providers for holistic workforce development solutions.⁵¹ Skills Australia has identified an expanded role for VET providers, proposing a new mandate for VET that allows providers greater resource flexibility in delivering outcomes aligned to enterprises' business strategies.⁵²

48 ACPET, Education Industry Survey, August 2010.

49 IBSA Applied Research Report, Telecommunications Industry, December 2009, and employer surveys conducted for the 2010 Escan.

50 Australian Industry Group, Vocational Education and Training Workforce: Productivity Commission Issues Paper Submission, July 2010.

51 Australian Council of Trade Unions, Submission to the Productivity Commission study of the vocational education and training (VET) workforce, July 2010.

52 Skills Australia, Creating a Future Direction for Australian Vocational Education and Training: A discussion paper on the future of the VET system, October 2010.

A common message from IBSA Escan consultations was that many small and medium sized businesses undertake little, if any, workforce planning⁵³ making it difficult for the organisation, let alone the VET system, to identify their current skills needs. Additionally it is felt that the needs of large businesses dominate VET policy and program decision-making as larger businesses are more able to present their views and engage with governments, ISCs and education and training authorities.⁵⁴

Many enterprises, particularly SMEs, do not have internal capability or capacity to make the best use of workforce skills.⁵⁵ Skills Australia has proposed that most of the expertise in Australia, in the area of skills utilisation, lies outside of individual businesses either in commercial consultancies or specialist government services.⁵⁶ Given the significant proportion of SMEs in all of the IBSA industries, building SME capacity for workforce planning and development could have considerable impact on industry viability and its ability to respond to workforce challenges.

The Skills Australia discussion paper on Creating a Future Direction for Australian VET has proposed that the VET system should take on a broader workforce development role to assist organisations with workforce planning and skills utilisation beyond merely training.⁵⁷ However, the lack of a national approach to workforce planning for the VET sector has been regularly noted⁵⁸ and workforce development capability may first need to be developed within VET, before it can be extended to clients of the sector.

Many providers within the public and private system do currently understand their role in enabling the achievement of broader workforce development goals. However, a funding and reporting system focused primarily on Training Packages and qualification outcomes does not support the development and packaging of holistic solutions. There is a need for greater recognition at a system level that Training Packages and qualification outcomes are just one part of a strategic workforce development approach.

53 Based on polling results from Melbourne, Sydney and Brisbane IBSA Escan consultation forums, August 2010.

54 Participant comments from IBSA Escan consultations Melbourne, Sydney and Brisbane.

55 Society for Knowledge Economics, Workplaces for the Future Forum, Melbourne, Treasury Place, 27 July 2009.

56 Skills Australia, Creating a future direction for Australian vocational education and training: A discussion paper on the future of the VET system, October 2010.

57 Skills Australia, Creating a future direction for Australian vocational education and training: A discussion paper on the future of the VET system, October 2010.

58 Organisation for Economic Cooperation and Development, 2010, Learning for Jobs: Synthesis Report of the OECD Reviews of Vocational Education and Training, Paris, France.

Reflecting industry need

Through its continuous improvement process IBSA is able to respond to emerging industry requirements for workforce development. Appendix A contains a list of changes made to Training Packages during 2009 as part of the continuous improvement process.

Examples of the way in which IBSA Training Packages have been recently improved to align with industry needs include:

- Integrated Telecommunications Training Package – the newly endorsed ICT10 includes new qualification streams in Broadband and Wireless Technology, Digital Reception Technology, Optical Networks' Radio Frequency Networks, Rigging Installation, and Telecommunications Network Engineering.
- Printing Training Package – the newly enhanced ICP10 includes new qualifications and elective units in digital print, core environmental sustainability competencies in every qualification and elective competitive manufacturing competencies.
- Entertainment Training Package (CUE03) – updated to include business continuity and sustainability units as electives in a number of qualifications.
- Screen and Media Training Package (CUF07) – updated to increase workplace safety and provide access to electives imported from the Music Training Package.
- Visual Arts, Craft and Design Training Package (CUV03) – updated to include new qualifications at Diploma and Advanced Diploma levels.
- Training and Education Training Package (TAE10) – the newly endorsed Package includes the updated Certificate IV qualification for trainers and assessors and new Vocational Graduate Certificate and Vocational Graduate Diploma qualifications for language, literacy and numeracy practitioners.

To raise awareness of changes to Training Packages, IBSA has conducted information sessions and professional development workshops around the country for businesses and training providers.

Factors that will impact on future Training Package developments include:

- Financial Services Training Package (FNS10) – the introduction of tighter credit management controls by ASIC under the National Consumer Credit Protection Act, effective from 01 July 2010, which include registration with ASIC if engaging in credit activities and the introduction of a national e-conveyancing program.
- IT Training Package – forthcoming changes to the Package will reflect the skill needs of a dynamic industry dominated by small businesses. Demand for skill sets that augment existing qualifications has been identified, such as games and web development.⁵⁹
- Museum and Libraries/Information Services Training Package – forthcoming changes to the Package will reflect skills needs associated with technological advances, sector convergence with IT programming and the digitalisation of collections.

⁵⁹ IBSA, Scoping Review of the ICA05 Information and Communications Technology Training Package v3.0, December 2009.

State and Territory variation

Although this Escan is national in focus and does not spotlight detailed consideration of skills and workforce development issues at jurisdictional level, the research process has highlighted some significant variances between States and Territories.

While the emergence of a two-speed economy has been denied⁶⁰, analysts have highlighted distinct differences in economic performance between the states.

New South Wales

While business conditions improved strongly in New South Wales in September of 2010⁶¹, Commsec considers that the state economy is the nation's underperformer⁶², a finding disputed by the NSW government⁶³ however suggesting job seekers may be less actively seeking work. Improving data from the state may flow through in future Commsec reports. Unemployment in the state fell sharply to 5 percent in August 2010 while the participation rate remained stable at 63.4 percent.⁶⁴

In 2009 IBSA Training Packages accounted for 20 percent of all student participation in publicly funded VET in New South Wales. Of this participation, almost half was in the Business Services Training Package. Among all states/territories, New South Wales is the highest user of the Entertainment Training Package (0.5 percent of total NSW student participation compared with 0.2 percent nationally) and the equal highest user of the Telecommunications Training Package (0.4 percent of total NSW student participation compared with 0.3 percent nationally).⁶⁵

Victoria

The Victorian economy is benefitting from a boom in new home building and is considered one of the strongest nationally.⁶⁶ Business conditions eased slightly in September⁶⁷ but business confidence rose strongly.⁶⁸ Unemployment has remained steady at 5.5 percent in August by workforce participation rose to 65.9 percent.⁶⁹

Victoria is one of three states, along with Western Australia and Queensland, which has experienced significant employment growth in the ICT industry since 2003.⁷⁰

In 2009 IBSA Training Packages accounted for 15 percent of all student participation in publicly funded VET in Victoria, the lowest rate nationally. Of this participation, almost half was in the Business Services Training Package. Victoria is the equal highest user of the Telecommunications Training Package (0.4 percent of total Victorian student participation compared with 0.3 percent nationally) but, somewhat surprisingly, proportionally the lowest user of the IT Training Package (only 1.8 percent of total Victorian student participation compared with 2.8 percent nationally).⁷¹

60 ANZ Research Quarterly, October 2010.

61 National Australia Bank, Monthly Business Survey, September 2010.

62 Commsec, State of the States report, October 2010.

63 The Sydney Morning Herald, NSW challenges Commsec report, 25 October 2010.

64 The Australian, Unemployment slashed by jobs boom, 9 September 2010.

65 NCVER, VET Provider Collection, 2009.

66 Commsec, State of the States report, October 2010.

67 National Australia Bank, Monthly Business Survey, September 2010.

68 National Australia Bank, Monthly Business Survey, September 2010.

69 The Australian, Unemployment slashed by jobs boom, 9 September 2010.

70 CIIER Whitehorse Top 250 ICT industry analysis by state and territory Dec 2009.

71 NCVER, VET Provider Collection, 2009.

Queensland

Economic conditions in Queensland have been adversely affected by the damaging influence of the strong Australian dollar on the tourism industry.⁷² In the year to September 2010, Queensland experienced the lowest level of business confidence of all Australian states/territories.⁷³ The state experienced a drop in the unemployment rate to 5.4 percent in August but the proportion of people looking for work also fell.⁷⁴

However, poor economic performance is a quite recent phenomenon for Queensland and the state is one of three states – along with Western Australia and Victoria – that has experienced significant employment growth in the ICT industry since 2003.⁷⁵

In 2009 IBSA Training Packages accounted for 17 percent of all student participation in publicly funded VET in Queensland. Of this participation more than half (53 percent) was in the Business Services Training Package. Queensland is a relatively high user of the Visual Arts, Craft and Design Training Package (1.0 percent of total Queensland student participation compared with 0.7 percent nationally), but Queensland is a low user of the Financial Services Training Package (only 1.5 percent of total Queensland student participation compared with 2.3 percent nationally).⁷⁶

South Australia

The South Australian economy is currently one of the nation's high performers due to high population growth and above trend retail spending.⁷⁷ While the South Australian unemployment rate rose, to 5.4 percent, in August this was accompanied by an increase in the workforce participation rate to 63.5 percent.⁷⁸

In 2009 IBSA Training Packages accounted for 16 percent of all student participation in publicly funded VET in South Australia. Of this participation 43 percent was in the Business Services Training Package. South Australia is the equal highest user of the Printing and Graphic Arts Training Package – 0.3 percent of total South Australian student participation compared with 0.2 percent nationally.⁷⁹

Western Australia

Along with the ACT, Western Australia has been identified as the nation's standout economy⁸⁰ with business confidence high and continuing upward.⁸¹ The resource boom is boosting construction and investment in the west and creating jobs. Although Western Australia's unemployment rate rose to 4.5 percent in August 2010, it is still among the lowest nationally and is accompanied by a participation rate of 68.7 percent.⁸²

72 Commsec, State of the States report, October 2010.

73 National Australia Bank, Monthly Business Survey, September 2010.

74 The Australian, Unemployment slashed by jobs boom, 9 September 2010.

75 CIER Whitehorse Top 250 ICT industry analysis by state and territory Dec 2009.

76 NCVER, VET Provider Collection, 2009.

77 Commsec, State of the States report, October 2010.

78 The Australian, Unemployment slashed by jobs boom, 9 September 2010.

79 NCVER, VET Provider Collection, 2009.

80 Commsec, State of the States report, October 2010.

81 National Australia Bank, Monthly Business Survey, September 2010.

82 The Australian, Unemployment slashed by jobs boom, 9 September 2010.

Western Australia is one of three states – along with Victoria and Queensland – that has experienced significant employment growth in the ICT industry since 2003.⁸³

In 2009 IBSA Training Packages accounted for 22 percent of all student participation in publicly funded VET in Western Australia. Of this participation, 45 percent was in the Business Services Training Package. Western Australia is a high user of the Visual Arts, Crafts and Design Training Package – 2.1 percent of total Western Australian student participation compared with 0.7 percent nationally.⁸⁴

Tasmania

Tasmanian business conditions were in heavily negative territory for much of 2010.⁸⁵ Business confidence has been trending downward, although sample sizes are small and may not be entirely reliable.⁸⁶ The unemployment rate is high compared to other states. However, the rate has fallen from 2009 levels to 6 percent in August 2010.⁸⁷

In 2009 IBSA Training Packages accounted for 22 percent of all student participation in publicly funded VET in Tasmania. Of this participation more than half (52 percent) was in the Business Services Training Package. Tasmania is the highest user of the Financial Services Training Package (3.3 percent of total Tasmanian student participation compared with 2.3 percent nationally) and equal highest user of the Printing and Graphic Arts Training Package (0.3 percent of total Tasmanian student participation compared with 0.2 percent nationally). However, Tasmania is the lowest user of the Training and Assessment Training Package (1.3 percent of total Tasmanian student participation compared with 1.8 percent nationally).⁸⁸

Northern Territory

The Northern Territory economy is benefitting from very low unemployment of around 3.0 percent and retail trade almost 30 percent above trend.⁸⁹ At 73.8 percent in August 2010, NT has the highest workforce participation rate nationally suggesting that severe impact from skills shortages are a possibility.

In 2009 IBSA Training Packages accounted for 18 percent of all student participation in publicly funded VET in the Northern Territory. Of this participation 34 percent was in the Business Services Training Package. The Northern Territory has high use of IBSA's Cultural and Creative industry Training Packages with proportionally the highest use of the Screen and Media Training Package, 0.8 percent of total NT student participation compared with 0.5 percent nationally; the Music Training Package, 1.9 percent of total NT student participation compared with 0.3 percent nationally; the Visual Arts, Craft and Design Training Package, 2.5 percent of total NT student participation compared with 0.7 percent nationally; and the Training and Assessment Training Package, 2.7 percent of total NT student participation compared with 1.8 percent nationally. Perhaps understandably, Northern Territory is proportionally the lowest user of the Business Services Training Package (6.1 percent of total NT student participation compared with 8.5 percent nationally), and the equal lowest user of the Financial Services Training Package (1.5 percent of total NT student participation compared with 2.3 percent

83 CIER Whitehorse Top 250 ICT industry analysis by state and territory Dec 2009.

84 NCVER, VET Provider Collection, 2009.

85 National Australia Bank, Monthly Business Survey, September 2010.

86 National Australia Bank, Monthly Business Survey, September 2010.

87 The Australian, Unemployment slashed by jobs boom, 9 September 2010.

88 NCVER, VET Provider Collection, 2009.

89 Commsec, State of the States report, October 2010.

nationally) and the ICT Training Package (1.8 percent of total NT student participation compared with 2.8 percent nationally).⁹⁰

Australian Capital Territory

Along with Western Australia, the ACT has been identified as having the strongest economy in the country.⁹¹ The Territory is benefitting from low unemployment, 3.1 percent in August 2010⁹², and strong population growth that are driving home building and buying.

In 2009 IBSA Training Packages accounted for 26 percent of all student participation in publicly funded VET in the ACT, the highest rate nationally. Of this participation almost half (47 percent) was in the Business Services Training Package and a further 23 percent in the ICT Training Package. ACT is proportionally the highest user of the Business Services Training Package, 12.1 percent of total ACT student participation compared with 8.5 percent nationally; the Museum and Library/Information Services Training Package, 0.8 percent of total ACT student participation compared with 0.2 percent nationally; and the ICT Training Package, 5.9 percent of total ACT student participation compared with 2.8 percent nationally. However, ACT is proportionally the lowest user of the Telecommunications Training Package, 0.1 percent of total ACT student participation compared with 0.3 percent nationally.⁹³

90 NCVER, VET Provider Collection, 2009.

91 Craig James, Commsec quoted in ABC News Online, 25 October 2010.

92 The Australian, Unemployment slashed by jobs boom, 9 September 2010.

93 NCVER, VET Provider Collection, 2009.

Chapter 5 – Future directions for endorsed components of Training Packages

Training Packages and the VET system are crucial to the ongoing development of the Australian workforce and to national productivity. Workforce development builds the skills of individual workers, and also the capability of organisations to manage and use individuals productively. Skills for effective workplace planning were identified as critical by many participants in IBSA's consultation processes.

Considerations for VET stakeholders

IBSA's Escan research and consultation process has produced findings that, while not recommendations, could be considered in future planning by VET system stakeholders.

Government – supporting workforce development

Escan 2011 findings suggest that to support workforce development Government could consider:

- developing funding programs that target SMEs through incentives
- working with the tertiary sector, VET and higher education, to implement strategies and develop incentives for improving articulation arrangements, and
- establishing mechanisms for collecting reliable data on the extent of private training provision.

Industry, associations and employers – maximising skills outcomes

Escan 2011 findings suggest that to support workforce development industry/employers could consider:

- partnering with RTOs to develop effective solutions for workforce development
- investigating recruitment strategies that encourage new or underrepresented population groups into the industry workforces, and
- investing in the upskilling of existing workers, with an emphasis on transferable digital and foundation skills.

Training Providers – partnering with industry

Escan 2011 findings suggest that to support workforce development training providers could consider:

- working cooperatively with enterprises to develop and implement holistic workforce development solutions
- investigating new, flexible delivery methods using technology and fast broadband services to better meet the needs of industry clients
- quality assurance mechanisms that support the tertiary sector to achieve quality of provision in response to community and industry expectations, and
- investigating mechanisms that enable VET providers to take on a broader role in workforce development.

IBSA's future work – supporting industry skilling

Escan 2011 research and consultation processes have highlighted directions for future work that will be considered by the IBSA Board. They suggest that in future IBSA will need to work with government, industry and other VET system stakeholders to:

- ensure that changes in regulation and legislation are integrated into the relevant Training Package
- develop strategies to engage SMEs in workforce planning and to enable them to contribute to discussions on skills needs
- ensure Training Package coverage of emerging industry sectors and occupations as they grow in significance
- investigate and respond to the convergence of industries and skills in IBSA training packages
- enable effective articulation to higher education programs, and
- integrate the strategic management and leadership skills required in the digital economy into relevant Training Packages.

Appendix A – Report of Training Package continuous improvement

Table 9 below highlights the changes made to the endorsed components of IBSA Training Packages over the preceding 12 months and identifies any refinements or new units of competency. More detailed information on updates to training packages can be found on the IBSA Website at <http://www.ibsa.org.au/training-packages/training-package-updates.aspx>.

TABLE 9: IBSA TRAINING PACKAGE CONTINUOUS IMPROVEMENT

BSB07 Business Services Training Package, Version 5.0	
Date submitted to NQC secretariat:	22 November 2010
Date endorsed by NQC or ISC upgrade:	16 December 2010
Date made public through NTIS:	22 February 2011
Industry imperatives/rationale for change:	
BSB41907 Certificate IV in Business (Governance) and BSB50707 Diploma of Business (Governance): extensive consultation was undertaken among Indigenous communities for the two governance qualifications with the aim of developing an outcome that better meets the needs of Indigenous corporations and the vocational education and training system.	
Summary of key changes:	
<ul style="list-style-type: none"> • Review of two Business (Governance) qualifications with amendments to 11 related units. • Creation of 15 new business units. 	
BSB07 Business Services Training Package, Version 4.0	
Date submitted to NQC secretariat:	30 September 2010
Date endorsed by NQC or ISC upgrade:	22 October 2010
Date made public through NTIS:	21 February 2011
Industry imperatives/rationale for change:	
<p>In early 2009 IBSA, through four related projects, consulted with key stakeholders around Australia to obtain feedback on:</p> <ul style="list-style-type: none"> • the skills required by managers in the 21st century and the role of leaders across all industry sectors • how best to embed innovation and creativity into BSB07 • the structure and uptake of BSB31207 Certificate III in Frontline Management and BSB40807 Certificate IV in Frontline Management, and • the structure and uptake of the suite of marketing, advertising and sales qualifications in BSB07. <p>The outcome of this consultation led to the review of the Certificate III in Business, Certificate IV in Business Sales and the Advanced Diploma of Advertising and the removal of the Certificate III in Frontline Management from BSB07. The Dip of International Education Services, Voc Grad Cert in Management (Learning), Voc Grad Cert in International Education Services and Voc Grad Dip of Management were also removed from BSB07 and incorporated into TAE10 as part of the expansion of the Training and Education Training Package.</p>	

BSB07 Business Services Training Package, Version 4.0

Summary of key changes:

- General review of three Sales and Advertising qualifications and subsequent change in code.
- General review of the 12 Advertising, Marketing, and Sales qualifications.
- BSB31207 Certificate III in Frontline Management was deleted due to lack of demand.
- The following four qualifications were removed from Business Services and incorporated into Training and Education TAE10 Training Package:
 - BSB50907 Diploma of International Education Services
 - BSB70108 Vocational Graduate Certificate in Management (Learning)
 - BSB70207 Vocational Graduate Certificate in International Education Services, and
 - BSB80108 Vocational Graduate Diploma of Management (Learning)
- Creation of 13 new management, marketing and sales units.
- Corrections to the eight units and change to version identifier.
- Two skill sets were added; Aspiring Supervisor and Managing Innovation

BSB07 Business Services Training Package, Version 3.0

Date submitted to NQC secretariat:	25 January 2010
Date endorsed by NQC:	16 February 2010
Date endorsed by Minister of Education:	3 March 2010
Date made public through NTIS:	30 August 2010

Industry imperatives/rationale for change:

BSB41207 Certificate IV in Legal Services and BSB51007 Diploma of Legal Services: while these qualifications were modified during the Training Package review, the industry has experienced extensive change to its legislation, technology and work practices in the past decade, with flow-on impact on work roles and competencies. A broad review of the legal qualifications was undertaken. The training package was also updated to comply with NQC flexibility and sustainability rules and inclusion of reference to relevant national legislation.

Summary of key changes:

- Review of two Legal Services qualifications and subsequent change in code.
- Addition of 18 new Communication and Legal Services units.
- Corrections to ten units and change to version identifier.

CUE03 Entertainment Training Package, Version 3.1	
Date endorsed by NQC or ISC upgrade:	ISC upgrade
Date made public through NTIS:	12 November 2010
Industry imperatives/rationale for change:	
Updated to comply with NQC flexibility and sustainability rules and inclusion of reference to relevant national legislation.	
Summary of key changes:	
<ul style="list-style-type: none"> • Inclusion of the NQC flexibility rules relating to the mix of importable units and provision for access to accredited courses to ten qualifications. • Inclusion of business continuity units into the elective pool for eight qualifications. • Inclusion of appropriate sustainability unit from Business Services training package into the elective pool of ten qualifications. • Inclusion of specific reference to knowledge relating to sustainability issues in screen and media in Unit CUEIND01C Source and apply entertainment industry knowledge which affects ten qualifications. • Addition of reference to the 'National Code of Practice for Induction for Construction Work' to the section on licensing, legislative, regulatory or certification considerations in CUE20103 Certificate II in Live Production, Theatre and Events. • Addition of reference to the 'National Standard for 'Licensing Persons Performing High Risk Work' and the 'National Code of Practice for Induction for Construction Work' to the section on licensing, legislative, regulatory or certification considerations three qualifications. 	

CUF07 Screen and Media Training Package, Version 1.2	
Date endorsed by NQC or ISC upgrade:	ISC Upgrade
Date made public through NTIS:	12 November 2010
Industry imperatives/rationale for change:	
Updated to comply with NQC flexibility and sustainability rules and inclusion of reference to relevant national legislation.	
Summary of key changes	
<ul style="list-style-type: none"> • Inclusion of the NQC flexibility rules relating to the mix of importable units and provision for access to accredited courses to 18 qualifications. • Inclusion of business continuity units into the elective pool for 14 qualifications: • Inclusion of appropriate sustainability unit from Business Services training package into the elective pool of 17 qualifications. • Inclusion of two additional units into CUF50107 Diploma of Screen and Media: CUSSOU406A Record sound on location and CUSSOU407A Coordinate location sound recording. • Addition of four imported Music Business qualifications. 	

CUS09 Music Training Package, Version 1.1

Date endorsed by NQC or ISC upgrade:	ISC upgrade
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Date made public through NTIS:	4 November 2010
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Industry imperatives/rationale for change:

Updated to comply with NQC flexibility and sustainability rules and inclusion of reference to relevant national legislation.

Summary of key changes

- Inclusion of the NQC flexibility rules relating to the mix of importable units and provision for access to accredited courses to the 13 qualifications.
- Inclusion of business continuity units into the elective pool for eight qualifications.
- Inclusion of appropriate sustainability unit from Business Services training package into the elective pool of 13 qualifications.
- Inclusion of specific reference to knowledge relating to sustainability issues in screen and media in Unit CUSIND301B Work effectively in the music industry which affects five qualifications.
- Unit BSBSMB408B Manage personal, family, cultural and business obligations has been upgraded to the most recent version, which affects three qualifications.
- Three unit codes corrected in CUS30209.
- Unit title for CUSSOU404A changed to "Edit dialogue" which effects two qualifications CUS50209 Diploma of Sound Production and CUS40209 Certificate IV in Sound Production

FNS10 Financial Services Training Package, Version 1.0

Date submitted to NQC secretariat:	16 June 2010
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Date endorsed by NQC or ISC upgrade:	8 July 2010
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Date made public through NTIS:	24 November 2010
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Industry imperatives/rationale for change:

The FNS04 Financial Services Training Package was released in October 2004 after the scheduled review of the previous FNB99 Training Package. Between October 2008 and April 2009, Innovation and Business Skills Australia (IBSA) conducted scoping research on the take-up of FNS04 plus a technical analysis and comprehensive industry consultation. The Scoping Report provided 28 recommendations for improvement to the Package, all of which have been addressed in FNS10 Financial Services Training Package.

Summary of key changes

- Redevelopment of entire Financial Services Training Package from FNS04 to FNS10
- FNS10 now includes a financial literacy skill set designed to assist meeting the needs of identified gaps in nationwide financial literacy, and
- The training package also includes a BAS agent registration skills set designed for persons who are seeking registration as a BAS Agent with the Tax Practitioners Board.

ICA05 Information and Communications Technology Training Package, Version 3.1	
Date endorsed by NQC or ISC upgrade:	ISC upgrade
Date made public through NTIS:	26 July 2010
Industry imperatives/rationale for change:	
<p>The review of the ICA05 identified the need to incorporate new and emerging technology trends in the industry.</p> <p>The industry coverage has been expanded to cover new business models and advances in technologies including networking, web development, software development, database integration, sustainability, application implementation, telecommunication, digital and interactive games, and digital media technologies.</p> <p>The training package was also updated to comply with NQC flexibility and sustainability rules and inclusion of reference to relevant national legislation.</p>	
Summary of key changes	
<ul style="list-style-type: none"> • Modifications applied to three qualifications to meet the flexibility rules: ICA10105 – Certificate I in Information Technology, ICA20105 – Certificate II in Information Technology and ICA30105 – Certificate III in Information Technology 	

ICP10 Printing and Graphic Arts Training Package, Version 1.0	
Date submitted to NQC secretariat:	15 March 2010
Date endorsed by NQC or ISC upgrade:	5 April 2010
Date made public through NTIS:	6 July 2010
Industry imperatives/rationale for change:	
<p>ICP05 Printing and Graphic Arts Training Package was endorsed in August 2005. Since its endorsement concerns were raised that the Training Package did not adequately address the changes in new and emerging technologies, particularly in the area of digital printing, which includes wide format, high speed document production, variable data, colour management and more. Accordingly, a project to develop digital printing qualifications was identified as a priority by IBSA Printing SAC and at the same time it was agreed to undertake a fitness for purpose review. The project was identified as a priority by the IBSA Printing Sector Advisory Committee (SAC) and included in IBSA's 2008-2009 Continuous Improvement Plan.</p>	
Summary of key changes	
<ul style="list-style-type: none"> • Redevelopment of entire Printing and Graphic Arts Training Package from ICP05 to ICP10 with: <ul style="list-style-type: none"> ○ Inclusion of additional digital printing units of competency ○ Addition of two digital printing qualifications, and ○ Qualifications updated to include a core environmental sustainability unit and additional choice of elective units. 	

ICT10 Integrated Telecommunications Training Package, Version 1.0

Date submitted to NQC secretariat:	23 March 2010
Date endorsed by NQC or ISC upgrade:	14 April 2010
Date made public through NTIS:	15 June 2010

Industry imperatives/rationale for change:

The update to ICT10 has been driven by a number of government policy and industry initiatives including the NBN, Digital Education Revolution (DER) and sustainability practices to reduce carbon emissions and green house effect on the environment. The revisions are based on new and emerging technologies including telecommunications, sustainable networks, internet protocol (IP) networks, optical and radio networks, cloud networks, mesh networks, information technology and digital media.

Summary of key changes

- Redevelopment of entire Integrated Telecommunications Training Package from ICT02 to ICT10.

TAE10 Training and Education Training Package, Version 1.0

Date submitted to NQC secretariat:	April 2010
Date endorsed by NQC or ISC upgrade:	13 May 2010
Date made public through NTIS:	31 May 2010

Industry imperatives/rationale for change:

The Certificate IV qualification is the entry level qualification to the industry of training and assessment. The qualification and major design elements within it underwent a major review to provide strong foundation skills and knowledge for trainers and assessors in Australian VET and thus meet a number of needs in the VET sector; VET professionals in TAFE Institutes, professionals in private RTOs and trainers and assessors working in various industry workplaces. The 40104 Certificate IV in Training and Assessment became the 40110 Certificate IV in Training and Education

Summary of key changes

- Redevelopment of entire Training and Education Training Package from TAA04 to TAE10.
- Released as a companion volume to TAA04 Training and Assessment Training Package, which has been retained for the purposes of maintaining TAA50104 Diploma of Training and Assessment, while it undergoes review.

Appendix B – Methodology and bibliography

This report was compiled from Escans developed for each of IBSA's six industries. Statistical information for the Industry Escans was gathered through desktop research from a range of sources provided in the reference list.

Input to all of the industry Escans was gathered from industry stakeholders via a series of consultation forums in September and October 2010. The forums were held in Melbourne, Sydney, Brisbane, Adelaide and Perth. A webinar was used to gather views from regional stakeholders and others that were not able to attend the face-to-face consultations.

Survey tools were used at each of the forums to gather additional information from participants, including advice on occupations in demand. The responses included coverage of all IBSA industries.

The drafts of the industry and this principal Escan were validated by IBSA's six industry Sector Advisory Committees in November 2010.

The following organisations have made valuable contributions to the IBSA Escan:

Abacus – Australian Mutuals	Australian Information Industry Association (AIIA)
Academy of Information Technology	Australian Institute of Credit Management (AICM)
ACE (Adult Community Education) North Coast Inc	Australian Institute of Management (AIM) QLD
Adult Learning Australia	Australian Institute of Management (AIM) WA
Agnew School	Australian Institute of Mercantile Agents
ANZ Bank	Australian Institute of Training and Development (AITD)
Arts, Communications, Finance Industries and Property Services (ACFIPS)	Australian Library and Information Association
Association of Superannuation Funds of Australia Ltd (ASFA)	Australian Manufacturers Worker's Union (Print)
Australasian Corrections Education Association Inc (ACEA)	Australian Qualifications Framework Council
Australian and New Zealand Institute of Insurance and Finance (ANZIIF)	Australian Securities and Investment Commission (ASIC)
Australian Booksellers' Association	Australian Services Union (ASU)
Australian Computer Society Inc.	Box Hill Institute of TAFE
Australian Council for Private Education and Training (ACPET)	Brisbane 31 – Community TV station
Australian Dance Institute	Brisbane North Institute of TAFE
Australian Financial Markets Association	BSA Advanced Learning
Australian Government Information Management Office (AGIMO)	Business Planning Pty Ltd
Australian Human Resources Institute (AHRI)	Business SA
Australian Industry Group (AIG)	Business Services Industry Skills Board SA Inc
Australian Industry Group Training Services (AiGTS)	Business Skills Victoria
	Busy Inc
	Cabinet Makers Association and Architectural Door Hardware Association
	Carclew Youth Arts Centre

Centre for Innovative Industries Economic Research (Australia) (CIIER), Whitehorse Strategic Group Ltd	Heidelberg Print
Certiport Inc, South East Asia Pacific Region	Hunter Institute of TAFE NSW
CHARTTES Training Advisory Council	IIT Training Pty Limited
Chisholm Institute	Illawarra Institute TAFE NSW
City of Unley	Indigenous Lead Centre at Tropical North Queensland Institute of TAFE
Commonwealth Bank	Inner Northern Local Learning & Employment Network
Communications, Electrical, Plumbing Union (CEPU)	Institute of Certified Bookkeepers
Community Services, Health & Education Training Council Inc	Insurance Australia Group (IAG)
Conquest Communications	JDA Print Recruitment (Vic)
Corangamite District Adult Education Group Inc	Jims Bookkeeping
Council for Dance Educators Co Ltd	Karen Weiss, Journalist
Creative Industries Skills Council	Learning Advisory Services Australia Pty Ltd
Crown Institute of Business and Technology	Learning Partnerships
Defence Force	Learning Solutions Group
Department of Education and Training QLD	Leighton Contractors Pty Ltd
Department of Innovation, Industry, Science and Research	Local Employment and Training Services
DGIT Consultants Pty Ltd	Lynne Spender, Consultant
Eco Learning Pty Ltd	Major Industries Training Advisory Council (MITAC)
Electrical, Electrotechnology, Energy & Water Skills Board	Matchmaster
Energy Skills Qld	Maxwells Services
Enterprise Knowledge Pty Ltd	MEGT
Entertainment and Technical Event Training College (ETETC)	Metro Screen
EPIC Industry Training Board	Micro Enterprises and Individuals, Australian Taxation Office
Finance Sector Union (FSU)	Mint Training
Financial, Administrative and Professional Services Training Council (FAPSTC) Inc	Multimedia Victoria
Flexible Training Solutions	Musicians' Union of Australia (MUA)
Fuji Xerox	National Association for the Visual Arts (NAVA)
Future Staff	National Institute of Accountants (NIA)
Future Vision Training and Administration	National Insurance Brokers Association of Australia (NIBA)
FutureNow	North Coast Institute TAFE NSW
Gail Power, Consultant	North Coast TAFE
Game Developers' Association of Australia (GDAA)	Open Channel
General Reinsurance Life Australia Ltd	Pinnacle Financial Services Academy
Gordon Institute of TAFE	Primus
Gwydir Shire Council	Printing Industries Association of Australia (PIAA)
	Prografica Printing
	Property & Financial Services ITAB

Puggle Press and Co Pty Ltd	St John First Aid
QANTAS Airways Limited	Suncorp Metway
QR Limited	Swinburne TAFE
Queensland Complete Printing Services	Sydney College Business & IT
Railcorp	Sydney Institute of TAFE
Ramsden Telecommunications Training	Sydney Institute of Technology
Record Information Management Solutions Pty Ltd	Tactic Consulting Services Pty Ltd
Records Management Association of Australasia (RMAA)	TAFE Development Centre
Regional Arts Australia	TAFE NSW
RetireInvest ING Australia	TAFE SA
RM Gregory Printers	TAFE SA, Adelaide College of the Arts
Self-Managed Superannuation Funds Association (SPAA)	Telstra
Service Industries Training Advisory Council	TITAB Australia Cabler Registry Services
Service Skills SA	TRAC Consulting
Skills Tasmania	University of Adelaide
SkillsHub	Value-Able Development
Social Inclusion and Vocational Access Skills Unit, Ultimo TAFE	Victoria University
Society of Motion Picture and Television Engineers	Victorian Curriculum and Assessment Authority
South Western Sydney Institute TAFE NSW	Victorian Employers Chamber of Commerce and Industry (VECCI)
SSI Australia	VMP Film Video Multimedia
St George Bank	Western Sydney Institute TAFE
	Wide Bay Institute of TAFE
	Women in Film and Television (WIFT)
	Workbridge Association Inc

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Appendix C – Occupations and Qualifications in Demand

IBSA reports critical occupations in demand to government and industry stakeholders.

This alphabetical list reflects demand for occupations and job roles reported at IBSA's Escan industry consultation and validation forums conducted in 2010. Underpinning industry intelligence and research were also incorporated into this list.

Qualifications that correspond to the occupations in demand are also provided. Suggested 'pathway' qualifications are in *italics* and the **bold** occupations and job roles represent newly reported occupations in demand.

TABLE 10: IBSA OCCUPATIONS AND QUALIFICATIONS IN DEMAND

ANZSCO	Occupation/Job Role	Training Package	Qualification
BUSINESS SERVICES			
221111	Accountant	<i>FNS40210</i>	<i>Cert IV in Bookkeeping</i>
		<i>FNS40610</i>	<i>Cert IV in Accounting</i>
		FNS50210	Diploma of Accounting
		FNS60210	Advanced Diploma of Accounting
225111/ 225112/ 225113/ 131112	Account Manager	<i>BSB40307</i>	<i>Cert IV in Customer Contact</i>
		<i>BSB40107</i>	<i>Cert IV in Advertising</i>
		BSB50307	Diploma of Customer Contact
		BSB50207	Diploma of Business
		BSB50107	Diploma of Advertising
		BSB60307	Advanced Diploma of Customer Contact
		BSB60207	Advanced Diploma of Business
		BSB60110	Advanced Diploma of Advertising
551211	Bookkeeper	<i>FNS30110</i>	<i>Cert III in Financial Services</i>
		<i>FNS30310</i>	<i>Cert III in Accounts Administration</i>
		FNS40210	Cert IV in Bookkeeping
551111	Accounts Assistant	FNS30110	Cert III in Financial Services
		FNS30310	Cert III in Accounts Administration
		FNS40210	Cert IV in Bookkeeping
132411	Business Policy and Planning Manager (including international)	<i>BSB40507</i>	<i>Cert IV in Business Administration</i>
		BSB50107	Diploma of Advertising
541112/ 611312/ 639311	Call or Contact Centre Operator	BSB20207	Cert II in Customer Contact
		BSB30207	Cert III in Customer Contact
		BSB40307	Cert IV in Customer Contact
		BSB50307	Diploma of Customer Contact
511111/ 511112	Contract, Program, and Project Manager/Administrator	BSB41507	Cert IV Project Management
		BSB51407	Diploma of Project Management
		BSB60707	Advanced Diploma of Project Management
132111/ 111211	Corporate Services Manager	BSB50407	Diploma of Business Administration
		BSB60407	Advanced Diploma of Management

ANZSCO	Occupation/Job Role	Training Package Qualification	
132111	Corporate Social Responsibility Manager	BSB51107	Diploma of Management, including Business Continuity and Sustainability units
		BSB60407	Advanced Diploma of Management, including Business Continuity and Sustainability units
149211	Customer Contact Manager	<i>BSB40307</i>	<i>Cert IV in Customer Contact</i>
		<i>BSB40807</i>	<i>Cert IV in Frontline Management</i>
		BSB50307	Diploma of Customer Contact
		BSB60307	Advanced Diploma of Customer Contact
		BSB51107	Diploma of Management
132211/ 149914/ 222312	Finance Manager	<i>FNS40710</i>	<i>Cert IV in Financial Practice Support</i>
		FNS50210	Diploma of Accounting
		FNS50310	Diploma of Finance and Mortgage Broking Management
		FNS50510	Diploma of Personal Trustees
		FNS50610	Diploma of Financial Planning
		FNS51010	Diploma of Financial Markets
		FNS50910	Diploma of Banking Services Management
		BSB51107	Diploma of Management
		BSB60407	Advanced Diploma of Management
531111	General Administrative Officer	BSB30407	Cert III in Business Administration
		BSB41107	Cert IV in Business Administration
		BSB50807	Diploma of Business Administration
111211	General Manager	BSB51107	Diploma of Management
		BSB60407	Advanced Diploma of Management
		BSB60207	Advanced Diploma of Business
132311	Human Resource Administrator/Manager	BSB50607	Diploma of Human Resources Management
		BSB60907	Advanced Diploma of Management (Human Resources)
		BSB70108	Vocational Graduate Cert in Management (Learning)
521111	Marketing Assistant	BSB40207	Cert IV in Business
		BSB41307	Cert IV in Marketing
		BSB50207	Diploma of Business
		BSB51207	Diploma of Marketing
225112	Market Research Analyst	BSB41307	Cert IV in Marketing
		BSB51207	Diploma of Marketing

ANZSCO	Occupation/Job Role	Training Package Qualification	
512111/ 512299	Office and Practice Manager	BSB30307	<i>Cert III in Micro Business Operations</i>
		BSB40207	<i>Cert IV in Business</i>
		BSB40407	<i>Cert IV in Small Business Management</i>
		BSB40507	<i>Cert IV in Business Administration</i>
		BSB50207	Diploma of Business
		BSB50807	Diploma of Business Administration
		BSB51507	Diploma of Purchasing
		BSB60207	Advanced Diploma of Business
		BSB60407	Advanced Diploma of Management
132311	OHS Manager	BSB41407	<i>Cert IV in Occupational Health and Safety</i>
		BSB51307	Diploma of Occupational Health and Safety
		BSB60607	Advanced Diploma of Occupational Health and Safety
251312	OH&S Officer/Advisor	BSB30707	Cert III in Occupational Health and Safety
		BSB41407	Cert IV in Occupational Health and Safety
		BSB51307	Diploma of Occupational Health and Safety
512299/ 599112	Para-legal Professional	BSB40110	Cert IV in Legal Services
		BSB50110	Diploma of Legal Services
551311	Payroll clerk	FNS30110	Cert III in Financial Services
		FNS30310	Cert III in Accounts Administration
		FNS40210	Cert IV in Bookkeeping
521111	Personal Assistant and/or Secretary	BSB30407	Cert III in Business Administration
		BSB41107	Cert IV in Business Administration
		BSB50807	Diploma of Business Administration
542111/ 542113/ 542114	Receptionist	BSB30407	Cert III in Business Administration
		BSB41107	Cert IV in Business Administration
		BSB50807	Dip of Business Administration
224214	Records and Information Coordinator	BSB41707	Cert IV in Recordkeeping
		BSB51707	Diploma of Recordkeeping
		BSB60807	Advanced Diploma of Recordkeeping
131112	Sales and Marketing/ Business Development Manager	BSB41307	Cert IV in Marketing
		BSB40610	Cert IV in Business Sales
		BSB51207	Diploma of Marketing
		BSB50107	Diploma of Advertising

ANZSCO	Occupation/Job Role	Training Package Qualification	
CULTURAL AND CREATIVE			
139911	Arts Administrator/ Manager (inc business and financial skills)	BSB30307	Cert III in Micro Business Operations
		BSB40407	Cert IV in Small Business Management
		CUV40503	Cert IV in Arts Administration
		CUV60103	Diploma of Arts Administration
312312	Broadcast Technologist/ Outside Broadcasting Technician/Screen and Media Technician	ICT20110	Cert II in Telecommunications Technology
		ICT20310	Cert II in Telecommunications Cabling
		CUF30207	Cert III in Broadcast Technology
		ICT30210	Cert III in Telecommunications
		ICT30310	Cert III in Telecommunications Cabling
		BSB41507	Cert IV in Project Management
		CUF40107	Cert IV in Screen and Media
		CUF40307	Cert IV in Broadcast Technology
		ICT40610	Cert IV in Telecommunications Networks Technology
		ICT40210	Cert IV in Telecommunications Network Engineering
		ICT50210	Diploma of Telecommunications Management
		ICT50310	Diploma of Telecommunications Computer Systems
		ICT60210	Diploma of Radio Frequency Networks
		ICT60310	Advanced Diploma of Telecommunications Network Engineering
272611/ 149311	Community Cultural Development Officer/ Exhibition Developer and Manager	CUV40503	Cert IV in Arts Administration
		CUV60103	Diploma of Arts Administration
		CUE30303	Cert III in Venues and Events (Customer Service)
		CUE40403	Cert IV in Venues and Events (Customer Service)
		CUE50403	Diploma of Venues and Events
		CUE60403	Advanced Diploma of Venues and Events

ANZSCO	Occupation/Job Role	Training Package Qualification	
232411/ 232413/ 232414	Designer (graphic, interactive media, multimedia, new media, social media and web)	BSB30307	Cert III Micro Business Operations [customised for innovation competencies]
		CUV30303	Cert III in Design Fundamentals
		ICA30105	Cert III in Information Technology
		ICP30310	Cert III in Printing and Graphic Arts (Multimedia)
		BSB40407	Cert IV in Small Business Management [customised for innovation competencies]
		ICA40305	Cert IV in Information Technology (Websites)
		ICA40805	Cert IV in Information Technology (Multimedia)
		CUF40207	Cert IV in Interactive Digital Media
		BSB51107	Dip of Small Business Management [customised for innovation competencies]
		CUF50207	Diploma of Interactive Digital Media
711411	Digital Photographic Printer	ICP20310	Cert II in Printing and Graphic Arts (Digital Printing)
		ICP30410	Cert III in Printing and Graphic Arts (Digital Printing)
		ICP50210	Diploma of Printing and Graphic Arts (Multimedia)
		ICP50110	Diploma of Printing and Graphic Arts (Digital Production)
323312	Film Armourer		(No applicable TP qualification – experience may be gained through military or police employment)
232413	Games Developer/3D Animator/Visual Effects	CUF40107	Cert IV in Screen and Media
		CUF40207	Cert IV in Interactive Digital Media
		CUV40303	Cert IV in Design
		ICA40305	Cert IV in Information Technology (Websites)
		ICA40805	Cert IV in Information Technology (Multimedia)
		CUF50107	Diploma of Screen and Media
		CUF50207	Diploma of Interactive Digital Media
		ICA50605	Diploma of Information Technology (Website Development)
		ICA50905	Diploma of Information Technology (Multimedia)
		CUF60107	Advanced Diploma of Screen and Media
		CUV60307	Advanced Diploma of Creative Product Development

ANZSCO	Occupation/Job Role	Training Package Qualification	
232412	Illustrator	CUV30103	Cert III in Visual Arts and Contemporary Craft
		CUV30303	Cert III in Design Fundamentals
		CUV40103	Cert IV in Visual Arts and Contemporary Craft
		CUV40303	Cert IV in Design
		CUF40207	Cert IV in Interactive Digital Media
		CUF40107	Cert IV in Screen and Media
		ICA40805	Cert IV in Information Technology (Multimedia)
		ICA50905	Diploma of Information Technology (Multimedia)
		ICA50605	Diploma of Information Technology (Website Development)
		ICA50905	Diploma of Information Technology (Multimedia)
		CUF50207	Diploma of Interactive Digital Media
		CUF50107	Diploma of Screen and Media
		CUV60307	Advanced Diploma of Creative Product Development
224999	Knowledge/Information Manager	CUL30104	Cert III in Library/Information Services
		CUL40104	Cert IV in Library/Information Services
		CUL40204	Cert IV in Museum Practice
		CUL50104	Diploma of Library/Information Services
599711 / 399312	Library Assistant/Library Technician	CUL30104	Cert III in Library/Information Services
		CUL40104	Cert IV in Library/Information Services
		CUL40204	Cert IV in Museum Practice
		CUL50104	Diploma of Library/Information Services
399514	Make-up/Prosthetist/Colourist	CUF40407	Certificate IV in Make-up
		CUF40507	Certificate IV in Costume for Performance
		CUF50407	Diploma of Specialist Make-up Services
261212	Multimedia Specialist	ICA40305	Cert IV in Information Technology (Websites)
		ICA50605	Diploma of Information Technology (Website Development)
249299	Private Teacher/Tutor (art, dance, drama, music)	TAE401104	Cert IV in Training and Assessment
261212	Web Development (content management, database development, editing and publishing)	ICA40305	Cert IV in Information Technology (Websites)
		ICA50605	Diploma of Information Technology (Website Development)
212412/ 212499	Writers/Editors (digital and print)		(No applicable TP qualification, higher education qualification used)

ANZSCO	Occupation/Job Role	Training Package Qualification	
FINANCIAL SERVICES			
221111/ 221112/ 221113	Accountant/Accounting Manager	FNS40210 FNS40610 FNS40710 FNS50210 FNS60210	<i>Cert IV in Bookkeeping</i> <i>Cert IV in Accounting</i> <i>Cert IV in Financial Practice Support</i> Diploma of Accounting Advanced Diploma of Accounting
551111/ 221111	Accounting Assistant/ Accounts Officer/Senior Supervisor	FNS20110 FNS30310 FNS40610 FNS40210 FNS40710 FNS50210 FNS60110	Cert II in Financial Services Cert III in Accounts Administration Cert IV in Accounting Cert IV in Bookkeeping Cert IV in Financial Practice Support Diploma of Accounting Advanced Diploma of Accounting
221214	Auditor Officer/Accounts	FNS20110 FNS30310 FNS40210 FNS40310 FNS40610 FNS50210 FNS60210	Cert II in Financial Services Cert III in Accounts Administration Cert IV in Bookkeeping Cert IV in Credit Management Cert IV in Accounting Diploma of Accounting Advanced Diploma of Accounting
222112/ 222199	Broker – Mortgage/Finance	FNS40810 FNS50310	Cert IV in Finance and Mortgage Broking Diploma of Finance and Mortgage Broking Management
5522	Business Lending/ Mortgage Development	FNS30310 FNS40110 FNS40810 FNS50310	<i>Cert III in Accounts Administration</i> Cert IV in Credit Management Cert IV in Finance and Mortgage Broking Diploma of Finance and Mortgage Broking Management
599311	Debt Collector	FNS40110 FNS51510	Cert IV in Credit Management Diploma of Credit Management
222311	Financial Investment Advisor	FNS40810 FNS50610 FNS60410	Cert IV in Finance and Mortgage Broking Diploma of Financial Planning Advanced Diploma of Financial Planning
222311	Financial Planner/ Adviser/Technical Specialist	FNS40710 FNS50610 FNS60410	<i>Cert IV in Financial Practice Support</i> Diploma of Financial Planning Advanced Diploma of Financial Planning

ANZSCO	Occupation/Job Role	Training Package Qualification	
149212/ 131112/ 222312/	Financial Planning Manager – Business Development Relationship and Client Service	<i>BSB40207</i>	<i>Cert IV in Business</i>
		<i>BSB40607</i>	<i>Cert IV in Business Sales</i>
		<i>BSB40307</i>	<i>Cert IV in Customer Contact</i>
		<i>BSB40607</i>	<i>Cert IV in Business Sales</i>
		<i>BSB50207</i>	<i>Diploma of Business</i>
		<i>BSB50307</i>	<i>Diploma of Customer Contact</i>
		<i>BSB60207</i>	<i>Advanced Diploma of Business</i>
		<i>FNS50610</i>	<i>Diploma of Financial Planning</i>
		<i>FNS60410</i>	<i>Advanced Diploma of Financial Planning</i>
221212	Financial Risk Manager	<i>FNS50810</i>	<i>Diploma of Financial Risk Management</i>
		<i>FNS60810</i>	<i>Advanced Diploma of Financial Risk Management</i>
541112/ 131112/ 611312	Financial Services – Call Centre/Card Services Officer/Customer Service/ Business Development Relationship	<i>FNS20110</i>	<i>Cert II in Financial Services</i>
		<i>FNS30310</i>	<i>Cert III in Accounts Administration</i>
		<i>BSB40207</i>	<i>Cert IV in Business</i>
		<i>BSB40307</i>	<i>Cert IV in Customer Contact</i>
		<i>BSB40607</i>	<i>Cert IV in Business Sales</i>
		<i>BSB50207</i>	<i>Diploma of Business</i>
		<i>BSB50307</i>	<i>Diploma of Customer Contact</i>
		<i>BSB60207</i>	<i>Advanced Diploma of Business</i>
		<i>BSB60307</i>	<i>Advanced Diploma of Customer Contact</i>
132211/ 149914/ 222312	Financial Services Manager	<i>FNS40710</i>	<i>Cert IV in Financial Practice Support</i>
		<i>FNS50210</i>	<i>Diploma of Accounting</i>
		<i>FNS50310</i>	<i>Diploma of Finance and Mortgage Broking Management</i>
		<i>FNS50510</i>	<i>Diploma of Personal Trustees</i>
		<i>FNS50610</i>	<i>Diploma of Financial Planning</i>
		<i>FNS51010</i>	<i>Diploma of Financial Markets</i>
		<i>FNS50910</i>	<i>Diploma of Banking Services Management</i>
222113	Insurance Broker	<i>FNS41710</i>	<i>Cert IV in Insurance Broking</i>
		<i>FNS51210</i>	<i>Diploma of Insurance Broking</i>
		<i>FNS60110</i>	<i>Advanced Diploma of Insurance Broking</i>
552312/ 599611	Insurance Consultant Claims	<i>FNS30210</i>	<i>Cert III in Personal Injury Management (Claims Management)</i>
		<i>FNS40310</i>	<i>Cert IV in Personal Injury Management (Claims Management)</i>
		<i>FNS41710</i>	<i>Cert IV in Insurance Broking</i>
		<i>FNS51210</i>	<i>Diploma of Insurance Broking</i>
		<i>FNS60110</i>	<i>Advanced Diploma of Insurance Broking</i>

ANZSCO	Occupation/Job Role	Training Package Qualification	
611211	Insurance Officer – Health and Life Insurance Compliance	FNS30210	Cert III in Personal Injury Management (Claims Management)
		FNS41410	Cert IV in General Insurance
		FNS41510	Cert IV in Life Insurance
		FNS51110	Diploma of General Insurance
		FNS51310	Diploma of Life Insurance
221111	Insolvency Officers	FNS50810	Diploma of Financial Risk Management
599611/ 599612/ 599613/ 611211/ 599613	Loss Recovery/Claims, Fraud/Repossessions/ Collections Reconciliation/ Underwriting	FNS30310	Cert III in Accounts Administration
		FNS40110	Cert IV in Credit Management
		FNS40510	Cert IV in Personal Injury Management (Underwriting)
		FNS40810	Cert IV in Finance and Mortgage Broking
		FNS41610	Cert IV in Loss Adjustment
		FNS50110	Diploma of Personal Injury Management
		FNS51410	Diploma of Loss Adjustment
FNS50810	Diploma of Financial Risk Management		
552211	Managers Credit/Audit Compliance	FNS40110	Cert IV in Credit Management
222312	Superannuation Advisor	FNS40910	Cert IV in Superannuation
		FNS50710	Diploma of Superannuation
		FNS51010	Diploma of Financial Markets
222312	Superannuation Funds Manager/Administrator	FNS40910	Cert IV in Superannuation
		FNS50710	Diploma of Superannuation
		FNS51010	Diploma of Financial Markets
		FNS60510	Advanced Diploma of Superannuation
		FNS60810	Advanced Diploma of Financial Risk Management
552312/ 599611	Workers' Compensation (RTW) Injury Management	FNS30110	Cert III in Financial Services
		FNS40310	Cert IV in Personal Injury Management (Claims Management)
		FNS40410	Cert IV in Personal Injury Management (Return to Work)
		FNS50110	Diploma of Personal Injury Management
		FNS50810	Diploma of Financial Risk Management

ANZSCO	Occupation/Job Role	Training Package Qualification	
INFORMATION AND COMMUNICATIONS TECHNOLOGIES & TELECOMMUNICATIONS			
313214/ 342414	Broadband Technician	ICT20210	Cert II in Telecommunications
		ICT20310	Cert II in Telecommunications Cabling
		ICT30210	Cert III in Telecommunications
		ICT30310	Cert III in Telecommunications Cabling
		ICT30610	Cert III in Broadband and Wireless Networks
		ICT40110	Cert IV in Optical Networks
		ICT40610	Cert IV in Telecommunications Networks Technology
		ICT40210	Cert IV in Telecommunications Engineering
135111/ 135199	Chief Information Officer	ICA50205	Diploma of Information Technology (Project Management)
		ICA60105	Advanced Diploma of Information Technology (Process Improvement)
		ICA60205	Advanced Diploma of Information Technology (Network Security)
263312/ 263111	Computer Network Professionals	ICA30105	Cert III in Information Technology
		ICA40305	Cert IV in Information Technology (General)
		ICA10105	Diploma in Information Technology (General)
		ICA40405	Cert IV in Information Technology (Networking)
		ICA50405	Diploma of Information Technology (Networking)
		ICA60205	Advanced Diploma of Information Technology (Network Security)
262111/ 262112	Database and Systems Administrator	ICA60205	Advanced Diploma of Information Technology (Network Security)
312412/ 313211	Digital Communication Technician/Digital Reception Technician	ICT20410	Cert II in Telecommunications Digital Reception Technology
		ICT30410	Cert III in Telecommunications Digital Reception Technology
		ICT40310	Cert IV in Telecommunications Radio Communications
261111/ 261112	ICT Business and Systems Analyst	ICA40505	Cert IV in Information Technology (Programming)
		ICA50405	Diploma of Information Technology (Networking)
		ICA50605	Diploma of Information Technology (Website Development)
		ICA60205	Advanced Diploma of Information Technology (Network Security)

ANZSCO	Occupation/Job Role	Training Package Qualification	
263112	ICT Helpdesk Officer	ICA30105	Cert III in Information Technology
		ICA40405	Cert IV in Information Technology (Networking)
135199	ICT Managers	ICA50205	Diploma of Information Technology (Project Management)
		ICA60105	Advanced Diploma of Information Technology (Process Improvement)
		ICA60205	Advanced Diploma of Information Technology (Network Security)
135112	ICT Project Manager	ICA50205	Diploma of Information Technology (Project Management)
		ICA60105	Advanced Diploma of Information Technology (Process Improvement)
262112	ICT Security Specialist	ICA60205	Advanced Diploma of Information Technology (Network Security)
313214/ 313199	ICT Support Technician	ICA30105	Cert III in Information Technology
		ICA40305	Cert IV in Information Technology (General)
		ICA50105	Diploma in Information Technology (General)
263299	ICT Support and Test Engineers	ICA30105	Cert III in Information Technology
		ICT40510	Cert IV in Telecommunications Network Planning
		ICA40305	Cert IV in Information Technology (General)
		ICA10105	Diploma in Information Technology (General)
261212	Multimedia Specialist and Web Developer	ICP30310	Cert III in Printing and Graphic Arts (Multimedia)
		CUF40207	Cert IV in Interactive Digital Media
		ICA40805	Cert IV in Information Technology (Multimedia)
		CUF50207	Diploma of Interactive Digital Media
262111	Professional – Virtual Database Administrator	ICA50505	Diploma of Information Technology (Database Design and Development)
261111/ 261311/ 261312/ 261313	Software and Applications Programmer	ICA40505	Cert IV in Information Technology (Programming)
		ICA50705	Diploma of Information Technology (Software Development)
342412/ 342413	Telecommunications Cable Jointer/ Lineworker/Cabler	ICT20310	Cert II in Telecommunications Cabling
		ICT20410	Cert II in Telecommunications Digital Reception Technology
		ICT20210	Cert II in Telecommunications
		ICT30410	Cert III in Telecommunications
		ICT30310	Cert III in Telecommunications Cabling

ANZSCO	Occupation/Job Role	Training Package Qualification	
233411/ 263312/ 263311/ 313212/ 313213	Telecommunications Network Planner/ Operations/Test Engineer/ Designer/Technical Specialist	ICT30210	<i>Cert III in Telecommunications</i>
		ICT40210	Cert IV in Telecommunications Engineering
		ICT40510	Cert IV in Telecommunications Network Planning
		ICT40610	Cert IV in Telecommunications Network Technology
		ICT50210	Diploma of Telecommunications Network Engineering
		ICT50510	Diploma of Telecommunications Planning and Design
		ICT60210	Advanced Diploma of Telecommunications Network Engineering
		ICT70110	Vocational Graduate Certificate in Telecommunications Network Engineering
		ICT80110	Vocational Graduate Diploma of Telecommunications Network Engineering
No applicable code	Telecommunications Rigger Installer	ICT20510	Cert II in Telecommunications Rigging Installation
		ICT30510	Cert III in Telecommunications Rigging Installation
262113	Virtual Systems Administrator	ICA40705	Cert IV in Information Technology (Systems Analysis and Design)
		ICA50305	Diploma of Information Technology (Systems Administrator)
PRINTING AND GRAPHIC ARTS			
392111	Binder and Finisher	ICP20610	Cert II in Printing and Graphic Arts (Converting, Binding and Finishing)
		ICP30710	Cert III in Printing and Graphic Arts (Print Finishing)
131112	Business Development/ Sales and Marketing Manager	BSB41307	<i>Cert IV in Marketing</i>
		BSB51207	Diploma of Marketing
		ICP40610	<i>Cert IV of Printing and Graphic Arts (Management/Sales)</i>
		ICP50410	Diploma of Printing and Graphic Arts (Management/Sales)
392311/ 392211	Digital Printer/Digital Press Operator (Inkjet; Continuous; Web Fed; Wide Format)	ICP30410	Cert III in Printing and Graphic Arts (Digital Print)
		ICP30510	Cert III in Printing and Graphic Arts (Printing)
		ICP40110	Cert IV in Printing and Graphic Arts (Graphic Pre-Press)
		ICP40310	Cert IV in Printing and Graphic Arts (Printing)
		ICP50210	Diploma of Printing and Graphic Arts (Multimedia)

ANZSCO	Occupation/Job Role	Training Package Qualification	
392111	Mail House Operator	ICP21010	Cert II in Printing and Graphic Arts (Mail House)
		ICP31010	Cert III in Printing and Graphic Arts (Mail House)
392311	Print Production/Machinist (including digital)	ICP20410	Cert II in Printing and Graphic Arts (Print Production Support)
		ICP30510	Cert III in Printing and Graphic Arts (Printing)
133512	Production Manager	ICP40710	<i>Cert IV in Printing and Graphic Arts (Process Leadership)</i>
		ICP50510	Diploma of Printing and Graphic Arts (Process Improvement)
TRAINING AND EDUCATION			
272111	Career Counsellor/Adviser		(No applicable TP qualification, higher education qualification used)
422116	Education/Teachers' Aide		(TP qualification available through Community Services and Health Industry Skills Council)
242211	Professional – Language Literacy and Numeracy	TAE70110	Vocational Graduate Certificate in Adult Language, Literacy and Numeracy Practice
		TAE80110	Vocational Graduate Diploma of Adult Language, Literacy and Numeracy Leadership
242211	Professional – Training and Development (Non-school VET)	TAE40110	Cert IV in Training and Assessment
		TAE50104	Diploma of Training and Assessment
242211	Professional – VET Curriculum Designer/Adviser	TAE40110	Cert IV in Training and Assessment
242211	Teachers – Schools – ICT Learning	TAE40110	Cert IV in Training and Assessment
223311	Training and Development Professional	TAE40110	Cert IV in Training and Assessment
		TAE50104	Diploma of Training and Assessment
132311/ 223311	Training Centre Manager	BSB51107	Diploma of Management
		TAE40110	Cert IV in Training and Assessment
242211	Vocational Education Teacher, School & Non School/Workplace VET Trainer-Assessor/Trade Trainer	TAE40110	Cert IV in Training and Assessment
		TAE50104	Diploma of Training and Assessment

Appendix D – Industry Case Studies

The following industry case studies provide examples of the way in which IBSA Training Packages have been successfully implemented in enterprises as part of holistic workforce development solutions. These examples from large and small enterprises emphasise the role that training packages play in building skills that are integrated within organisations. The case studies also highlight the critical results that can be achieved from establishing partnerships to support industry skilling – sharing responsibility and maximising good practise.

The six industry case studies are:

Business Services: QANTAS – boosting enterprise capacity through a workforce capability program

Cultural and Creative Industries: Enhancing and recognising skills at the Victorian Arts Centre

Financial Services: St George Bank – partnering on workforce development

Information and Communications Technology: Telstra – investing in workforce development

Printing and Graphic Arts: Prografica – skills for new brand management services

Training and Education: Performance Training – training for success.

Business Services:

QANTAS – boosting enterprise capacity through a workforce capability program

As the major aviation employer in Australia, Qantas can't afford to sit back and wait for the marketplace to deliver the skills it requires. It is active in building its enterprise skills and strengthening its capability across 35,700 employees and at least 250 unique roles. Their roles range from pilots to cabin crew, professional and technical engineers to aviation information analysts, fuel hedging specialists to meteorologists, baggage handlers and catering.

Capability development is a long term commitment. For a Boeing 747 Captain it takes 18 to 20 years of development, plus regular training every year after that; Qantas is planning five and ten years out for its future skills. An additional challenge is training a workforce that operates in diverse locations across the cities, regions and rural Australia, on the move and in shift work. So a range of delivery mechanisms maximise the capability development processes.

Focussing long term, the Qantas Group has developed a People Strategic Plan that aligns to the business strategy and three goals of:

1. building a strong employee engagement culture conducive to lasting change
2. supporting and developing the diverse and ageing workforce, and
3. developing leadership capability across all levels of the organisation.

The strong workplace culture relies on providing a safe workplace with attractive conditions. Key Qantas benefits include, consistent with Australian best practice, access to award-winning employer-sponsored childcare in three cities, wellbeing programs focussing on healthy ageing, paid and unpaid parenting and carers' leave and opportunities for reduced airfares.

Qantas has a set of leadership standards designed to give all managers and supervisors a common approach to people management. Desirable leadership behaviours have been identified and are measured including collaboration and care, being open and transparent along with enjoyment and accountability.

In the many Qantas Group workplaces it is the immediate manager who is critical; they build the relationship with employees and importantly build or breach trust. Qantas has adopted the 70/20/10 approach – 70 percent training on the job, including targeted development assignments, 20 percent via coaching and mentoring; and 10 percent training in the classroom. All programs are scalable, flexible, practical and capable of being delivered anywhere.

Qantas has deliberately chosen to deliver national qualifications. Employees gain transferrable skills with nationally recognised qualification outcomes increasing their learning commitment. Frontline leader development was revised in 2008 in partnership with business leaders, internal and external RTO and an Australian Apprenticeships Centre to deliver Certificate III in Business and Certificate IV in Frontline Management with over 1,000 leaders undertaking the program.

This leadership development focus is actively supported by the Qantas Group Executive Team within Qantas and provides high quality communication to staff largely on the move and in many locations; over 2009-10 IBSA actively supported building these critical leadership skills within Qantas through a national Enterprise Based Productivity Places Program pilot.

Qantas established a \$10 million Centre of Service Excellence was built in 2008 to support intensive, face-to-face coaching and group training. An annual employee awards program supports the achievements of individuals.

Qantas is working to create a sustainable future; creating safe and healthy workplaces, engaging and motivating people – giving them the core skills they need as they move through their careers – and by developing great leaders at all levels of the business.

Cultural and Creative Industries: Enhancing and recognising skills at the Victorian Arts Centre

The Victorian Arts Centre is one of Australia's major state-owned performing arts venues. It encompasses both indoor and outdoor entertainment spaces, including theatres, a concert hall, exhibition spaces, restaurants, and Melbourne's iconic outdoor venue, the Sidney Myer Music Bowl. Every year it hosts international, national and local artists in traditional, contemporary and avant garde performances: concerts, dance, plays, musicals and a host of other forms.

In 2008, 2.8 million people walked through the Centre's doors to attend performances, exhibitions and events. Broadening its appeal and continuously improving its operations are high priorities.

The Centre is committed to building a positive organisation culture. Its workforce – over 260 full-time equivalent employees – is diverse in function and skills. Many employees are tertiary educated, and the Centre is keen to develop its skills base by significantly increasing the number of staff with a post year 12 qualification.

One particular group with few formal qualifications are the technical theatre crews. In a venue of the Centre's size and commitments the skills they require are diverse. In the course of setting up and taking down productions, their work includes rigging, carpentry, stage lighting and sound, audio/visual projection and props. They must accommodate changes in technology, varied production requirements and mandatory occupational health and safety standards. Safety is a paramount concern, in an environment where there is both manual handling and digitised operations of large sets, as well as extensive use of electrical equipment.

With the increasing professionalism of technical theatre staff, the Victorian Arts Centre is addressing the current and emerging training needs of this group. An established RTO, the Centre is using the Certificate III (Live Production Theatre and Events) to do this.

The Centre sees many advantages in this approach:

- training, course materials and assessment are customised to the Centre's varied facilities and productions, particularly large scale events and its highly specialised equipment. Traditional training institutions can rarely replicate the complexity, technology and scale of the environment
- classroom learning, supervised workplace practice and assessment (including Recognition of Prior Learning) take place at the Centre
- experience/skills of existing staff are developed and recognised, a major consideration given the shortage of appropriately skilled technicians
- workplace and industry-wide standards are lifted and
- safety requirements in the Centre's complex and distinctive working environment are continually and rigorously addressed.

The Victorian Arts Centre is also keen to develop the skills of front-of-house staff. It is delivering the Certificate III in Venues and Events (Customer Service) with a view to developing team leaders among its ushers, a heavily casualised workforce. Team leaders will have skills in coaching, reinforcing standards, and customer service for people with special needs and diverse visitor groups.

The Centre views both training programs as important in retaining skilled staff, developing career opportunities for their workforce and lifting industry standards.

The Victorian Arts Centre anticipates over 40 staff will be trained under this initiative which, with project support by IBSA, has been funded under the Australian Government's Enterprise Based Productivity Places Program.

Financial Services: St George Bank – partnering on workforce development

St George Bank recognises that, as an employer of choice, having a program that recognises and lifts capability of its existing staff assists in retaining its employees and attracts new staff. In recent years St George has integrated its internal training programs with national qualifications.

Developing strong partnerships with education and training partnerships with an RTO, Esset Australia, and an Australian Apprenticeships Centre, Sarina Russo, maximises St George Bank's skills outcomes. Through this three-way partnership St George offers traineeships and Certificate III to Diploma qualifications to staff in different areas of the business. The programs align to workforce and business planning and priorities. For 2010, a key priority was to build sales capability in the Bank's retail network; a two-week induction program was mapped to the Certificate IV in Business Sales.

The retail business includes branches and the contact centre; these areas were the first to be nationally recognised qualifications. More recently the process has been replicated to upskill existing staff. St George Bank is currently offering training in Certificate III in Financial Services, Certificates IV in Business Sales and Frontline Management, Certificate IV and Diploma in Training and Assessment and the Diploma of Management. These programs utilised a combination of Existing Worker Productivity Places Program and traineeship funding

Over 600 staff have completed a qualification since the programs commencement in 2008 averaging around 70 percent completion. The program features integrated on the job learning along with Recognition of Prior Learning.

St George has been recognised for its work with its learning partners and a structured arrangement involving process mapping of the roles and responsibilities within the three-way relationship. The service level agreements are reviewed annually or when required by a business process change. These processes have been acknowledged by the Department of Education, Employment and Workplace Relations as contributing to the above average completions; other industries are looking at the St George approach to offering business aligned nationally recognised qualifications. IBSA partnered with the Bank on a Productivity Places Program trial in late 2008–09 with the Western Australian PPP was contributing funding to the program.

The robust training culture at St George Bank, while acting as attraction and retention strategies, enhances staff motivation and has the additional benefit of attracting government funds to assist investment in further learning initiatives. Outcomes for individual learners are also important; they are better equipped to deliver a service to customers and ensure business objectives are achieved. Customer satisfaction is the critical measure and rates are higher for St George than any other major bank. More staff choose to stay and progress their careers with St George with employees recognising the value proposition St George bank offers.

Information and Communications Technology: Telstra – investing in workforce development

Telstra's has a long history with telecommunications in Australia dating back to 1901, when the Postmaster-General's Department was established by the Commonwealth Government firstly to manage all domestic telephone, telegraph and postal services and then in 1946 an expanded role to manage international telecommunications services.

Telstra underwent partial privatisation in November 1997 when the Australian telecommunications market was opened and was later fully privatised in November 2006.

Telstra has a tradition of investing in its people and training is a key component of the business's workforce strategy. After training thousands of apprentices until the 1990s, when all apprentice training ceased, Telstra took the step in 2004 to invest in developing its future workforce. Telstra then launched its Operations Traineeship Program. Starting with 140 trainees it has since sponsored over 1,000 trainees.

The Operations Traineeship successfully completes 78 percent of trainees, with 83 percent being offered jobs with Telstra. The Trainees are generally 22–23 years old. As part of Telstra's diversity commitment Indigenous and female trainees have been sponsored. The program is currently made up of 220 trainees in metropolitan and regional Australia in eight key qualifications: Certificates II and III in Telecommunications, Certificate III in Customer Contact, Certificate II in Digital Reception Technology, Certificates III and IV in Information Technology.

Trainees benefit not only from formal competency based training offered by the RTO and practical work experience but also from the extensive in-house training offered by Telstra, eg occupational health and safety and technology-specific training. Telstra also appoints an internal coach/mentor for each trainee. Coaches are selected for their ability and interest in mentoring trainees and undergo training in topics including effective coaching and working with Generations X and Y. A dedicated website is set up for the Trainee Program enabling each business unit to share information. Evaluation is another key component of the program and is undertaken at a number of levels, including the business units, the suppliers and trainees.

Telstra is also focusing on applying a consistent approach to broader workforce planning and development, largely to ensure it has the ongoing capability to address business needs. This has resulted in programs to address the skills needs of existing employees. Using the Australian Government's Enterprise Based Productivity Places Program (PPP), and the NSW and Australian Governments' funded PPP, Telstra is refreshing and building the contemporary telecommunications skills in a number of roles. The upskilling of people in their roles will be underpinned by the recently released Integrated Telecommunications Training Package (ICT10).

The training providers work closely with business units at learning sites around Australia delivering training in online and face to face modes. The strength of these partnerships is the sound understanding of the business's requirements and workplace culture.

Printing and Graphic Arts: Prografica – skills for new brand management services

Multi-award winning company Prografica was established in October 1995 providing offset print services to small to medium enterprises in Sydney's inner western suburbs. Today, Prografica is positioned as a marketing company offering world class services at competitive prices; its robust infrastructure meets customers' ongoing brand management needs.

Prografica has increased its market profile achieving repeat and referred business from some of Australia's most recognised and reputable brands. Its entrepreneurial approach has seen it move from traditional print manufacturing to an industry leading marketing brand management service offering printed merchandise, website design, development and maintenance, multi-touch and multi-channel, direct marketing campaigns along with product warehousing and logistics.

The company has 18 employees and has won awards for innovation, business development, digital marketing and health and safety. As a small company with a growing range of services, Prografica requires staff with core technical competencies in their field such as graphic design, web development, pre-press and digital printing, bindery and sales. Further skills to enable staff to multiskill across the business focus on time management, customer service, leadership and collaboration. Capabilities required by managers at Prografica include technical, project, service and human resources with a functional understanding of production processes, deadlines and budgets.

Prografica's business development team have two, at first glance contradictory, challenges. The first to boost sales and the second to save the client money. The team has an audit process that uncovers simpler and effective options for customers' requirements, eg web-to-print solutions or warehousing and logistics.

There are three central strategies used by Prografica to ensure its staff has the skills and capability to deliver its brand management services; firstly hiring people with the appropriate core technical skills; secondly complementing these skills with a work-based exposure and skilling program for the cross functional requirements; and finally purchasing training in specific areas.

The Prografica sales process is based on sales psychology requiring high level client service and business sales competence. Prografica's experience is that the best result for the business and individuals is learning is to gain skills through learning that is customised to Prografica's business context. When Kerim El Gabaili, Prografica's CEO, was asked what was needed for the business to use nationally recognised training, his response was specific, contextualised skilling appropriate for small-medium enterprises, processes using sales psychology and applied workplace learning in the context of the new printing and communications industry.

Kerim El Gabaili firmly believes the printing industry must be innovative and use its shared voice in the new world of communication services. 'There is a real opportunity for industry leaders to speak about the printing and communications industry of the future to governments, businesses and the media.' He suggests 'a road map for the future industry would highlight opportunities particularly for the numerous smaller businesses. The road map would feature the industry rebranding to visual communications and showcasing the industry's achievements in sustainable production and business practices.'

Training and Education: Performance Training – training for success

Training organisations can be great at identifying skills needs for their clients, but sometimes have a blind spot in relation to their own team's development. Successful RTOs know that the skills of their own workforce are their greatest asset. Performance Training Pty Ltd is a Queensland-based RTO that was established in 1981 to provide technical and safety training for the mining industry.

The company has developed a reputation for the provision of high quality products and services. Performance Training offers its clients holistic training solutions that include skills analysis, course design and training and assessment services, often in partnership with other RTOs or a client's inhouse trainers. The company's numerous awards for training in the mining industry were achieved largely through having a defined goal to be the preferred supplier of training services to the mining, power and civil construction industries.

The Performance Training team includes technical writers and consultants, workplace trainers and assessors, graphic artists, video and DVD producers, desktop publishers, process improvement consultants, web designers and programmers. Managing Director, Bryce Coventon, believes that the mix of expertise in the workforce is what makes Performance Training successful. 'Irrespective of a project's size or scope, we have the right people, the right skills and the right attitude to ensure we always deliver.'

The small team brings together employees with specialist skills in a variety of fields including geology, physics, anthropology, aerospace engineering, biotechnology, information technology and digital media. Recently eleven staff completed the Certificate IV in Training and Assessment and while not all of these staff are involved in the delivery of accredited training, Bryce Coventon says that undertaking the Certificate IV as a group allowed staff to share and strengthen their knowledge of competency based training.

While our RTO is able to deliver TAA, we had an external trainer come into the workplace to lead the internal program as it's important to get an outside perspective. A number of staff already held the qualification or its predecessor so we included RPL; revisiting topics in the small group setting was great for building knowledge and sharing understandings within the team. Thursday afternoon was TAA day and valuable professional discussions continued through the rest of the week.

The company is planning to use a similar process to transition to the TAE qualification. 'While we realise that it's not strictly necessary to re-do the qualification so soon, we see it as a worthwhile opportunity to continue building our practice and training services.'

Individual development plans are used to identify employees' goals and interest with employees currently undertaking a range of formal qualifications in education, art, auditing and management. Employees are also encouraged to identify new skills and share knowledge within the team through internal workshops and calibration meetings focussed on improving products and services.

Induction training is one of the Performance Training's specialist services and so, not surprisingly, the company has a careful approach to the induction of their recruits ensuring they are well prepared to contribute to the business on commencement. As a result staff retention is high. 'It's at least three years since we had anyone leave,' says Bryce.

When staff have a better understanding of the business, they are in a better position to raise ideas that will improve the business; this innovation is a huge benefit for us.

