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Scoping Skills for Sustainability

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IBSA wishes to acknowledge the work of Robyn Alexander of Alexander Toohey who has prepared this report.

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Executive Summary

This project follows on from the 2009 review by the 11 industry skills councils (ISCs) of the issue of environmental sustainability in the Training Packages for their industry sectors. The report *Environmental Sustainability: An Industry Response* (www.isc.org.au) provided an overview of what action is being taken by ISCs in responding to the skill needs of industry in environmental sustainability. Furthermore the report acknowledged that ISCs will need to develop a range of responses to address current and emerging priorities. This report aims to provide a framework for IBSA to consider its responses.

Research conducted as part of this project, corroborated by the consultations, endorses the view that sustainable development and sustainability skills should not be viewed as an 'add on'.

Sustainability should be embedded into the functions of an organisation, i.e. how it plans, how it implements its plans and how it measures its outcomes. In the same way sustainability should be embedded in how individuals carry out their work, i.e. how they plan their work, how they organise their work and how they carry out their work. The 2009 ISC report referred to this as 'personal responsibility' for environmentally sustainable practices.

At the operational or 'personal' level, there is the notion of how sustainability is incorporated into specific job roles. For example how people plan, organise and implement their work adhering to practices for sustainable development.

As well there is the level of the organisation and the management of that organisation as part of sustainable development. It is at this level that IBSA has a significant contribution to make as the national skills council responsible for the identification, development and maintenance of competencies and qualifications for managers.

As part of this project IBSA's training packages were reviewed to assess the extent of incorporation of skills for sustainability. The stock take identified considerable activity with respect to 'sustainability concepts'.

In summary, sustainability skills are being addressed in the current reviews of the Financial Services and the Information and Communication Training Packages.

With respect to the Printing and Graphics Arts Training Package, the enhancement project currently underway will strengthen considerably how sustainability skills are incorporated in its various qualifications.

Within the Education sector, new units are being drafted to support the recently endorsed Green Skills Agreement of the Ministerial Council for Tertiary Education and Employment. These units will provide impetus for professional development programs ‘to upskill VET instructors and teachers to deliver skills for sustainability.’ The professional development of VET instructors and teachers will go a long way to achieving the other MCTEE goal of embedding ‘skills for sustainability practice and teaching in vocational education and teaching.’

In the training packages that make up the Cultural and Related Industries sector and in the Telecommunications Training Package, there are numerous examples of units that have incorporated ‘environmental issues’ within the units either as part of the performance criteria, in the required skills/knowledge and/or in the range statement. The environmental issues addressed are compliance with laws and regulations, waste management and efficient use of materials.

Also within the Telecommunications Training Package there is a unit of competency ICTTC170 *Follow OHS and environmental policy and procedures which* incorporates the consideration of environmental issues in the management of workplace tasks.

What are the gaps in sustainability skills and how to address them? In the short term this is probably best done as part of a review of qualification packaging rather than unit by unit. The recent decision of the National Quality Council giving greater flexibility to the incorporation of electives and accredited courses in qualifications will facilitate this process as IBSA qualifications will have to be reviewed as part of the implementation of the NQC decision.

In the long term, as Training Packages are reviewed, it may be more appropriate that qualifications for technical or operational job roles include generic competencies that encompass sustainability as part of a unit/s which cover how a person plans, organises and undertakes their work.

In the meantime, the BSB generic sustainability units can be used as part of the packaging of qualifications. Other ISCs are also taking this action. Some ISCs are using the generic sustainability units as they exist or they are contextualising them for their industry sectors. However, consultations revealed a view that given the critical nature of these competencies they are worthy of a cross-ISC review.

As stated, it is IBSA's role as the guardian of the managerial competencies which is critical in the context of skilling the Australian workforce for sustainable development. It is the managers of organisations who will lead and be responsible for implementing sustainable development practices in their organisations.

This starts with the alignment of organisational objectives more broadly with those of society and taking a longer term perspective than may have been in the past. This has been referred to as corporate social responsibility (CSR) or corporate citizenship or simply corporate sustainability.

Ultimately sustainability is not an 'add on' but incorporated in the development of business practices that are built around social and environmental considerations. As stated, this starts with the planning function which will then incorporate concepts like the triple bottom line in the implementation of strategic and business plans.

If Australian managers are going to lead in sustainable development, many of the qualifications aimed at management development may need to be reviewed in this context. Furthermore it is important to ensure that the many trainers and assessors of these qualifications have ongoing professional development to deliver skills for sustainability for the next generation of managers. It was stressed by a number of stakeholders that the emphasis should be on equipping VET trainers for a particular industry with the technical competencies, the delivery skills and assessment capability to deliver and assess sustainability skills.

In the review of other ISC documentation on sustainability and in the consultations, it became clear that there are a number of generic competencies that can underpin sustainable development. These include: compliance, auditing, risk assessment and risk management, continuous improvement, and innovation. Some of these competencies are already in the Competitive Manufacturing Training Package and the BSB. IBSA has a significant cross-industry role in this area as many these competencies are considered part of 'management'. Many of the competencies have already been developed but are often applied to a particular context. Occupational health and safety (OHS) provides a good illustration.

IBSA is responsible for the generic OHS competencies and those competencies which underpin OHS specialist roles. There are a number of similarities between OHS and sustainability as a specialist job role. Sustainability like OHS should be built into a person's job role. However there is a need for sustainability specialists to support the organisation

and individuals in becoming more sustainable in their work practices, in the same way many organisations have OH&S professionals.

Many universities and registered training organisations are developing their own courses aimed at people considering a career in 'sustainability'. The question is whether or not there should be national competencies to underpin the role of the sustainability specialist, in the same way that there is in OHS.

The 2009 ISCs report noted that at this stage there is a 'worrying plethora of accredited courses and policy' on skills for sustainability. It further noted that to achieve environmental sustainability 'requires a climate of innovation, collaboration and leadership'. IBSA, as the champion for these competencies, can play a pivotal role in facilitating and supporting the achievement this outcome.

Recommendations

1. Ensure the BSB sustainability units are included as core or elective units as part of the review of the packaging arrangements for IBSA qualifications.
2. Incorporate 'sustainability' as part of the review of the OHS units of competency in 2010.
3. Consult with other ISCs about the development of cross-industry competencies and qualifications comparable to those for OHS for 'sustainability' specialist roles.
4. Action the recommendation of the Report *Incorporation of Manager 2020 Principles* for the development of a generic management/leadership skills framework embedding sustainability as a core competency.
5. Initiate a cross-ISC project to develop a set of units and qualifications that meet the needs of business and enterprises in sustainable development. Included in this project would be a review of the BSB generic sustainability units, the Competitive Manufacturing units and qualifications and incorporate or review relevant BSB units including:
 - compliance
 - auditing
 - risk assessment, risk management
 - continuous improvement
 - management
6. Develop professional development resources and programs for delivery to trainers and assessors of IBSA qualifications to:
 - support the implementation of the BSB generic sustainability units in the relevant industry qualifications
 - support the implementation of the new units of competency in Training and Assessment for sustainability on an industry by industry basis. This program would be accredited using IBSA developed training and assessment materials and offered jointly by IBSA and approved RTOs for the relevant industry sector.
7. Consider a format for developing IBSA training packages which standardises units around how employees plan, organise and undertake their work incorporating sustainability practices.

Background

There is growing recognition at national, state/territory, industry and enterprise level of the increasing importance of skills to support sustainable development. At the national level, the Commonwealth and State and Territory Ministers adopted the *National VET Sector Sustainability Policy and Action Plan (2009-2012)*.

Recently, State and Territory Ministers responsible for vocational education and training signed on to a new National Green Skills Agreement aimed at ensuring Australia's VET system delivers the skills for sustainability that will enable individuals and businesses to contribute to a sustainable, low carbon economy in their workplaces and communities.

The Agreement's objectives are to:

- embed skills for sustainability practice and teaching in vocational education and training;
- up-skill VET instructors and teachers to deliver skills for sustainability;
- review Training Packages to embed sustainability knowledge, skills and principles; and implement a transition strategy to re-skill vulnerable workers

At the state and territory level, responses are being formulated to meet specific industry and regional needs for skills in environmental sustainability. An example is in NSW where there have been two editions of its report *Skills for Sustainability (2007 and 2009)*. Based on this report, NSW strategies and priorities acknowledge unique regional and industry needs of that State through a range of programs.

At an industry level, Industry Skills Councils have reviewed training packages for their industry sectors addressing the issue of environmental sustainability producing a report *Environmental Sustainability: An Industry Response*.

Following on from this work individual ISCs are delving more deeply into the issues surrounding skills for sustainability. To this end IBSA commissioned a project to:

- Determine if current generic sustainability units from the Business Services Training Package should be included as core units in all or selected IBSA qualifications;
- Identify the need and support for industry specific sustainability skills as core competencies;

- Establish a qualifications framework for each qualification, contingent on the outcomes of the above;
- Identify gaps and establish industries support for the development of additional units that provide the skills and knowledge, but not limited to the following:
 - Emissions management;
 - Managing the impact of climate change;
 - Emissions/carbon trading;
 - Compliance with regulatory requirements, and
 - Consideration of current new units developed in ICT02, ICPO5 and FNS04.
- Identify and establish industry support for current/future sustainability technologies to support the development of skills and knowledge within new and existing units of competency;
- Determine appropriateness of skills for sustainability for micro and small business;
- Review the need for support materials;
- Investigate how other Industry Skills Councils are involved in skills for sustainability;
- Investigate the accredited courses available in sustainability and the institutions conducting the courses;
- Identify the need and support for skill sets for environmental sustainability, and
- Identify the need and support for embedded skills for sustainability.

Robyn Alexander of Alexander Toohey Pty Ltd was contracted to carry out the project.

Methodology

Stage 1

In carrying out this Stage the following action was taken

BSA's Training Packages were reviewed to determine the extent to which sustainability skills are addressed.

Research was conducted into emerging job roles to support the goal of a sustainable economy. An introductory paper was developed to be used as basis of the consultations.

Questions to be explored were:

- What are the emerging job roles related to environmental sustainability in those industries covered by IBSA?
- What qualifications/skill sets do the people in the identified job roles need?
- How are existing job roles changing as a result of issues associated with environmental sustainability?
- How are people maintaining their current competence in the context of these changes?
- How are professional associations addressing these issues?
- What role should IBSA assume in working with stakeholders in addressing the maintenance of current competence in relation to environmental sustainability?

Supplementary research on developments with accredited courses and relevant qualifications being developed was conducted.

Action being taken by other ISCs with respect to skills for sustainability was also investigated.

Peak bodies were contacted to determine their approach to and view on skills for sustainability.

All state training authorities and other ISCs were advised of the project and input was sought.

Stage 2 – Consultations

Contact was made via email or telephone to a sample of industry representatives on IBSA's Sector Advisory Committees. Meetings were organised with some of these industry representatives and telephone interviews were held with others who responded to the request. A list of consultations is at Appendix Two.

Research into the activities of other ISCs was followed up with a number of face to face or telephone interviews.

Stage 3 – Final Report

A draft summary together with recommendations was submitted in December 2009 prior to the final report.

IBSA Training Packages

A review of the training packages covering IBSA's industry sectors was undertaken to determine the extent to which environmental sustainability is addressed.

The following word searches were undertaken across the IBSA training packages.

- sustainable
- sustainability
- environment
- waste
- efficient
- efficiency
- reduction
- reduce

The only units to be identified with 'sustainable' in the unit title were the BSB generic units.

BSBUSUS201A	Participate in environmentally sustainable work practices
BSBUSUS301A	Implement and monitor environmentally sustainable work practices
BSBUSUS401A	Develop workplace policy and procedures for sustainability

However there is a range of other units that incorporate concepts of environmental sustainability across the Training Packages. See Appendix One for a matrix of units which incorporate environmental sustainability to some degree in the BSB and Cultural and Related Industries Training Packages. The Telecommunications Training Package was also reviewed. It was found that the units which involve 'installing', 'placing', 'resourcing' or 'securing' materials or equipment had reference to environmental issues either as part of waste minimization or compliance with environmental codes and regulations. This is the majority of the units and because they were all similar, they were not included in the matrix.

To summarise, in most instances where a unit involves use of materials or skills and knowledge in planning or design, there is reference to environmental considerations either in required knowledge or the range statement.

Action being taken in other industry sectors is summarised below.

Printing and Graphic Arts

The Printing and Graphics Arts Training Package (ICP05) Enhancement project has recommended, among a number of things, that the BSB environmental sustainability units be incorporated as a core component of every qualification in ICP05. Furthermore the enhancement report calls for the incorporation of competitive manufacturing (CMI) units as electives.

To be specific it has been recommended that one of the following environmental units is incorporated as a **core** unit of competency into all existing and new qualifications in ICP05, at the appropriate level:

BSBUS201A	Participate in environmentally sustainable work practices
BSBUS301A	Implement and monitor environmentally sustainable work practices
BSBUS401A	Develop workplace policy and procedures for sustainability

Furthermore it is recommended that the following competitive manufacturing units are incorporated into ICP05 as **elective** units of competency at the appropriate level:

MSACMC210A	Manage the impact of change on own work
MSACMC200A	Apply competitive manufacturing practices
MSACMS201A	Sustain process improvements
MSACMT230A	Apply cost factors to work practices
MSACMT240A	Apply 5S procedures in a manufacturing environment
MSACMT270A	Use sustainable energy practices
MSACMT271A	Use sustainable energy practices
MSACMT280A	Undertake root cause analysis
MSAENV272A	Participate in environmentally sustainable work practices
MSACMC410A	Lead change in a manufacturing environment
MSACMT440A	Lead 5S in a manufacturing environment
MSAENV472A	Implement and monitor environmentally sustainable work practices
MSAPMSUP390A	Use structured problem solving tools

These recommendations are going through the consultation and feedback process, validation and sign off, before it is put forward for endorsement by the National Quality Council.

Printing Industries Association of Australia, the peak body for the printing industry has developed its own certification program (Sustainable Green Print) designed to help printing companies meet their environmental responsibilities and go above and beyond compliance. Consideration could be given to accrediting the training to support Sustainable Green Print against some of the competencies to be incorporated in ICP05.

Information and Communication

There are two training packages within the Telecommunications Training Package (ICT02) and the Information and Communication Training Package (ICA05). The Information and Communication Training Package is currently under review. At this stage the BSB sustainability units will be core units in the packaging at appropriate qualification levels.

In addition there are 5 ICT specific units addressing sustainability. These are:

ICTSUS4183	Install and test renewable energy systems for ICT networks (elective)
ICTSUS4184	Install and test power saving hardware (elective)
ICTSUS4185	Install and test power management software (core)
ICTSUS4186	Install thin client applications for power over ethernet (elective)
ICTSUS5187	Implement server virtualisation for a sustainable ICT system (elective)

The training package developers are also looking at sustainability units at AQF 6, 7 and 8.

As mentioned, in the Telecommunications Training Package there is reference to sustainability skills/knowledge in various performance criteria, required knowledge or within the range statements.

All units (over 100) which involve installation or use of materials incorporates reference to 'environmental requirements' and conformance to 'relevant legislation, codes, regulations and standards' particularly in relation to waste management.

Furthermore all the units which involve organising resources or planning a project brief also have reference to legislative and environmental conditions. As a consequence these units have not been included as part of Appendix One.

An example of how sustainability is addressed in range statements is in range statement for the unit *Forecast service demands* ,

Relevant legislation, codes, regulations and standards include:

Technical Standards AS/ACIF S008:2006, AS/ACIF S009:2006
AS Communications Cabling Manual (CCM) Volume 1
ACIF Standards and Codes
AS/NZS 3000:2007
AS/NZS 3080:2003
AS/NZS 3084:2003
AS/NZS 3085.1:2004
AS/NZS ISO/IEC 15018:2005
AS/NZS ISO/IEC 24702:2007
AS/NZS IEC 61935.1:2006
AS/NZS IEC 61935.2:2006
AS/NZS ISO/IEC 14763.3:2007
Australia Building Codes and Regulations
Fire Regulations
Occupational Health and Safety
Environmental Protection Acts
Mining legislation
Noise abatement and heritage legislation
Confined spaces regulations
Cabling security codes and regulations

In the unit *ICTTC0301D Prepare a project brief*, one of the range statements is -

Barriers to planned network growth may include: local planning approvals, environmental considerations, heritage legislation restrictions, government policy, community opposition

Finally the unit *ICTTC170A Follow OHS and environmental policy and procedures* incorporates the consideration of environmental issues in the management of workplace tasks. This unit is a prerequisite for many other units.

The one exception is the more generic unit *ICTTC173A Plan, organise and undertake work activities* which does not contain any reference to sustainable practices in planning, organising and undertaking work activities.

This competency is based on the competency UEPOPS439A – Plan and organise work, from the UEP06 Electricity Supply Industry – Generation Sector Training Package Skills and knowledge to be covered:

Develop and implement work plan; Co-ordinate/sequence work requirements; Review job progress against agreed goals; Communicate information to others; Prepare and interpret work procedures; Estimate materials and resource requirements; Apply data analysis techniques and tools; Basic work planning and organisation theory; Occupational Health and Safety; Team goals; Enterprise permit procedures; Relevant plant and equipment; Relevant statutory requirements; Appropriate engineering and design practices and procedures; Enterprise recording procedures; Appropriate tools, equipment and materials required to do the work; Basic team communication process; Time management techniques.

Education

New units of competency in Training and Assessment for Sustainability are being drafted. These units are expected to support the recently endorsed Green Skills Agreement of MCTEE, in particular the commitment to:

- embed skills for sustainability practice and teaching in vocational education and training;
- up-skill VET instructors and teachers to deliver skills for sustainability;

The working titles of the units are:

- Recognise and unpack sustainability skills in training packages and curriculum.
- Incorporate sustainability into training and assessment practice.

Financial Services

The Financial Services Training Package is under review. Sustainability will be explicit in the revised FNS10 Training Package.

At this stage sustainability practices are being incorporated into the two industry 'knowledge' units. The lower level *Work effectively in the financial services industry* will be core for all qualifications up to Certificate 3. The other unit *Apply principles of professional practice to work in the financial service industry* will be core for all qualifications from Certificate 3 onwards.

In the case of the unit *Apply principles of professional practice to work in the financial service industry* there is a specific element: "identify sustainability issues for the financial services industry" which contain specific performance criteria on 'triple bottom line', business planning and sustainability policies, strategies and impacts on industry'.

Cultural and Related Industries

There are five training packages which cover the broad industry sector of cultural and related industries. Three of the training packages were looked at in detail for examples of how sustainability is addressed.

A number of the units address sustainability in planning in an 'environmentally'way, minimising waste in the implementation of the particular activity or in controlling environmental risks or adhering to environmental compliance regulations. These are summarised in Appendix One.

Visual Arts, Craft and Design Training Package (CUV03)

Examples of units are provided below.

CUVADM02B Plan work space

Unit descriptor

This unit describes the skills and knowledge required to plan the allocation and usage of space consistent with a concept or business plan. This unit is applicable to work in many industries. Significant underpinning knowledge of the particular work context is required. This work would usually be carried out autonomously and may include responsibility for others.

One of the performance criteria is –

Allocate work space.

- *Assess the physical characteristics of the space in relation to its capacity to meet requirements.*
- *Assess **safety and environmental issues** that may impact on the organisation of space.*
- *Establish criteria for the allocation of space in accordance with **organisational/project objectives**.*
- *Consult and reach agreement on criteria for allocation of space with relevant stakeholders.*

Another example is the unit *CUVVSP16B Research and experiment with techniques to produce drawings*

- 1.1 Take account of **particular safety or environmental issues** associated with the use of different techniques and media.
- 1.2 Calculate correct quantities of materials required and minimise waste where possible.

In the unit *CUVVSP04B Apply techniques to produce ceramics*, the range statement addresses the minimisation of waste and it is also part of the required knowledge.

Particular safety or environmental issues may include:

Federal, State and Territory legislation, regulations and standards
personal protection
recycling
safe disposal of waste

- environmental issues associated with the tools, materials and equipment used in ceramic work

Entertainment training package (CUE03)

In the unit *CUETEM03C Establish and manage production requirements and resources* environmental issues are addressed in the unit descriptor, the performance criteria and the range statement.

Establish production requirements.

Evaluate initial production concepts and technical requirements in relation to feasibility, safety and any environmental impact.
Provide timely, accurate and correct advice on the feasibility and safety of concepts and their implementation, including suggestions of workable alternatives as required.
Accurately document details of safety and technical requirements in relation to the production concepts.
Clarify production concepts and final requirements in consultation with the appropriate personnel as required.

Apply art finishing methods to materials.

- Select and prepare appropriate tools and materials for the chosen art finishing method.
- Use tools and materials safely during the art finishing process correctly.
- Use and dispose of tools and materials in an environmentally responsible manner.
- Use art finishing techniques on raw materials and finished items in accordance with production/performer requirements.
- Promptly identify any problems with art finishing and take appropriate action to address these, including discussions with relevant colleagues.

Range statement

Environmentally responsible use of materials and tools may include consideration of:

- appropriate disposal of waste
- minimising use of environmentally damaging products
- noise and odour impacts on others
- special disposal techniques for certain products.

In another example, *CUEPRP03B Apply a general knowledge of props construction*, environmental sustainability is addressed in the performance criteria.

Select equipment and materials in preparation for construction.

- Liaise with supervisor to determine the nature of props to be constructed.
- Correctly identify and select appropriate materials for prop construction in accordance with instructions and the intended use for the prop.
- Calculate correct quantities of materials required and minimise waste where possible.
- Select appropriate equipment and tools in accordance with materials being used and type of prop construction required.

In *CUEFSH01B Identify and manage safety and health requirements at an outdoor fireworks display*, a risk management approach to environmental issues is adopted in the range statement.

Procedures for controlling risks may include:

- availability of first-aid and firefighting resources
- compliance with ergonomic and environmental requirements
- consultations with other relevant persons
- correct selection, use and maintenance of personal protective equipment
- emergency procedures
- hazard and risk identification and reporting
- identification of emergencies that may occur
- identification of other agencies to assist with emergencies
- identification of the types of risks that may exist

Museum and Library/ Information Services Training Package (CUL04)

In the unit *CULMS201C Develop and apply knowledge of the museum industry* sustainability is incorporated in the required knowledge:

- concept of sustainable museum practice (environmental, economic and social)

In other units sustainability is part of the range statement or the performance criteria. See below.

Basic information about the museums industry should include:

- role, function and history of museums in the community, including different structures and philosophies
- key contacts and industry networks
- relationship of museums industry to other industries and other cultural agencies
- products and services typically provided by museums
- legislation that impacts on the industry
- concept of sustainable museum practice

Evaluate the educational focus of the organisation

- Evaluate the role of education in the overall scope of the organisation's activities and its impact on different work practices
- Assess the benefits of an educational focus for organisation activities and the ways in which this contributes to sustainable museum practice

Establish need and scope of activities, events or programs

- Identify and develop activities, events or programs which meet current/future organisational priorities and policies and which contribute to sustainable museum practice

Business Services

IBSA has a unique role as the national Industry Skills Council with responsibility for the identification, development and maintenance of relevant competencies and qualifications for managers. The Business Services Training Package (BSB07) has over 500 units of competency and 64 qualifications covering administrative and business practices. Many of these units already have

reference to environmental sustainability or could be used in the development of sustainable practices in organisations. See Appendix One.

As the custodian of the management units, not only does IBSA have responsibility for its own qualifications, but also these units are imported into qualifications for other industries aimed at managerial roles

The Report *Incorporation of Manager 2020 Principles* (IBSA, 2009) noted that since the inception of the Frontline Management Initiative in the mid-1990s, units and qualifications of the BSB have undergone a number of iterations. Units have been refined and others have been added. Based on the research and consultations undertaken as part of the 2009 project a new management framework was recommended. The proposed framework outlined in the Report consists of a core set of skills common to all managers but differing in depth and complexity as management responsibility.

If sustainability is not to be an 'add on' it needs to be incorporated in all business practices. In light of the recommendations of the 2009 Report, and the priority being placed on sustainability being an embedded business practice, the time is right for a cross-industry project to develop a management framework that will meet the future needs of Australian business. This would require extensive collaboration amongst the ISCs and their stakeholders. The aim would be to have a suite of cross industry management competencies residing in the Business Services Training Package which could be contextualised for particular industries.

Another pressing issue as part of the goal of sustainable development is the continuous professional improvement of those people who are already in industry. The Australian Industry Group survey conducted in 2009 (Australian Industry Group, 2009) found that 60% of businesses surveyed intended to boost the capacity of their existing personnel to manage their carbon footprint. These people will be looking for opportunities to develop their skills through professional associations and learning institutions including RTOs and universities. There should be enough flexibility in the packaging of units to meet the differing workforce needs.

OHS and Sustainability

Another consideration with respect to the BSB07 Training Package is the OHS units and qualifications. There are a number of similarities between OHS and environmental sustainability in job roles. The review of the units in IBSA training packages noted that compliance with OHS and environmental issues were frequently considered together.

OHS is a core unit, in some cases the only core unit, of many qualifications. Like OHS, sustainability should be bedded into the way people plan and carry out their work.

However there will be a need for 'sustainability' specialists in the same way there are OHS specialist roles in organisations. While OHS is bedded into individual job roles, there is a need for OHS specialists to advise and support individuals and organisations in this area.

IBSA already has responsibility for the cross-industry OHS units and qualifications. Consideration should be given to assuming the same role with respect to comparable roles in environmental sustainability.

A Cross-ISC Approach

The three generic sustainability units have been imported by a number of ISCs. They are used as they are or they are contextualised to the particular industry. In the consultations with ISCs, it was noted that these units were really meant to be introductory and that consideration should be given to reviewing them.

In addition to the three generic sustainability units, as mentioned, the BSB training package contains a number of units which apply to sustainable development. For example auditing, compliance, project management, continuous improvement and innovation are all competencies which are required to further sustainability. Many of the BSB units may be able to be packaged in skills sets and qualifications aimed at developing sustainability skills, however in some cases the units have been written to a specific context. For example 'quality' auditing or 'OHS' auditing.

A list of the units which could potentially be used in this context is contained in Appendix Three.

A more thorough analysis of the identified units would need to be undertaken to determine whether or not they could be used in the context of sustainability as they exist or whether or not revisions to the units would need to be undertaken.

Another relevant development is the review of the Competitive Manufacturing units and qualifications by Manufacturing Skills Australia. The concepts of lean production and sustainability are intertwined. There would be considerable merit in the MSA and IBSA conducting a joint project that will see best practice outcomes in this area which could be adapted across all industries.

Professional Capacity of Trainers and Assessors

AQTF 2007 Standard 1.4 states that RTO training and assessment must be conducted by trainers and assessors who:

- have the necessary training and assessment competencies as determined by the National Quality Council or its successors
- have the relevant vocational competencies at least to the level being delivered or assessed
- continue developing their vocational and training and assessment competencies to support continuous improvements in delivery of the RTOs services.

Maintaining currency of competency is an issue for all trades and professions. IBSA, as the ISC primarily responsible for the qualifications of personnel working in the VET sector, is taking action that will further the goal of embedding skills for sustainability practice and teaching in vocational education through the development of relevant units of competency. The development of specific units will not be enough. They will need to be contextualised and rolled out on an industry basis.

In the case of IBSA this would entail the development of professional development programs targeting the trainers and assessors of the relevant industry qualifications. The aim would be to develop their skills and knowledge in the delivery and assessment of skills for sustainability in the relevant qualifications. It is envisaged that IBSA would be responsible for the development of the program, resources and assessment materials which would be delivered in conjunction with approved RTOs. Funding for this initiative would need to be sought as it is important that these programs are low-cost professional development as many of the trainers are contracted by RTOs.

Another idea for consideration is to host a series of seminars to showcase best practice in not only teaching and assessing sustainability skills, but also in practicing sustainability in the delivery of training and assessment. The proposed Skills for Sustainability Excellence Framework could be used as a basis for developing these programs.

ISCs and Sustainability

There are particular ISCs for which environmental sustainability is a higher priority because of the environmental impact of the industries covered. Included in this group would be Construction and Property Services ISC, Manufacturing Skills Australia, Transport and Logistics ISC. The 2009 ISCs Report summarised action being taken or is being planning by the individual ISCs.

Manufacturing Skills Australia (MSA) has contextualised the 3 generic sustainability units for the manufacturing industry. MSA has responsibility for the Competitive Manufacturing qualifications which cover skills for sustainable practices from a Certificate III to more advanced qualifications. This training package is under review this year.

In addition the MSA is developing a Certificate IV and a Diploma in sustainability with an emphasis on manufacturing technologies although it is understood an estimated 60% of the Certificate IV is generic.

Within Construction and Property Services ISC a project is underway to develop a Certificate IV in Home Sustainability Assessment. Like all other ISCs CPSISC is undertaking a review of their training packages for gaps in sustainability.

The Transport and Logistics ISC is undertaking a project looking at emerging roles and current and future skill requirements to further sustainable development. It is recognised however that it will be the competencies of the trainers and assessors which is going to be critical in developing skills for sustainability. As a consequence the professional development of industry trainers and assessors is going to be a priority.

Discussion

Sustainability is being addressed in range of VET products for IBSA's respective industry sectors.

The bulk of units of competency in IBSA training packages which involve the use of materials, project or organisational planning incorporate consideration of environmental issues, either as a compliance or efficiency concept or as part of a minimisation of waste issue.

Those training packages that are being reviewed are addressing sustainability in the development of the new or revised units and qualifications.

Furthermore as part of the review of the flexibility of training packages to meet the new NQC requirements, the BSB sustainability units can be incorporated if they are not already included.

What is missing is an overarching strategic approach to the development of skills for sustainability. This does not just apply to IBSA but ISCs collectively. Rather than dwell on content of individual units, it seems more effective to look across training packages to identify best practice units and packaging arrangements that incorporate sustainability in how people plan and carry out their work.

While there is a large element of 'personal responsibility in environmental sustainability, there is even greater responsibility on the part of managers of businesses, governments and community organisations to assume a leadership role in sustainable development. These people have organisational responsibility and as such the question then becomes how sustainability is incorporated in the organisational strategic and business planning process.

It is understood that the Manufacturing Skills Australia is planning to conduct a review of the Competitive Manufacturing units and qualifications this year. There is an inter-twining of the concepts of sustainability and lean manufacturing which is bedded in the CMI. Many stakeholders would like to see these units and qualifications extend beyond manufacturing. As a consequence a cross-ISC collaborative project would seem to be more appropriate. IBSA, as the ISC for management competencies and qualifications would be expected to take a principal role in developing the cross-industry response.

The ISCs 2009 Report on environmental sustainability noted that there was a 'proliferation of initiatives that range from the sublime to the ridiculous. In an effort to avoid duplication and confusion, considerable effort is needed to coordinate, collaborate and cooperate in developing what the report saw as an 'overarching picture' of skills for sustainability. The recommendations put forward aim to facilitate the development of this picture

Appendix One – Matrix

Unit Code	Unit Name	Element	Performance Criteria	Required Knowledge	Range Statement	No specific mention but could be used
	Business Services					
BSBADM101A	Use business equipment and resources					yes
BSBADM307B	Organise Schedules					yes
BSBADM311A	Maintain business resources	yes				
BSBADM405B	Organise meetings					yes
BSBADM406B	Organise business travel					yes
BSBADM407B	Administer projects					yes
BSBADM409A	Coordinate business resources	yes				
BSBADM504B	Plan or review administrative systems					yes
BSBCOM401B	Organise and monitor the operation of compliance management system		yes		yes	
BSBCOM402B	Implement processes for the management of a breach in compliance requirements		yes		yes	
BSBCOM403B	Provide education and training on compliance requirements and systems		yes		yes	
BSBCOM404B	Promote and liaise on compliance requirements, systems and related issues		yes		yes	
BSBCOM405A	Identify and interpret compliance requirements		yes		yes	
BSBCOM502B	Evaluate and review compliance		yes		yes	
BSB503B	Develop processes for the management of breaches in compliance requirements		yes		yes	
BSBCOM601B	Research compliance requirements and issues		yes		yes	
BSBCOM602B	Develop and create compliance requirements		yes		yes	

Unit Code	Unit Name	Element	Performance Criteria	Required Knowledge	Range Statement	No specific mention but could be used
	Business Services Cont..					
BSB603B	Plan and establish compliance management systems		yes		yes	
BSBFLM309C	Support continuous improvement systems and processes		yes	yes	yes	
BSBFLM311C	Support a Workplace Learning Environment				yes	
BSBFLM412A	Promote Team Effectiveness		yes	yes	yes	
BSBFLM503B	Manage Effective Workplace Relationships				yes	
BSBFLM305C	Support Operational Plan		yes	yes		
BSBINN502A	Build and Sustain an Innovative Work Environment					yes
BSBLED501A	Develop a workplace learning environment					yes
BSBLED701A	Lead personal and strategic transformation		yes	yes		
BSBMGT403A	Implement continuous improvement				yes	
BSBMGT608B	Manage Innovation and continuous improvement				yes	
BSBMGT616A	Develop and Implement strategic plans					
BSBRISK401A	Identify risk and apply risk management processes			yes		
BSBRISK501A	Manage risk			yes		

Unit Code	Unit Name	Element	Performance Criteria	Required Knowledge	Range Statement	No specific mention but could be used
	Cultural and Related Industries					
CUSIND301A	Work effectively in the music industry			yes		
CUSMKG501A	Manage the promotion of creative acts		yes			
CUSADM05A	Develop and implement a business/strategic plan				yes	
CULMS009B	Implement preventive conservation activities		yes		yes	
CULMS407C	Install and dismantle exhibition elements		yes	yes		
CULMS201C	Develop and apply knowledge of the museum industry			yes		
CULMS609C	Develop policies and strategies		yes	yes		
CULMSO13B	Implement facility maintenance programs			yes		
CUVICS03B	Develop innovative ideas at work			yes		
CUVCON06B	Develop concepts for arts organizations or projects		yes			
CUVADM02B	Plan workspace		yes		yes	
CUVIND501A	Maintain and apply creative arts industry knowledge				yes	
CUVCRS01B	Plan work for a nominated site				yes	
CUVCRS04B	Produce technical drawings				yes	
CUVCRS05B	Use typography techniques for design work			yes		
CUVCRS06B	Make scale models			yes		
CUVVSP02B	Research and experiment with techniques to produce calligraphy		yes		yes	

Unit Code	Unit Name	Element	Performance Criteria	Required Knowledge	Range Statement	No specific mention but could be used
	Cultural and Related Industries cont..					
CUVDES04B	Integrate theory and design processes in response to a brief			yes		
CUVVSP16B	Research and experiment with techniques to produce drawings		yes		yes	
CUVVSP04B	Apply techniques to produce ceramics			yes	yes	
CUETEM03C	Establish and manage production requirements and resources		yes		yes	
CUEPRP03B	Apply a general knowledge of props construction		yes			
CUEFS01B	Identify and manage safety and health requirements at an outdoor fireworks display				yes	
CUETEM03C	Establish and manage production requirements and resources		yes		yes	
CUECOS14B	Construct hard and soft sculptured costume accessories		yes			
CUEPR02B	Research and Obtain and prepare props		yes	yes		
CUESET04C	Use research, innovation and experimentation to create props			yes		
CUESCE05B	Apply a general knowledge of scenic art			yes		
CUESOU13B	Specify, install and operate audio for an outdoor event			yes		
CUFMUP401A	Design, apply and remove make-up			yes		
CUFMUP502A	Design and apply special make-up			yes		
CUFMUP503A	Create prosthetics for special make-up effects			yes		
CUFMUP501A	Design and apply specialized make-up			yes		
CUFHAZ401A	Perform hazardous action sequences using vehicles				yes	
CUFHAZ402A	Perform hazardous action sequences involving fights and falls				yes	
CUFHAZ403A	Perform hazardous action sequences involving natural elements				yes	
CUFHAZ404A	Perform hazardous action sequences involving animals			yes		

Appendix Two – Consultations

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Appendix Three - Generic Units

Listed below are from BSB07 that are relevant to the concept of sustainable development. Some of the management units refer to 'environmental management', adhering to environmental management regulations, triple bottom line, and global contexts. Many of the generic management skills may already be held in organisations but it is the application to sustainable development that individuals may seek.

Units – Management

BSBMGT402A	Implement operational plan
BSBMGT401A	Show leadership in the workplace
BSBMGT403A	Implement continuous improvement
BSBMGT515A	Manage operational plan
BSBMGT516A	Facilitate continuous improvement
BSBMGT605B	Provide leadership across the organisation
BSBMGT608B	Manage innovation and continuous improvement
BSBMGT616A	Develop and implement strategic plans
BSBMGT617A	Develop and implement a business plan

Units - auditing

BSBOHS608B	Conduct an OHS audit
BSBMKG515A	Conduct a marketing audit
BSBAUD402B	Participate in a quality audit
BSBAUD501B	Initiate a quality audit
BSBAUD503B	Lead a quality audit
BSBAUD504B	Report on a quality audit

Units – compliance

BSBOHS408A	Assist with compliance with OHS and other relevant laws
BSBOHS408A	Assist with compliance with OHS and other relevant laws
BSBCOM401B	Organise and monitor the operation of compliance management system
BSBCOM402B	Implement processes for the management of a breach in compliance requirements

BSBCOM403B	Provide education and training on compliance requirements and systems
BSBCOM404B	Promote and liaise on compliance requirements, systems and related issues
BSBCOM405A	Promote compliance with legislation
BSBCOM501B	Identify and interpret compliance requirements
BSBCOM502B	Evaluate and review compliance
BSBCOM503B	Develop processes for the management of breaches in compliance requirements
BSBCOM601B	Research compliance requirements and issues
BSBCOM602B	Develop and create compliance requirements
BSBCOM603B	Plan and establish compliance management systems

Units - Innovation

BSBINN201A	Contribute to workplace innovation
BSBINN301A	Promote innovation in a team environment
BSBINN501A	Establish systems that support innovation
BSBINN502A	Build and sustain an innovative work environment
BSBINN601A	Manage organisational change
BSBINN801A	Lead innovative thinking and practice

Marketing

BSBMKG401B	Profile the market
BSBMKG402B	Analyse consumer behaviour for specific markets
BSBMKG408B	Conduct market research
BSBMKG409A	Design direct response offers
BSBMKG410A	Test direct marketing activities
BSBMKG411A	Analyse direct marketing databases
BSBMKG412A	Conduct electronic marketing communications
BSBMKG413A	Promote products and services
BSBMKG414A	Undertake marketing activities
BSBMKG415A	Research international markets
BSBMKG416A	Market goods and services internationally
BSBMKG501B	Identify and evaluate marketing opportunities
BSBMKG502B	Establish and adjust the marketing mix
BSBMKG506B	Plan market research
BSBMKG507A	Interpret market trends and developments

BSBMKG508A	Plan direct marketing activities
BSBMKG509A	Implement and monitor direct marketing activities
BSBMKG510A	Plan electronic marketing communications
BSBMKG511A	Analyse data from international markets
BSBMKG512A	Forecast international market and business needs
BSBMKG513A	Promote products and services to international markets
BSBMKG514A	Implement and monitor marketing activities

Project Management

BSBPMG401A	Apply project scope management techniques
BSBPMG402A	Apply time management techniques
BSBPMG403A	Apply cost management techniques
BSBPMG404A	Apply quality management techniques
BSBPMG405A	Apply human resources management approaches
BSBPMG406A	Apply communications management techniques
BSBPMG407A	Apply risk management techniques
BSBPMG408A	Apply contract and procurement procedures
BSBPMG501A	Manage application of project integrative processes
BSBPMG502A	Manage project scope
BSBPMG503A	Manage project time
BSBPMG504A	Manage project costs
BSBPMG505A	Manage project quality
BSBPMG506A	Manage project human resources
BSBPMG507A	Manage project communications
BSBPMG508A	Manage project risk
BSBPMG509A	Manage project procurement
BSBPMG510A	Manage projects

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