Australian Government

Department of Education, Employment and Workplace Relations

ICTSUS7235A Use ICT to improve sustainability outcomes

Release: 1

ICTSUS7235A Use ICT to improve sustainability outcomes

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to improve sustainability outcomes through the reduction of environmental, economic and social impacts for a range of industries using ICT based solutions. It involves meeting the requirements for monitoring and reporting of greenhouse gas emissions and using ICT for creating opportunities to improve sustainability by addressing products, services and processes specific to specific enterprises and industries.
	No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

Application of the Unit

Application of the unit	This unit is applies to individuals employed as an ICT consultant or with an ICT related role in an organisation. Work normally involves a high degree of autonomy or is within a management team with a high level of responsibility.

Licensing/Regulatory Information

Refer to Unit Descriptor

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Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Design and manage a sustainability audit	1.1. Use an audit tool reflects criteria of benchmark, nature of risks, relevant information and data types, evaluation of performance and legislative requirement
	1.2. Define the scope, objectives and benchmarks for the audit in consultation with relevant stakeholders
	1.3. Use an *audit tool* to reflect criteria of benchmark, nature of risks, relevant information and data types, evaluation of performance and legislative requirement
	1.4. Document requirements for audit resources, timing, schedule and responsibilities consistent with industry best practice and relevant standards
	1.5. Ensure *collection strategies* are objective, systematic and that information and data is valid and reliable
	1.6. Report outcomes clearly and concisely, including benefits to be achieved by adoption of audit report recommendations
2. Monitor energy consumption and emissions	2.1. Analyse requirements of the National Greenhouse and Energy Reporting System (NGERS) and other relevant *legislation* and industry standards in relation to a range of *industries* and the needs of specific organisations
	2.2. Identify links with functional areas and environmental management systems to ensure comprehensive information and data collection
	2.3. Determine *hardware* and *software* required for collecting, collating, analysing and reporting emissions related information and data
	2.4. Factor requirement for an external audit into the monitoring proposal
	2.5. Critically evaluate energy consumption and emissions data
	2.6. Develop improvement strategies based on the review of data
	2.7. Use industry *best practice* as a quality benchmark
3. Develop ICT solutions to improve sustainability outcomes	3.1. Research and analyse *mitigation and adaptation strategies* appropriate for a range of industries
	3.2. Benchmark and document performance expectations in consultation with relevant stakeholders
	3.3. Develop and document technical specifications

ELEMENT	PERFORMANCE CRITERIA
	including hardware, software, networking, interface and security requirements
	3.4. Determine timelines, resources and costs for implementation and ongoing monitoring and maintenance
	3.5. Analyse the impact of ICT solution in relation to performance benchmarks
	3.6. Analyse opportunities and develop recommendations to improve sustainability of enterprise products, services and processes
	3.7. Present report for client sign off

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to read and evaluate complex and formal documents such as legislation and technical reports
- communication skills to consult with stakeholders and liaise with clients
- literacy skills to prepare written reports and other documentation requiring precision of expression and language and structures suited to the intended audience
- research skills to analyse and present information
- technical skills to:
  - conduct an ICT sustainability audit
  - quantify sustainability objectives, targets, achievements and measures
  - use relevant systems and procedures to aid in the achievement of emissions reduction

Required knowledge

- auditing sustainability processes and practices
- corporate social responsibility
- development processes and practices
- hazard identification and control
- industry standards
- legislation framework underpinning sustainability
- principles, practices and available tools and techniques of sustainability

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REQUIRED SKILLS AND KNOWLEDGE

management relevant to a range of industries

- relevant ISO standards
- sustainability from a local, national and international perspective
- sustainability including ecological, economic and social issues
- technical performance measurement

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the ability to: • audit and analyse patterns of energy use • develop monitoring and reporting systems that comply with regulatory requirements • develop a workable implementation strategy • formulate solutions using ICT to reduce emissions • develop benchmarks for reviewing and improving performance.

Context of and specific resources for assessment	Assessment must ensure:
	• relevant reports:
	   • government
	   • Intergovernmental Panel on Climate Change (IPCC)
	   • scientific
	• conference papers
	• vendor white papers
	• resources, tools and networking equipment
	• suitable hardware and software
	• suitable bandwidth for internet connections
	• relevant legislation and regulations
	• manufacturers' technical specifications
	• relevant ISO standards.

Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct observation of the candidate managing organisation sustainability • review of analyses, plans and reports completed by the candidate • oral or written questioning to assess required knowledge.
Guidance information for	Holistic assessment with other units relevant to the

EVIDENCE GUIDE	
assessment	industry sector, workplace and job role is recommended, for example:
	• ICTSUS7236A Manage improvements in ICT sustainability.
	Aboriginal people and other people from a non-English speaking background may have second language issues.
	Access must be provided to appropriate learning and assessment support when required.
	Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed.
	In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.
	Where applicable, physical resources should include equipment modified for people with special needs.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
Stakeholders may include:	• clients and customers • Federal Government

RANGE STATEMENT	
	• local government • management • non-government organisations (NGOs) • shareholders • staff • state government • suppliers.
Audit tool may include:	• National Carbon Accounting System Data Viewer • National Carbon Accounting Toolbox.
Collection strategies may include:	• electricity billing information • hardware sensor devices.
Legislation may include:	• Australian Government White paper • Australian Government Green paper • Carbon Pollution Reduction Scheme (CPRS) • Emissions Trading Scheme (ETS).
Industries may include:	• building • electricity • logistics • motor.
Hardware may include:	• sensors • wireless sensor networks.
Software may include:	• avoiding mass extinctions engine (AMEE) • carbon footprint calculators • logica carbon reporting software • online system for comprehensive activity reporting (OSCAR) • statistical analytic software (SAS) carbon reporting software • sustainability SCO2 (Software CO2).
Best practice information may be found in:	• 2020 Report • company case studies • vendor white papers.
Mitigation and adaptation strategies may include:	• broadband or telepresence • carbon capture and storage (CCS) • geosequestration • household monitoring • monitoring sources of energy that produce CO2

RANGE STATEMENT	
	• remote workstation solutions • The Intelligent Office.

Unit Sector(s)

Unit sector	Telecommunications

Co-requisite units

Co-requisite units		

Competency field

Competency field	Sustainability