Australian Government

Department of Education, Employment and Workplace Relations

ICASUS702A Conduct a business case study for integrating sustainability in IT planning and design projects

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with *ICA11 Information and Communications Technology Training Package version 1.0*

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to establish a business case to justify innovative implementation of sustainability in information technology (IT) planning and design projects. It involves accessing industry information and applying legislative guidelines.

Application of the Unit

Project managers, planners and designers, consultants or contractors who have responsibility for conducting or managing information and communications technology (ICT) projects apply the skills and knowledge in this unit.

This unit will prepare the participant in planning and conducting cost-benefit analysis and return on investment for the implementation of sustainable schemes at the enterprise level.

Licensing/Regulatory Information

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.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
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.*

Elements and Performance Criteria

1. Scope the project for establishing a business case for integrating sustainability in IT project	1.1 Analyse proposed ***IT project*** specifications to determine scope and extent of sustainability integration in design aspects 1.2 Analyse and evaluate ***expected goals*** of project and relate the business case to broader organisational goals 1.3 Research ***appropriate sources of information*** relevant to the project to prepare the business case for validation with ***stakeholders***
2. Plan and conduct the business case for a sustainable IT project	2.1 Evaluate the ***critical success factors*** to determine the vital strategy for the project to implement sustainability and gain competitive advantage 2.2 Produce ***estimate of costs*** projected over an appropriate time period and determine potential for ***return on investment*** for a proposed design and implementation plan 2.3 Conduct a cost-benefit analysis to determine the financial gain of the derived ***overall benefit*** obtained by integrating sustainability into the project 2.4 Produce ***executive summary*** for the stakeholders on the proposal, including risk analysis if the sustainability component activity is not implemented
3. Devise management strategies for integrating sustainability into an IT project	3.1 Initiate and progress ***sustainable management principles*** that result in reduced environmental impact 3.2 Establish, regularly review and improve ***key performance indicators*** (KPIs) on sustainability performance 3.3 Incorporate innovative planning and design rules for IT projects that foster sustainability and environmental best practice 3.4 Produce energy usage projection using estimated carbon dioxide emissions with comparable ***benchmarks*** and provide ***detailed report*** to support the long-term benefits

Required Skills and Knowledge

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

Required skills

- analytical skills to compare and evaluate effective technical solutions involving introduction or improvement of sustainability
- communication skills to:
  - adjust communication to suit different audiences
  - consult on and validate policy
  - liaise with stakeholders to outline the resulting sustainability benefits
  - respond effectively to diversity
  - work as a member of a team
- literacy skills to:
  - prepare reports and an executive summary regarding the level of achievement of sustainability benchmarks, environmental targets and performance highlights
  - document technical requirements and procedures
  - evaluate complex and formal documents, such as government policy and legislation
  - interpret technical specifications and related sustainability documentation
  - prepare a business case
- numeracy skills to:
  - analyse and confirm business requirements
  - calculate budget requirements and limitations
  - determine workforce requirements
  - perform calculations related to life cycle assessment (LCA) and carbon dioxide (CO2) emissions
- organisational skills to:
  - arrange relevant documentation and approvals
  - set out project requirements and priorities
- problem-solving skills to:
  - account for unexpected variations to requirements
  - manage different points of view and dissenting stakeholders
- project-management skills to undertake or manage a complex project
- research and writing skills to:
  - prepare written business cases requiring precise expression, language and structures suited to intended audience
  - research and present information
  - gain and maintain relevant and current technology driving sustainability
- technical skills to use sustainability software tools.

Required knowledge

- best practice approaches relevant to sustainability

- energy consumption and energy audit methodology
- environmental and sustainability legislation, regulations and codes of practice applicable to industry and organisation
- environmental impacts of products, processes, systems and services
- equal employment opportunity, equity and diversity principles and OHS implications of policy being developed
- global and national initiatives, legislation, policies and guidelines
- policy development processes and practices
- principles, practices and available tools and techniques of sustainability management relevant to the ICT industry
- quality assurance systems relevant to own organisation
- relevant industry knowledge
- relevant organisational policies, procedures and protocols to assist in achieving workplace sustainability
- sustainability assessment tools
- sustainable management principles and strategies
- software tools for IT power consumption and CO2 emissions calculations.

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: • establish a business case to introduce or improve sustainability in an IT project • produce a cost-benefit analysis showing overall benefit of integrating sustainability into an IT project • devise, implement and review management strategies showing a measurable improvement using the chosen benchmark indicators.
Context of and specific resources for assessment	Assessment must ensure access to: • appropriate learning and assessment support when required • modified equipment for people with special needs • sites on which preparation of a business case for introducing or improving sustainability in an IT project may be carried out • relevant legislation, standards, guidelines, reports and equipment specifications and drawings • range of workplace documentation and personnel, information and resources, such as compliance obligations, organisational plans, and work responsibilities.
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: • review of policy developed by candidate and procedural documentation outlining the approach taken • review of implementation strategy, plans and work plans prepared by candidate • analysis of methods used to involve stakeholders in policy development, implementation and review • review of work area relating to policy and procedures being developed to assess measurement of resources used, hazards and compliance.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate. Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the

	work being performed. Indigenous people and other people from a non-English speaking background may need additional support. In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.

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.

IT project may include:	• content delivery or distribution network • data storage networks • equipment upgrades • introduction of new technology • media networking • new data centre • new IP network • security network • server network • software upgrade • unified communication.
Expected goals may include:	• achieving best practice while protecting the environment without sacrificing profitability • better return on investment • improving public perception of company image • meeting sustainability targets • providing information on trade-offs of alternative processes, products and materials • reducing resources and emissions.

Appropriate sources of information may include:	• AS/NZS 3598:2000
	• BS EN 16001:2009
	• Dow Jones Sustainability Index (DJSI)
	• international standards for environmental management - life cycle assessment:
	  • AS/NZS ISO 14040:1998
	  • AS/NZS ISO 14041:1999
	  • AS/NZS ISO 14042:2001
	  • AS/NZS ISO 14043:2001
	  • AS/NZS ISO 14048:2003
	• United States Environmental Protection Agency (EPA) - Life-Cycle Assessment: Principles and Practice EPA/600/R-06/060 May 2006.

Stakeholders may include:	• business partners • community

	• customers • government organisations • industry associations • investors • shareholders • staff • technical experts.
Critical success factors may include:	• better customer satisfaction • improved profit margin • improved quality of products and services • improved revenue growth • increase in customer numbers • increase in new sources of business • positive cash flow.
Estimate of costs may include:	• annual operating costs • capital costs • detailed breakdown of costs • recurring costs • summary of costs by category.
Return on investment may include:	• carbon trading • project life • rate of depreciation • simple return on investment calculation.

Overall benefit may include:	• improved:
	  • employee satisfaction
	  • operational expenditure
	  • use of workspace
	  • organisation performance and efficiency
	  • public perception of company
	• more reliable service to customers
	• carbon tax trade-offs.

Executive summary may include:	• background to the proposal • introduction to the proposal • past and current environment • rationale for establishing the business case at this time.

Sustainable management principles may include:	• audit waste-management procedures
	• improving the energy efficiency of IT network equipment:
	  • reducing the need for air conditioning
	  • shutting down equipment during low demand
	• procurement strategies:

	• assessing suppliers' environmental policies and procedures • lowering energy consumption or environmental impact of replacement products or services • managing the environmental impacts of electrical and electronic equipment • using energy consumption and environmental impact as criteria in the process of awarding contracts • supply chain: • driving ethical values through the supply chain • engaging supplier involvement in emissions reporting and continual improvement • engaging suppliers who provide information on energy consumption and product lifecycles • influencing suppliers to provide energy efficient products and services.
Key performance indicators may include:	• kg CO2 emissions from company car fleet • kg CO2 emitted per floor area occupied in permanent buildings • percentage of timber from well-managed, sustainable sources used in construction • percentage volume of material from sustainable sources • reduction of quantity (in 1000's kg) of ozone depleting gases used in air-conditioning equipment.
Benchmarks may include:	• AccountAbility AA1000 Assurance Standard (2008) • BSI BenchMark • Carbon Disclosure Project (CDP) • DJSI • Global Reporting Initiative (GRI) G3 guidelines (telecommunications sector supplement).
Detailed report may include:	• calculated estimated CO2 emissions for nominated project • calculated potential energy savings and payback periods for recommended actions • innovative approaches • recommendations in order of priority on range of activities with sustainable outcomes.

Unit Sector(s)

Sustainability