Australian Government

Department of Education, Employment and Workplace Relations

ICAICT503A Validate quality and completeness of system design specifications

Release: 1

INDUSTRY
SKILLS
COUNCILS
Creating Australia's Future

ICAICT503A Validate quality and completeness of system design specifications

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 check the system specifications against outcomes and quality standards.

Application of the Unit

This unit applies to individuals working as system designers who are required to validate system design specifications to ensure that they meet the required organisational audit standards.

System quality may refer to the network system, a program or a project.

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.

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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. Determine audit criteria	1.1 Investigate the *system* or product for which the quality audit is being performed to understand its functionality
	1.2 Determine the objectives to be achieved by the quality audit
	1.3 Determine the scope of the quality audit
	1.4 Develop a list of audit criteria and *quality benchmarks*
	1.5 Develop a *metric* to classify the audit criteria
	1.6 Determine the audit technique or methodology to be followed
	1.7 Examine and detail the resources available to carry out the audit
	1.8 Document the objectives, scope, criteria, technique and resources in an audit plan
2. Audit aspects of the final system	2.1 Use the audit criteria to collect evidence about the functionality and quality of the final system, including *documentation*
	2.2 Use a checklist to monitor audit progress
	2.3 Document audit outcomes as the audit progresses
3. Review and confirm contract and specifications	3.1 Review system contract against audit outcomes
	3.2 Compare system functionality against audit outcomes and system contract
	3.3 Identify items of non-compliance where audit outcomes do not meet performance targets or fall short of contract *requirements*
	3.4 Review system procedures for corrective action
	3.5 Document items of non-compliance and proposed corrective action

Required Skills and Knowledge

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

Required skills

- communication skills to:
  - liaise with internal and external personnel on technical and operational matters
  - present information
- literacy skills to:
  - analyse and evaluate information
  - write reports
- planning and organisational skills to conduct quality audit when reviewing system against contract areas
- problem-solving skills to draft acceptance criteria
- technical skills to:
  - create appropriate metrics
  - explore functionality of the system being tested.

Required knowledge

- acceptance criteria
- detailed design principles and specification standards
- fault tolerance technologies
- quality audits
- quality levels, both generally and as required by the organisation.

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: • determine audit criteria and conduct audit • review system procedures for non-compliance • specify corrective actions.
Context of and specific resources for assessment	Assessment must ensure access to: • audit tools • documentation guidelines • relevant standards and benchmarks • service level agreement (SLA) • archive policy • acceptance criteria • IT security specifications • live system, including database, system files and designed interface • technical specifications of system. Where applicable, physical resources should include equipment modified for people with special needs.
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 candidate undertaking an audit • verbal or written questioning to assess candidate's knowledge of requirements for identifying audit criteria • review of documented items of non-compliance and proposed corrective action prepared by candidate.
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.

System may include:	- active server page (ASP) - applications - databases - gateways - internet service provider (ISP) - operating system - servers.
Quality benchmarks may include:	- benchmarks that cover: - cost savings - performance - quality - technical matters - relevant quality standards: - AS3925.1-1994 Software quality assurance - plans - NZS14102:1998 Information technology guideline for evaluation and selection of CASE tools - AS/NZS4258:1994 Software user documentation process - AS/NZS ISO/IEC 12207:1997 Information technology - Software life cycle processes.
Metric may include:	- capacity - input - output - performance - quality - value metrics.
Documentation may follow:	- audit trails - International Organization for Standardization (ISO), International Electrotechnical Commission (IEC) and Australian Standards (AS) standards - naming standards - project management templates - report writing principles - version control.

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Requirements may refer to:	- application - business - network - people in the organisation - system.

Unit Sector(s)

General ICT