

ICAA5054C: Validate quality and completeness of system design specifications

Description

This unit defines the competency required to check the system specifications against outcomes and quality standards. System quality may refer to the network system, a program or a project. The following units are linked to form an appropriate cluster: ICAB5071B Review developed software ICAB5074B Monitor the system pilot No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Employability Skills

This unit contains employability skills.

Unit Sector

Analyse and Design

Performance criteria

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

Skills and Knowledge

Required skills

- Problem solving skills for a range of unpredictable problems (e.g. when drafting acceptance criteria)
- Plain English literacy and communication skills in relation to analysis, evaluation and presentation of information (e.g. when documentation procedures have been followed)
- Ability to conduct quality audit to review system against contract areas, and when identifying areas of non-compliance

Required knowledge

- Broad knowledge of detailed design principles and specification standards (e.g. when reviewing all aspects of the system design and quality)
- Broad knowledge of fault tolerance technologies (e.g. when reviewing all aspects of system design and quality)
- Detailed knowledge of acceptance criteria (e.g. when reworking and confirming quality of high-level design)

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.

Metric may include but is not limited to:

- input,
- output,
- capacity,
- performance,
- quality
- value metrics

Documentation may follow:

- ISO/IEC/AS standards,
- audit trails,
- naming standards,
- version control,
- project management templates
- report writing principles

System may include but is not limited to:

- databases,
- applications,
- servers,
- operating systems,
- gateways,
- ASP
- ISP

Requirements may be in reference to:

- business,
- system,
- application,
- network
- people in the organisation

Quality benchmarks relevant quality standards include:

- AS 3925.1-1994 Software quality assurance - plans
- AS/NZS 4258:1994 Software user documentation process

- AS/NZS ISO/IEC 12207:1997 Information technology - software life cycle processes
- AS/NZS 14102:1998 Information technology - guideline for evaluation and selection of CASE tools

May vary according to the type of organisation and may cover technical, cost savings, performance and quality. Some organisations may be quality certified and have well-documented standards for addressing quality, while others will not. In a simulated environment best practice workplace examples must be used

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 following is essential:

- Assessment must confirm preset system goals or objectives have been achieved and that quality standards have been met

To demonstrate competency in this unit the learner will require access to:

- Technical specifications
- Acceptance criteria
- Live system, including database, system files, designed interface
- Service-level agreement
- Archive policy
- Documentation guidelines
- IT security specifications

Context of and specific resources for assessment

The breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination would be characteristic.

The demonstration of competency may also require self-directed application of knowledge and skills, with substantial depth in some areas where judgment is required in planning and selecting appropriate equipment, services and techniques for self and others.

Assessment must ensure:

- Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may also be involved.

Method of assessment

The purpose of this unit is to define the standard of performance to be achieved in the workplace. In undertaking training and assessment activities related to this unit, consideration should be given to the implementation of appropriate diversity and accessibility practices in order to accommodate people who may have special needs. Additional guidance on these and related matters is provided in ICA05 Section 1.

- Competency in this unit should to be assessed using summative assessment to ensure consistency of performance in a range of contexts. This unit can be assessed either in the workplace or in a simulated environment. However, simulated activities must closely reflect the workplace to enable full demonstration of competency.
- Assessment will usually include observation of real or simulated work processes and procedures and/or performance in a project context as well as questioning on underpinning knowledge and skills. The questioning of team members, supervisors, subordinates, peers and clients where appropriate may provide valuable input to the assessment process. The interdependence of units for assessment purposes may vary with the particular project or scenario.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended. In the case of this unit, it could be assessed in a holistic manner with:

- ICAB5071B Review developed software
- ICAB5074B Monitor the system pilot

An individual demonstrating this competency would be able to:

- Demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- Analyse and plan approaches to technical problems or management requirements
- Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- Evaluate information, using it to forecast for planning or research purposes
- Take responsibility for own outputs in relation to broad quantity and quality parameters
- Take some responsibility for the achievement of group outcomes