Australian Government

Department of Education, Employment and Workplace Relations

ICANWK514A Model preferred system solutions

Release: 1

ICANWK514A Model preferred system solutions

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 fit a physical model into the design phase of the methodology.

Application of the Unit

This unit applies to systems designers who are required to model proposed solutions.

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. Review and confirm information requirements and existing models	1.1 Review information ***requirements*** and clarify areas that are not understood 1.2 Identify organisational ***standards*** for developing models, and check the model development method for consistency with organisational goals 1.3 Identify assumptions and incorporate into modelling process 1.4 Identify goals and resolve into tasks required to be performed to obtain goals 1.5 Define internal tasks needed to perform identified goals
2. Resolve conflicts and inconsistencies	2.1 Identify missed opportunities arising from previous and current model development 2.2 Identify bottlenecks, overlooked functionalities and other issues and resolve with ***client*** input as required
3. Build and test model	3.1 Develop model based on ***existing architecture*** 3.2 ***Document*** details of model, according to agreed project or organisational standards 3.3 Develop model according to ***project*** deliverables and acceptance criteria within determined timeframe and project ***constraints*** 3.4 Test model against the test plan 3.5 Document test data to ensure that test procedures validate performance of the model
4. Ensure that the model represents a workable solution	4.1 Ensure a consensus view of key information technology (IT) ***stakeholders*** is represented in model 4.2 Ensure model is checked by key IT stakeholders to confirm common knowledge of the model and the proposed ***solution*** 4.3 Submit model to ***appropriate person*** for sign-off

Required Skills and Knowledge

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

Required skills

- communication skills to negotiate and liaise with internal and external personnel on technical and operational matters
- literacy skills to:
  - document details of system model
  - interpret standards
- planning skills to set benchmarks and identify project scope when developing model
- problem-solving skills to resolve conflicts and inconsistencies in systems models
- research skills to specify, analyse and evaluate broad features of a particular business domain and best practice system
- technical skills to:
  - develop the model
  - test model according to test plan.

Required knowledge

- client business domain, particularly the client organisation structure and business functionality
- current industry-accepted hardware and software products and standards
- modelling techniques and methodologies
- range of development and test tools
- systems development methodologies.

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: • use two or more development tools • develop specific areas of a system for further information or to confirm a software or hardware direction • identify opportunities for expansion of the model • test the model to a test plan.
Context of and specific resources for assessment	Assessment must ensure access to: • acceptance criteria • client requirements • future organisational business processes • organisational and process goals • project budget • project deliverables • standards for model development • technical specifications • test plan • appropriate learning and assessment support when required. 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 preparing to develop a system model • verbal or written questioning to assess knowledge of developing and testing a system model • review of candidate's documented test results.
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.

Requirements may refer to:	• application • business • network • people in the organisation • system.
Standards may include:	• International Organization for Standardization (ISO), International Electrotechnical Commission (IEC) and Australian Standards (AS) • organisational • project • project standards, found on Standards Australia website.
Client may include:	• employee • external organisation • individual • internal department.

Existing architecture may vary from:	• systems based on mainframes to networks of mid-range machines and desktop computers
	• networks that may be:
	  • intranet
	  • local
	  • virtual private network
	  • wide or based on the internet
	  • with vendor products and network protocols.

Document may follow:	• audit trails • ISO, IEC and AS standards • naming standards • project management templates • report writing principles • version control.
Project may include:	• business improvement process • ebusiness solution involving the total organisation or part of the organisation • systems-only change

	• total organisational change.
Constraints may include:	• budget • hardware • legal • policy • resource • software • time.
Stakeholders may include:	• development team • project team • sponsor • user.
Solution may include:	• hardware upgrades • implementing a new system • new hardware • new software • software upgrades • user training.
Appropriate person may include:	• authorised business representative • client • supervisor.

Unit Sector(s)

Networking