



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICAA5048B Develop configuration management protocols**

**Release: 1**

## ICAA5048B Develop configuration management protocols

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	<p>This unit defines the competency required to develop administrative and technical procedures throughout the life cycle of a system, network, software and documentation project.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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### Application of the Unit

<b>Application of the unit</b>	
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### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

<b>Prerequisite units</b>		
	ICAB4076B	Implement configuration management

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
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## 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. Establish configuration management requirements	1.1. Establish identification <i>standards</i> for naming and version control of system, <i>network</i> , <i>software</i> and <i>documentation</i> to align with organisational needs 1.2. Establish tools and procedures for the required level of integration into the programming, <i>system</i> or <i>network</i> environment 1.3. Determine responsibilities for configuration management within the <i>project</i> and for ongoing support, including approval of changes 1.4. Determine the appropriate points for configuration of particular items
2. Establish control mechanisms	2.1. Establish methods for identification and recording of change requests in line with <i>organisational guidelines</i> 2.2. Establish <i>acceptance criteria</i> , <i>test and acceptance</i> processes and processes for approval of change requests in line with <i>organisational guidelines</i> 2.3. Establish security, access and management control criteria, and <i>quality benchmarks</i> 2.4. Determine necessary audit trails and alerts for variations or non-conformance
3. Establish monitoring mechanisms	3.1. Establish mechanisms to identify <i>software</i> status throughout the <i>software</i> life cycle, or the status of the <i>system</i> or <i>network</i> during upgrading or reconfiguration 3.2. Determine management of records and status reports, including the history of baselines and their links to back-ups 3.3. Define target audiences and determine the level of detail required in the status reports 3.4. Integrate configuration management into general <i>project</i> management processes for monitoring and control purposes
4. Manage the release of the product to clients	4.1. Determine physical and functional completeness of items prior to release 4.2. Determine requirements for formal control of <i>software</i> products and <i>documentation</i> 4.3. Determine policies for retention of baseline/master copies in line with safety, security and legislative requirements and <i>organisational guidelines</i>

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

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

#### Required skills

- Problem solving skills for a defined range of unpredictable problems involving participation in the development of strategic initiatives (e.g. when determining tools and procedures for the required level of integration into the programming environment)
- Plain English literacy and communication skills in relation to developing technical and business reports (e.g. when determining the level of detail required in the status reports and when defining target audiences)
- Group facilitation and presentation skills in relation to transferring and collecting information and gaining consensus on concepts (e.g. when determining responsibilities for configuration management within the project, and for ongoing support, including approval of changes)
- Project planning skills in relation to scope, time, cost, quality, communications and risk management (e.g. when integrating configuration management into general project management processes for monitoring and control purposes)
- Research skills for specifying, analysing and evaluating broad features of a particular business domain and best practice in software development methodologies (e.g. when determining tools and procedures for the required level of integration into the programming environment)
- Estimating function point analysis and other skills for use across a range of predictable project contexts in relation to either varied or highly specific functions (e.g. when determining the point at which items are subjected to configuration control)

#### Required knowledge

- Detailed knowledge of software development methodologies (e.g. when developing configuration management requirements)
- Detailed knowledge of quality assurance and quality processes (e.g. when developing configuration management requirements)
- Broad knowledge of project planning methodologies and tools (e.g. when establishing control and monitoring mechanisms)
- Detailed knowledge of benchmarking methodologies (e.g. when developing administrative and technical procedures throughout the software and documentation life cycle)

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>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.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• Assessment must confirm knowledge of quality processes, audit trails and version control.</li> <li>• Assessment must confirm the ability to develop reliable and valid configuration management procedures for technical and administrative procedures for use during the software life cycle, system or network reconfiguration or the upgrade process.</li> </ul> <p>To demonstrate competency in this unit the learner will require access to:</p> <ul style="list-style-type: none"> <li>• Technical specifications</li> <li>• Organisational standards for documentation and version control</li> <li>• Project management process and hierarchy</li> <li>• CASE tools</li> <li>• Future organisational business processes</li> <li>• Test plan</li> </ul> <p>Project budget and timeframe</p>
<b>Context of and specific resources for assessment</b>	<p>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.</p> <p>Assessment must ensure:</p> <ul style="list-style-type: none"> <li>• self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.</li> </ul>

<b>EVIDENCE GUIDE</b>	
	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Method of assessment</b>	<p>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.</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
<b>Guidance information for assessment</b>	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended</p> <p>An individual demonstrating this competency would be able to:</p> <ul style="list-style-type: none"> <li>Demonstrate understanding of a broad knowledge</li> </ul>

**EVIDENCE GUIDE**

	<p>base incorporating theoretical concepts, with substantial depth in some areas</p> <ul style="list-style-type: none"> <li>• Analyse and plan approaches to technical problems or management requirements</li> <li>• Transfer and apply theoretical concepts and/or technical or creative skills to a range of situations</li> <li>• Evaluate information, using it to forecast for planning or research purposes</li> <li>• Take responsibility for own outputs in relation to broad quantity and quality parameters</li> <li>• Take some responsibility for the achievement of group outcomes</li> <li>• Maintain knowledge of industry products and services</li> </ul>
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**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.

<b><i>Standards</i></b> may include:	<ul style="list-style-type: none"> <li>• ISO/IEC/AS standards</li> <li>• organisational standards</li> <li>• project standards (for further information refer to the Standards Australia website at: <a href="http://www.standards.com.au">www.standards.com.au</a>)</li> </ul>
<b><i>System</i></b> may include but is not limited to:	<ul style="list-style-type: none"> <li>• databases</li> <li>• applications</li> <li>• servers</li> <li>• operating systems</li> <li>• gateways</li> <li>• application service provider</li> <li>• ISP</li> </ul>
<b><i>Software</i></b> may include but is not limited to:	<ul style="list-style-type: none"> <li>• Commercial</li> <li>• in-house</li> </ul>



<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>packaged</li> <li>customised software</li> </ul>
<i>Network</i> may include but is not limited to:	<ul style="list-style-type: none"> <li>large and small LANs</li> <li>WANs</li> <li>the internet</li> <li>the use of the PSTN for dial-up modems only</li> <li>VPNs</li> <li>private lines</li> <li>data</li> <li>voice</li> </ul>
<i>Documentation</i> may follow:	<ul style="list-style-type: none"> <li>ISO/IEC/AS standards</li> <li>audit trails</li> <li>naming standards</li> <li>version control</li> <li>project management templates and report writing</li> <li>maintaining equipment inventory</li> <li>client training and satisfaction reports</li> </ul>
<i>Project</i> may include:	<ul style="list-style-type: none"> <li>a total organisational change</li> <li>a systems-only change</li> <li>a business improvement process</li> <li>an e-business solution involving the total organisation or part of the organisation</li> </ul>
<i>Organisational guidelines</i> may include but is not limited to:	<ul style="list-style-type: none"> <li>personal use of emails and internet access</li> <li>content of emails</li> <li>downloading information and accessing particular websites</li> <li>opening mail with attachments</li> <li>virus risk</li> <li>dispute resolution</li> <li>document procedures and templates</li> <li>communication methods</li> <li>financial control mechanisms</li> </ul>
<i>Acceptance criteria</i> may include:	<ul style="list-style-type: none"> <li>timeframe</li> <li>cost implications</li> <li>technical and logistical considerations</li> </ul>
<i>Test and acceptance processes</i>	<ul style="list-style-type: none"> <li>May vary according to size and type and scope of the project</li> <li>AS 4006-1992 Software test documentation may be relevant to this unit</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• ISO/IEC/AS standards are updated and changed on a regular basis; it is therefore important to check the Standards Australia website: (<a href="http://www.standards.com.au">www.standards.com.au</a> ) on a regular basis for new standards</li> </ul>
<p><i>Quality benchmarks</i> relevant quality standards include:</p>	<ul style="list-style-type: none"> <li>• AS 4043-1992 Software configuration management</li> <li>• AS 4042-1992 Software configuration management plans</li> <li>• AS 3925.1-1994 Software quality assurance - plans</li> <li>• AS/NZS 4258:1994 Software user documentation process</li> <li>• AS/NZS ISO/IEC 12207:1997 Information technology - software life cycle processes</li> <li>• AS/NZS 14102:1998 Information technology - guideline for evaluation and selection of computer-aided software engineering (CASE) tools</li> </ul> <p>International and Australian Standards are updated and changed on a regular basis, it is therefore important to check the Standards Australia website (<a href="http://www.standards.com.au">www.standards.com.au</a> ) on a regular basis for new standards.</p> <p>May vary according to the type of organisation, and the benchmarks will 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 will be used.</p>

## Unit Sector(s)

<b>Unit sector</b>	Analyse and Design
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## Co-requisite units

<b>Co-requisite units</b>		

## Competency field

<b>Competency field</b>	
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