



Australian Government

Department of Education, Employment and Workplace Relations

ICTPMG5039A Prepare project specifications

Release: 1

ICTPMG5039A Prepare project specifications

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to develop project specifications for a telecommunications project. The project may be a new installation, upgrade of capacity or technology for an existing network or subsystem for convergence to Next Generation Networks (NGN). Preparing the specifications involves costing, scheduling and resourcing. 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.
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Application of the Unit

Application of the unit	Field officers, technicians or technical supervisors from carriers, contractors or other services providers apply the skills and knowledge in this unit. This unit applies to switching, transmission and radio networks and the various transmission paths including cable, optical fibre, radio, microwave and satellite. Relevant job roles include designer and installer of NGN. These internet protocol (IP) networks provide fast internet, voice over internet protocol (VoIP) and internet protocol TV (IPTV) services.
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	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. Prepare for project estimate	1.1. Analyse project design obtained from appropriate personnel to determine project requirements according to project plan 1.2. Verify project requirements with customers and project team 1.3. Ascertain impact of time restraints on estimate 1.4. Analyse the impact of relevant legislation, codes, regulations and standards on planning processes 1.5. Establish availability of all appropriate data and documentation to allow for the completion of the work
2. Estimate resource requirements	2.1. Conduct site inspection to verify design details and project context 2.2. Produce an estimate of type, quantity and schedule of resources required for the project from the project plans 2.3. Prioritise sequence of work appropriate to enterprise needs 2.4. Calculate contractor and employee labour hours required according to project requirements, industrial awards and enterprise policies 2.5. Record estimates of materials, equipment and labour hours according to enterprise guidelines
3. Calculate costing details	3.1. Estimate the amount and type of resources required for successful completion of project including risk management and contingencies 3.2. Calculate costs for resources from current information following standard costing procedures 3.3. Produce a detailed record of all required resources and costing details for project specifications
4. Prepare detailed project plan	4.1. Prepare detailed plan, including specifications for materials, equipment, resources, locations and network routes 4.2. Forward plan and specifications to the appropriate personnel for project implementation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- analytical skills to compare and evaluate most effective solutions
- communication skills to:
 - liaise with customers to ensure requirements are known and can be met within timeframes
 - negotiate approvals and contract arrangements with suppliers and contractors
- literacy skills to:
 - interpret technical specifications, equipment manuals and tenders
 - write project specifications and detailed project plan
- numeracy skills to:
 - calculate budget requirements and limitations
 - determine workforce requirements
- planning and organisational skills to:
 - prioritise sequence of work
 - set out project requirements
- problem solving skills to address variations and contract issues
- research skills to gain and maintain relevant and current technical product knowledge
- technical skills to prepare drafts of detailed plan

Required knowledge

- common customer telecommunications applications and related equipment
- cost effective solutions in planning
- drafting techniques
- familiarity with the workplace and industry environment
- legislative and environmental impacts including options for green ICT installations
- network and transmission equipment
- network topologies, interface and interconnect solutions
- specific occupational health and safety (OHS) requirements
- warranty information and contractor work guarantees

Evidence Guide

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:

- estimate and cost resources for a telecommunications project
- analyse project design to determine specification options
- prepare detailed project plan including specifications for resources and network routes.

Context of and specific resources for assessment

Assessment must ensure:

- sites on which projects may be conducted
- relevant databases, legislative requirements and other site and project related documentation.

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 the candidate undertaking project specification tasks
- review of plans and specifications prepared by the candidate
- oral or written questioning to assess knowledge of the planning process
- review of completed specifications for a project.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- ICTPMG5031A Prepare a project brief.

Aboriginal people and other people from a non-English speaking background may have second language issues.

Access must be provided to appropriate learning and assessment support when required.

EVIDENCE GUIDE

	Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed. In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. Where applicable, physical resources should include equipment modified for people with special needs.
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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.

Appropriate personnel may include:

- planning manager
- project coordinator
- project manager
- project supervisor.

Relevant legislation, codes, regulations and standards may include:

- Australian Communications Industry Forum (ACIF) standards and codes
- Australian Communications and Media Authority (ACMA) technical standards
- AS Communications Cabling Manual (CCM) Volume 1
- Australian building codes and regulations
- Australian Standards
- enterprise standards

RANGE STATEMENT	
	• environmental protection • fire regulations • heritage legislation • industrial relations agreements, including awards and enterprise agreements • International standards • local government • manufacturer's enterprise operating policy and procedures • national code • OHS Act • other services and utilities codes of practice and standards: • electricity • gas • water • power company requirements • Privacy Act • spectrum management authority • statutory requirements • Trade Practices Act • traditional land owners.
Data and documentation may include:	• design plans • drawings: • detailed drawings • schematic • materials and equipment: • quantity • size • type • project information • schematic diagrams • tender specifications • text.
Resources may include:	• equipment • funds • labour • material • plant machinery • skilled support.

RANGE STATEMENT

<i>Current information</i> may include:	• catalogues • industrial award and agreement documents • information sheets • manuals • price lists • technical data • tender and project specifications.
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Unit Sector(s)

Unit sector	Telecommunications
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Project management
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