



Australian Government

ICTTEN519 Design network building projects

Release: 1

ICTTEN519 Design network building projects

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 7.0.

Application

This unit describes the skills and knowledge to scope requirements, assess land site suitability, arrange site acquisition and produce building design plans for telecommunications network building projects.

It applies to individuals working for private and public organisations who combine technical design and organisational skills to apply planning principles for provisioning of the various building projects and technologies within a telecommunications network to meet future customer demands.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Telecommunications Networks Engineering

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Scope design options for network building projects	1.1 Obtain project specifications from relevant personnel and determine the nature, purpose and type of network facilities in the project 1.2 Analyse project brief and identify design options in compliance with legislation governing carriers in Australia 1.3 Evaluate design requirements and determine optimal site selection to house facilities 1.4 Arrange an environmental impact study (EIS) to be conducted on the selected site 1.5 Confirm that the EIS project requirements assess the suitability of

ELEMENT	PERFORMANCE CRITERIA
	the selected site
2. Evaluate and arrange land acquisition for network building projects	2.1 Evaluate EIS findings and determine the suitability of the selected site 2.2 Analyse EIS findings and determine potential for land acquisition and purchase in compliance with regulations and legislation 2.3 Prepare a report on the EIS 2.4 Consult relevant personnel to establish a base for negotiation
3. Analyse area and select design option for network building projects	3.1 Investigate physical attributes of the area, environmental impacts and collected data 3.2 Prepare field sketch according to enterprise requirements and develop solutions to obvious physical construction impediments 3.3 Produce design options that are viable for the enterprise and recommend a preferred option with justifications 3.4 Evaluate selection of preferred option and confirm that enterprise business strategy outcomes and policies are satisfied
4. Notify interested parties of network building projects	4.1 Assess availability of stakeholders for project implementation and confirm works are within enterprise schedules 4.2 Inform relevant personnel of the type, extent and duration of proposed works according to enterprise policy 4.3 Obtain required written permission from relevant personnel and forward to those who will carry out the job
5. Produce design plan and documentation for network building projects	5.1 Prepare design plan according to enterprise requirements and document required geographical and topological information 5.2 Indicate location and specification of works and network equipment in design plan 5.3 Specify resources needed to complete the project 5.4 Update enterprise information systems according to enterprise guidelines and industry practice 5.5 Produce a complete design report and present to relevant personnel for approval

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Oral communication	Articulates requirements to internal and external personnel on technical and operational matters using language suitable to

SKILL	DESCRIPTION
	audience and environment • Employs listening and questioning techniques to confirm understanding
Reading	• Identifies, analyses and evaluates complex text to determine legislative and business requirements to assist with project planning
Writing	• Prepares written reports and workplace documentation that communicate complex information clearly and effectively
Planning and organising	• Applies formal processes when planning tasks and producing plans with logically sequenced steps, reflecting the needs of others • Implements actions according to a predetermined plan, making adjustments, if necessary • Makes decisions quickly in familiar situations requiring immediate attention, drawing on past experience to identify key variables and determine the best course of action
Problem solving	• Uses analytical processes to decide on a course of action, establishing criteria for deciding between options and seeking input and advice from others before taking action when necessary
Self-management	• Keeps up to date with legislation and regulations affecting work and considers implications of these when negotiating and planning work
Technology	• Understands key principles and concepts underpinning design and operation of digital systems and tools, and applies these as required

Unit Mapping Information

Supersedes and is equivalent to ICTTEN502 Design a telecommunications project.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTTEN519 Design network building projects

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- design at least two network building projects.

In the course of the above, the candidate must:

- scope and produce design options
- recommend land acquisition options
- prepare at least two justification reports, including evaluation of environmental impact study (EIS) findings
- prepare completed building design plans.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- required legislation, codes, enterprise policy and requirements, company work practices, regulations and standards, workplace health and safety (WHS) requirements for scoped work
- characteristics of project briefs and design options
- design requirements
- features and information presented in:
 - EIS
 - justification reports
 - field sketches
 - design plans and principles
- physical construction impediments
- access networks
- functions and features of:

- core networks
- computer aided design (CAD) software packages used in network designs
- network performance and capacity
- site surveys
- Environmental Protection Act (EPA) and its impact on designing network projects
- implications of heritage listings on sites
- networks planning and procedures.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- sites on which projects may be designed
- CAD drawing facilities
- required databases, legislative requirements and other site and project required documentation.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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