



Australian Government

Department of Education, Employment and Workplace Relations

ICTNPL5154A Develop planning strategies for building environment design

Release: 1

ICTNPL5154A Develop planning strategies for building environment design

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to develop planning strategies for the design phase to meet present and future demands. It involves gathering information on network capability, anticipated network deployment demand and scoping design requirements to produce building planning specifications. 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	Technical officers or engineers from private and public organisations apply the skills and knowledge in this unit. They combine technical skills with broader organisational skills to plan the network building requirements within a telecommunications network. As a member of a network planning team, their job titles include network planner, project manager and buildings infrastructure planner. This unit applies to the building environment required to support the deployment of network infrastructure and equipment, such as power, air conditioning and spatial needs.
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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. Evaluate the building environment requirements	1.1.Utilise network equipment deployment plans to convert network equipment specifications into building requirements data 1.2.Determine the planned and forecast network equipment deployment locations and quantities to prioritise tasks 1.3.Formulate justification to proceed by analysing the business requirements and benefits to the business 1.4.Analyse the current building capacities or capabilities against the planned deployment data to determine building environment shortfalls or additional needs 1.5.Determine the minimum needs required to address identified building services shortfalls, upgrades or changes 1.6.Identify relevant standards, business and regulatory requirements that are essential for building plan compliance
2. Scope the buildings design requirements	2.1.Quantify the building's requirements from known needs to determine if any standard deliverables can be used 2.2.Assess if requirements can be met using new or alternative solutions 2.3.Provide estimated costs and schedule to determine a planning solution 2.4.Prepare a scoping document and supporting documentation with recommendations that complies with deployment standards and regulatory requirements
3. Produce the project brief	3.1.Prepare a project scope in required briefing format to present to the design section 3.2.Plan project delivery to meet any business timing and funding constraints 3.3.Produce the building planning specifications with approvals and present to the building design section to be used for detailed design or construction specifications

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- analytical skills to evaluate technical requirements and produce building specifications
- communication skills to liaise with internal and external personnel on technical and non-technical matters
- learning skills to keep up to date with technological changes
- literacy skills to interpret technical and non-technical documentation and the writing of summary reports in required formats
- numeracy skills to interpret data results and evaluate different types of technical data
- planning and organisational skills to plan, prioritise and monitor own work
- problem solving and contingency management skills to adapt technology to requirements of particular sites and modify activities depending on differing operational contingencies, risk situations and environments
- research skills to interrogate databases and investigate different audit requirements
- technical skills to select and compare benefits and limitations of building technologies to offer alternatives

Required knowledge

- capability and limitations of the various network technologies to meet present and future needs
- costing and funding models
- detailed knowledge required to prepare and review the limits of a buildings facilities and services
- network equipment requirements to derive buildings specifications
- overview knowledge of:
 - network building design
 - regulations
 - standards
- typical problems and challenges that describe the limitations of the various buildings project work
- upgrade knowledge of current building requirements to meet future service obligations

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 : • assess building environment requirements to provide network capability for current demands, including consideration of merging technological development and product implementation • prepare a scoping document with solutions, costing and scheduling recommendations to meet network capability needs and regulatory requirements.
Context of and specific resources for assessment	Assessment must ensure: • computer assisted design (CAD) • computer networks • data for network planning • network equipment deployment plans • planning models • standards and regulations.
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 implementing planning processes • review of reports completed by the candidate for planning the development and growth of the telecommunications network • oral or written questioning to assess knowledge of the various aspects of the planning for the access telecommunications network.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTNPL5096A Develop planning strategies for Access Network design • ICTNPL5071A Develop planning strategies for core network design.

EVIDENCE GUIDE

	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. 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.

<i>Network equipment</i> may include:	• billing centre • broadband • broadcasting • call centre • internet protocol (IP) networking • network alarm • network operations centre • radio • switching • transmission.
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RANGE STATEMENT	
<i>Building requirements data</i> may include:	• alarms • cooling • fire protection • power usage • security protection • spatial.
<i>Business requirements</i> may refer to:	• complying with standards and regulations • deployment of infrastructure in a commercially viable way • meeting customer demands on the network.
<i>Capacities</i> may refer to:	• ability to extend building area • adequate fire and security protection • available adequate cooling power • available adequate power feed from electricity supply authority • available floor space for use • vehicular access.
<i>Capabilities</i> may refer to:	• ability to deliver desired products • building design specifications • building limitations on facility and services • future needs.
<i>Relevant standards</i> may include:	• accepted industry design standards and codes • Australian or international standards • company design standards • company specific policy and standards • deployment rules • environmental codes • fire authority codes • heritage codes • local council building codes • regulatory body requirements: • Australian Competition and Consumer Commission (ACCC) • Telecommunications Act.
<i>Regulatory requirements</i> may include:	• community • environmental • legal • statutory.
<i>Estimated costs</i> may include:	• comparable past project costs

RANGE STATEMENT	
	• costing models • funding model • unit rates.
Supporting documentation may include:	• area plans • briefing documents • business justifications • cost-benefit analysis • customer demands.
Project scope may include:	• costing • details of requirements to build • justification • materials • provisions • resource allocation • timing.
Funding constraints may include:	• delay in funding • lack of budget or funding • low priority • project deferment.
Approvals may include:	• compliance • contract delivery • financial delegation • governance • quality assurance.

Unit Sector(s)

Unit sector	Telecommunications
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Network planning
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