



Australian Government

Department of Education, Employment and Workplace Relations

ICTNPL6029A Plan the development and growth of the telecommunications network

Release: 1

ICTNPL6029A Plan the development and growth of the telecommunications network

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to analyse and evaluate forecast data to plan the development and growth of the telecommunications network. 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 to plan access networks. It may also apply to technical staff moving into planning and management positions with responsibility for small projects or parts of larger projects, and for the operational and engineering of the telecommunications network in general.
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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. Gather data related to existing and projected network usage	1.1. Access market intelligence for information on customer demand on the network and likely growth in network use 1.2. Obtain demand data to plan for potential network traffic quantity and flow 1.3. Access information relating to new and emerging technologies, facilities and features and their specific applications 1.4. Access relevant legislation and associated operational codes and analyse impact on planning processes
2. Assess need for network growth	2.1. Evaluate capacity of existing network to absorb planned growth using network capacity usage and traffic measurements 2.2. Plan likely timing of necessary network increments to minimise impact on the network 2.3. Assess use of new or alternate technologies to meet forecast growth
3. Develop network plans	3.1. Assess overall planning parameters including approved business plan prior to commencement of planning process 3.2. Analyse gathered information and produce a project plan with specifications to meet network growth 3.3. Conduct appropriate investment study including cost benefit analysis where required with consideration of barriers that may affect project plan 3.4. Produce a network plan with detailed specifications and seek approval according to enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- analytical skills to identify details relating to the project from the approved network plan
- communication skills to discuss project brief with enterprise personnel, customers and other contractors
- literacy skills to write project briefs
- numeracy skills to:
 - analyse site survey data
 - cost estimates and operate budgets according to enterprise policy
 - undertake cost and benefit studies as a guide to the decision making process
- planning and organisational skills to consider current, new technology, facilities and features when developing options
- problem solving skills to:
 - address and analyse specific customer requirements
 - assess current access network conditions
- research skills to:
 - analyse impacts on planning processes
 - obtain and study information relating to new technology or technology features
 - obtain geographical information
 - study relevant legislation and associated operational codes
- technical skills to:
 - apply the three phases of project management to complete the project brief
 - develop and study planning options considering present and future needs
 - identify barriers to plan realisation

Required knowledge

- detailed knowledge of:
 - cost estimates and operating budgets according to enterprise policy
 - project management theory, associated databases and project management software programs
 - telecommunications industry in Australia
- overview knowledge of:
 - economic and political influences on public and commercial enterprises

REQUIRED SKILLS AND KNOWLEDGE

- financial authorities and delegations
- influence of the local and international economic conditions on the telecommunications industry
- typical challenges and limits facing technology today and the consideration of future needs
- relevant legislation
- specific knowledge of collating and writing project briefs, reports and project charters

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: - gather data related to existing and projected network usage - assess need for network growth - develop network plans.
Context of and specific resources for assessment	Assessment must ensure: - data from organisations involved in planning initiatives - a range of software currently used in industry - relevant regulations, specifications that impact on forecasting activities.
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 network planning tasks - review of data gathered, reports and project plans prepared by the candidate for planning the development and growth of telecommunication networks - oral or written questioning to assess knowledge of planning the development telecommunications networks.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: ICTNPL6030A Forecast service demand. 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.

<i>Market intelligence</i> may include:	• customer demand • customer feedback • customer projections • customer specific technology needs • new technology impact.
<i>Demand data</i> may be:	• collected from: • customers: • actual • prospective • economic planners • internal organisational groups • local • marketing organisations • real estate agents • sales organisations

RANGE STATEMENT

- state and federal governments
- statutory bodies
- traffic management systems
- in relation to:
 - access transport planning
 - changing customer use patterns
 - demographic changes
 - economic forecasts
 - industry trends
 - influence of technology on traffic demand
 - land developments
 - local industry
 - market conditions
 - marketing programs
 - population trends
 - possible environmental impacts
 - power re-zoning
 - sales forecasts
 - shire planning
 - traffic patterns.

RANGE STATEMENT	
<i>New and emerging technologies</i> may be obtained from:	• marketing groups • specific technology planning groups • vendor and enterprise forward planning groups.
<i>Relevant legislation</i> may include:	• Australian Communications and Media Authority (ACMA) standards TS 14 • International Standards ISO 9000/9001 • International Telecommunication Union (ITU) recommendations • OHS • Privacy Act • State/Territory and Federal Environment Acts • Telecommunications Act and relevant codes.
<i>Planning</i> can relate to:	• buildings • network change • network growth and network reduction • priorities which are driven by: • customer demand • legislative requirements • marketing initiatives • revenue projections • sites • structures.
<i>Specifications</i> may include:	• availability of equipment • availability of resources • costing • funding • infrastructure developments • priority • risk assessment • technology requirements • timeframe.
<i>Barriers</i> may include:	• building availability • environmental considerations • financial constraints • government policy • heritage legislation restrictions • land acquisition problems • material availability • planning approvals

RANGE STATEMENT

	• technology availability.
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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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