



Australian Government

Department of Education, Employment and Workplace Relations

ICTNPL6030A Forecast service demand

Release: 1

ICTNPL6030A Forecast service demand

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to develop forecasts for demand for telecommunications services. It includes assessing activities that may change service demand and capacity requirements. All telecommunications service providers perform forecasting to assist in network planning. Accurate forecast helps operators make key investment decisions relating to product development and network growth 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 planners, designers and supporting administration staff apply the skills and knowledge in this unit. It may also apply to technical staff moving into planning and management positions. This unit may apply to new installation or upgrades to existing telecommunications 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. Gather forecast intelligence	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 assess the potential network traffic quantity and flow 1.3. Access information relating to new and emerging technologies , facilities and features and their specific applications to evaluate the market trends in new technology implementation 1.4. Obtain data from network analysis to determine the state of the existing network using customer complaint reports and network fault incidence rate
2. Produce forecast service demand information	2.1. Analyse and process all collated data and prepare to the format required for forecasting activity 2.2. Select and configure a suitable software forecasting tool to process the collated data 2.3. Evaluate forecast results to generate forecasts of service demand using information in reference to new developments 2.4. Compile forecast figures and report according to enterprise policy
3. Review forecasts and update systems records	3.1. Review forecasts according to enterprise policy 3.2. Ensure forecasts consider new developments in the area and technological changes where appropriate 3.3. Maintain updated systems records with information received from each installation amendment activity

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- analytical skills to assess technical demand requirements based on technical and non-technical input data
- literacy skills to:
 - document technical requirements

REQUIRED SKILLS AND KNOWLEDGE

- read and interpret equipment, system manuals, specifications and relevant enterprise policy
- numeracy skills to:
 - apply forecasting techniques
 - assess channel capacities and overall dimensioning requirements
 - work with statistical data
- problem solving skills to account for unexpected changes in demand requirements
- technical skills to:
 - compile reports and record activities of enterprise systems
 - work with data and statistical techniques

Required knowledge

- broad knowledge of:
 - common telecommunications measurements quantities
 - network and transmission equipment and capabilities
 - network topologies and common access and transmission hierarchies
- configure and use software forecasting tools
- detailed knowledge of:
 - forecasting techniques
 - sources of data to aid forecasting
- market intelligence
- new and emerging technologies
- typical customer applications and usage levels

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:

- collect data vital to the development of traffic and service variation
- generate forecasts in relation to traffic and service variation using appropriate forecasting techniques
- review forecasts relevant to specific planning periods.

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 practical forecasting
- review of reports and demand forecasts completed by the candidate
- oral or written questioning to assess knowledge of dimensioning issues, types of systems and applications.

Guidance information for assessment

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

- ICTNPL6029A Plan the development and growth of the telecommunications network.

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

EVIDENCE GUIDE

	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.

Market intelligence may include:

- customer request data
- development area plans
- development triggers
- market research:
 - external triggers may include:
 - government initiatives
 - local councils
 - local government planning
 - property developers
- market surveys
- planning approvals

RANGE STATEMENT	
	• planning commission data • service delivery data • zoning data • telecommunication databases: • capacity assessment data • traffic dimensioning data.
<i>Demand data</i> may be:	• collected from: • customers: • actual • prospective • economic planners • internal organisational groups • local • marketing organisations • real estate agents • sales organisations • 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.
<i>New and emerging technologies</i>	• marketing groups • specific technology planning groups

RANGE STATEMENT	
may be obtained from:	• vendor and enterprise forward planning groups.
Software forecasting tool may include:	• specialist forecasting software • spreadsheets • statistical tools: • graphical estimation • moving averages: • simple • weighted • Poisson distribution • probability • queuing theory • regression analysis • trend analysis.
Forecasts may include:	• bandwidth • call or data traffic demand • circuit dimensioning • congestion levels • demand for telecommunications services • growth expectations in number of services required • quality of service (QoS) targets • transmission capacity in Erlangs.
New developments may include:	• commercial • communications construction be occurring directly or concurrently with primary activity • domestic • industrial.
Systems records may include:	• databases • network management • records: • equipment • operational • planning.

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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