



Australian Government

ICTTEN4001B Identify requirements for customer telecommunications equipment

Release 1

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Modification History

Release	Comments
Release 2	This version first released with <i>ICT10 Integrated Telecommunications Training Package Version 3.0</i>. References to other units updated. Outcomes deemed equivalent.
Release 1	This version first released with <i>ICT10 Integrated Telecommunications Training Package Version 1.0</i>.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to identify requirements for customer's telecommunications equipment.

Cable used must be compliant with appropriate Australian Communications and Media Authority (ACMA) technical standard requirements for underground, aerial, Category 5, 6A, 7 or 7A and unshielded twisted pairs (UTP). Cabling products must be ACMA-approved.

Assessment by a TITAB registered assessor is recommended.

All customer cabling work in the telecommunications, fire, security and data industries must be performed by a registered cabler. All cablers are required to register with an ACMA-accredited registrar.

Application of the Unit

Technical staff who identify requirements for customer's telecommunications equipment apply the skills and knowledge in this unit.

This unit applies to indoor and outdoor installation within a customer premises. It may be applied to domestic, commercial or industrial installations. Communications applications include digital and analog, telephony, data, video, digital broadcasting, computer networks, local area networks (LAN) and multimedia.

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>

Elements and Performance Criteria

1. Prepare to identify services required	1.1 Notify customer to arrange access to site and identify customer equipment 1.2 Assess site specific safety requirements and enterprise occupational health and safety (OHS) processes and procedures 1.3 Notify customer to arrange access to the site and discuss customer requirements 1.4 Confirm details of types and models of existing and proposed customer equipment 1.5 Establish intended uses of customer's equipment to assist in identifying cabling requirements 1.6 Establish required cabling requirements with customer and make alternate recommendations 1.7 Locate existing facilities and systems including network facilities 1.8 Verify building construction to confirm accessibility 1.9 Utilise existing floor plans where available and integrate into subsequent documentation 1.10 Notify customer where physical location may incur additional cost 1.11 Prepare a report on required services
2. Establish availability of and access to existing cabling	2.1 Calculate capacity of existing cabling against proposed usage to ensure appropriate decisions are taken on extent of new cabling required 2.2 Inspect cabling to ensure compliance with ACMA regulations, relevant legislation, codes, regulations and standards 2.3 Prepare a report on cabling infrastructure and equipment to meet customer requirements
3. Complete required reports and documentation	3.1 Complete all required documents promptly and accurately according to company policy 3.2 Obtain customer confirmation of documented requirements where required 3.3 Distribute relevant documentation promptly to required parties 3.4 Obtain sign off from customer

Required Skills and Knowledge

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

Required skills

- communication skills to liaise with internal and external personnel on technical and operational matters
- literacy skills to:
 - interpret technical documentation, such as equipment manuals and specifications
 - read and interpret drawings related to customer's telecommunications equipment
 - write reports
- numeracy skills to calculate capacity of existing cabling
- planning and organisational skills to organise and maintain equipment
- problem solving skills to solve equipment and logistics problems
- task management skills to work systematically with required attention to detail and adherence to all safety requirements
- technical skills to:
 - establish cabling requirements
 - inspect cabling.
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Required knowledge

- features and operating requirements of test equipment
- legislation, codes of practice and other formal agreements that impact on the work activity
- manufacturer's requirements for safe operation of equipment
- specific OHS requirements relating to the activity and site conditions
- typical issues and challenges that occur on site.

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: • identify services required and availability and access to existing cabling • identify locations of equipment and placement of cables on support structures and building faces for both internal and external locations for service delivery • complete required reports and documentation including order forms, services checklists and quotation forms.
Context of, and specific resources for assessment	Assessment must ensure: • sites on which telecommunications installations can be conducted • relevant databases, licensing requirements and other site-related documentation.
Methods of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • review of a hands-on project completed by the candidate • review of an oral and written report with completed documentation • direct observation of the candidate identifying requirements for customer's telecommunications equipment.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTCBL2017B Alter services to existing cable system. 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

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.

Customer equipment may include:	• bandwidth managers • computer network • digital subscriber line (DSL): • asymmetric DSL (ADSL) • digital broadcasting • computer telephony integration (CTI) technologies • modems • network equipment • private automatic branch exchange (PABX) • pay TV and satellite TV installations • radio frequency (RF) equipment • security panels and equipment • single line telephones • telephone systems • video.
Customer requirements may cover:	• an existing builder's or electrical contractor's schedule • cable • connectors • cost per cable length installed per outlet • equipment types: • bandwidth managers • data • DSL • ADSL • ADSL2 • digital broadcasting • CTI • modems • network equipment • PABX • RF equipment • single line telephones • telephone systems

	• video • frames • requirements for: • equipment • labour • materials • other resources • timeframes • scope of works • support system.
Intended uses of customer's equipment may include:	• bandwidth management • future needs • interface types • integrated services digital network (ISDN) application • location • primary rate access • services required • speed • telephone distribution • video distribution.
Cabling requirements must include:	• cost estimates, speed, response time, capacity and compatibility of proposed cabling installation • ACMA approved cabling products • cable compliant with appropriate ACMA technical standard requirements: • aerial • Category 5, 6, 6A, 7 or 7A • shielded twisted pairs (STP) • underground • UTP • customer premises telecommunications cabling includes any area under the control of the customer as distinct from areas controlled by a network carrier.
Facilities may be:	• associated with network: • business links • call barring • call diversion • city links • data links • dial tone • easy call

	• incoming lines only • least cost routing • metering • rotary dialling.
Documentation may include:	• order forms • quotation forms • services checklists.
Relevant legislation, codes, regulations and standards include:	• Australian Communications Industry Forum (ACIF) standards and codes • AS Communications Cabling Manual (CCM) Volume 1 • AS/NZS 3000:2007 • AS/NZS 3080:2003 • AS/NZS 3084:2003 • AS/NZS 3085.1:2004 • AS/NZS IEC 61935.1:2006 • AS/NZS IEC 61935.2:2006 • AS/NZS ISO/IEC 14763.3:2007 • AS/NZS ISO/IEC 15018:2005 • AS/NZS ISO/IEC 24702:2007 • Australian building codes and regulations • cabling security codes and regulations • fire regulations • industry standards may include regulated or industry codes of practice and include appropriate ACMA technical standards • mining legislation • noise abatement and heritage legislation • OHS • technical standards AS/ACIF S008:2006 and AS/ACIF S009:2006 • Trade Practices Act.

Unit Sector(s)

Telecommunications - Telecommunications networks engineering