Australian Government

Department of Education, Employment and Workplace Relations

ICTTEN5204A Produce technical solutions from business specifications

Release: 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

ICTTEN5204A Produce technical solutions from business specifications

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to compile and evaluate the business specifications from a client and to produce business solutions for consideration.
	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.

Application of the Unit

Application of the unit	Officers in field work who carry out network design and implementation of practical technical solutions of ICT networks apply the skills and knowledge in this unit. They would be employed by telecommunications and IT networking provisioning companies specialising in integrating the converging and emerging technologies of ICT networks.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to produce technical solutions from business specifications	1.1. Obtain **business requirements** and **business specifications** for the **client** from **appropriate person** 1.2. Research and identify the business model of the client 1.3. Determine technical specifications for business 1.4. Clarify and confirm the business **problem** and key stakeholders' **requirements** with stakeholders 1.5. Document business objectives and problem and confirm details with appropriate person
2. Evaluate the impact of the technical requirements	2.1. Review and assess business problems, opportunities and objectives 2.2. Determine **technical requirements** in respect of input and output, interface, process flow or quality requirements 2.3. Analyse **hardware**, **software** and **network** requirements 2.4. Build business platform based on software solutions 2.5. Investigate processes to be changed by the business solution 2.6. Produce an evaluation document on the **impact** of the technical requirements on the business
3. Produce technical business solutions	3.1. Develop **technical solutions** in response to problems and business requirements 3.2. Determine costs involved to implement the technical business solution 3.3. Investigate a range of supplier products to determine which one best meets technical requirements 3.4. Produce a report document on the technical solutions addressing the business specifications and recommendations against business requirements
4. Document and validate the agreed solutions	4.1. Forward technical requirements and solution overview to appropriate person for feedback 4.2. Analyse feedback and incorporate change as required 4.3. Document changes and distribute to appropriate person 4.4. Obtain sign off on final business solution

Required Skills and Knowledge

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, operational and business related matters
- literacy skills to interpret technical documentation and write reports, design solutions and recommendations in required formats
- numeracy skills to interpret business requirements and specifications and evaluate possible technical design scenarios for optimum solution
- planning and organisational skills to plan, prioritise and monitor own work
- problem solving and contingency management skills to adapt varied business procedures to requirements
- research skills to interrogate vendor databases and website to implement different solutions to meet client business specifications
- technical skills to:
    - determine technical specifications
    - evaluate optimum solutions
    - produce technical solutions

Required knowledge

- business processes
- client business domain, business function and organisation
- compatibility issues and resolution procedures
- configuration of internet protocol (IP) networks
- customer and business liaison
- desktop applications and operating systems as required
- documenting technical specifications
- linkage between processes
- security protocols, standards and data encryption
- technologies, such as:
    - ICT network topologies
    - network protocols and operating systems
    - radio frequency (RF) networks and principles
    - optical networks and principles
    - mobile cellular networks
    - core networks
    - access networks
    - radio frequency identification (RFID) hardware and software.

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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: • adapt technologies to specified technical solutions • use site design software and hardware • evaluate client specifications against accepted industry practices • produce technical solutions from business specifications • produce information that can be shared between businesses • apply design concepts to business solutions • produce technical reports • make recommendations and offer optimum design solutions.
Context of and specific resources for assessment	Assessment must ensure: • client functional requirements • business specifications • database software • simulation software • organisational guidelines • network/computer layout • site design software and hardware • information on a range of ICT business solutions.
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: • review of evaluation document prepared by the candidate outlining the impact of technical requirements on the business • oral or written questioning assessing required knowledge • review of research methodologies and the final proposal prepared by the candidate outlining solutions and recommendations.

EVIDENCE GUIDE	
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICTTEN5203A Dimension and design a radio frequency identification system • ICTOPN6128A Design a dense wavelength division multiplexing 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.

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.

RANGE STATEMENT	
Business requirements may include:	• business application • business plan • existing system • mission statement • nature of the business • network or people in the organisation.
Business specifications may include:	• budget allocation • budget costs estimate • future plan • growth forecast • technical requirements • timeline.
Client may include:	• external organisations • finance company • health industry • ICT company • individual people • internal departments • internal employees • manufacturing company • service industry.
Appropriate person may include:	• authorised business representative • client • ICT network administrator • ICT network manager • ICT support manager • small or medium enterprise (SME) customer • small office home office (SOHO) customer • supervisor.
Problem may refer to:	• application • business • business need or opportunity that needs to be addressed • network or people in the organisation • system.
Stakeholders may include:	• development team • project team • sponsor • user.

RANGE STATEMENT	
Requirements may be in reference to:	• application • business • database • network • people in the organisation • platform • system.
Technical requirements may refer to:	• bandwidth • hardware problems • network growth • network security • network traffic congestions • new technologies • power usage • software problems • transmission dropouts • upgrades.

Hardware may include:	• cabling networks
	• internet protocol TV (IPTV)
	• multimedia
	• network elements:
	   • gateways
	   • local area network (LAN) switches
	   • routers
	   • servers
	   • wireless networks
	• optical networks
	• radio networks
	• RFID equipment
	• switching equipment
	• transmission equipment
	• voice and data equipment.

Software may include:	• commercial • customised software • in-house • packaged.
Network may include:	• broadband • data • ICT networks

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RANGE STATEMENT	
	• internet • intranet • media • radio • RFID • security • switching • telecommunications • transmission.
Impact may refer to:	• fewer downtimes • improved efficiency • improved response times • increased return on investment (RoI) • lower operational costs • more 'user friendly' network.

Technical solutions may include:	• audit requirements
	• changes to:
	   • network infrastructure
	   • security or privacy provisions
	• e-business or e-commerce solution
	• hardware upgrades
	• implementing a new system
	• inventory management
	• new hardware
	• new software
	• occupational health and safety (OHS) requirements
	• quality requirements
	• software upgrades
	• user training.

Unit Sector(s)

Unit sector	Telecommunications

Co-requisite units

Co-requisite units		

Competency field

Competency field	Telecommunications networks engineering

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