



Australian Government

Department of Education, Employment and Workplace Relations

ICAICT501A Research and review hardware technology options for organisations

Release: 1

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Modification History

Release	Comments
Release 1	This Unit first released with <i>ICAll Information and Communications Technology Training Package version 1.0</i>

Unit Descriptor

This unit describes the performance outcomes skills and knowledge to apply research skills when reviewing hardware solutions, as part of an analysis of emerging technology.

Application of the Unit

This unit applies to senior staff in a variety of information and communications technology (ICT) roles who are required to select new technology for their organisation and review the efficacy of existing technologies.

Licensing/Regulatory Information

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.

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. Determine organisational needs	1.1 Establish organisational needs and selection criteria for new technology 1.2 Review strategic goals and determine future requirements 1.3 Assess physical infrastructure and financial parameters against strategic goals
2. Research vendors, suppliers and IT industry specialists	2.1 Determine suitable suppliers and vendors 2.2 Source information from suppliers and vendors 2.3 Assess vendor information against <i>industry standards</i> 2.4 Review emerging standards and applications for compatibility with supplier and vendor information
3. Evaluate and report on hardware technology options	3.1 Review and test <i>hardware</i> to identify suitability for organisational requirements 3.2 Identify possible <i>project risks</i> associated with identified hardware 3.3 Document findings in a report and present to <i>appropriate person</i>

Required Skills and Knowledge

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

Required skills

- communication skills to:
 - convey complex and abstract concepts and information
 - liaise with customers, vendors and suppliers
 - participate in teams and contribute to solutions and goals
 - present information, such as the results of testing new technology and proposals to move in new directions
- literacy skills to:
 - interpret industry standards
 - interpret technical information from vendors and suppliers
- numeracy skills to calculate cost and consider financial information
- planning and organisational skills to:
 - estimate scope, time, cost and quality
 - plan communications and risk management
 - investigate new technology for new roles in the workplace
- problem-solving skills to develop new approaches with new technology
- research skills to:
 - analyse and evaluate information
 - develop reports and summary findings
 - gain and maintain relevant and current technical product knowledge
- technical skills to:
 - assess technical information against industry standards
 - review and test hardware.

Required knowledge

- business planning process relevant to the development of data and voice integration and remote access business solutions
- client business needs that can be satisfied by the provision of IT products and services
- current business practices in preparing reports
- current industry and technology information sources
- current industry-accepted hardware, cabling and software products, including broad knowledge of general features and capabilities, with particular reference to emerging trends and product design
- equipment performance benchmarking
- industry networks, key individuals and organisations within the IT industry
- information-gathering techniques
- quality assurance practices, to promote reliable investigation processes
- vendor product directions:
 - access and security products

- next generation networks
- self-configuring asymmetric digital subscriber line (ADSL) or cable modem-router-switch for the small office home office (SOHO) market
- wireless standards.

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	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> analyse and plan approaches to technical problems or management requirements access and convey conceptual information regarding emerging technology in relation to organisational needs evaluate information, using it to forecast for planning or research purposes recommend technology options.
Context of and specific resources for assessment	<p>Assessment must ensure access to site with:</p> <ul style="list-style-type: none"> network or computer layout documentation and premises plans network components equipment specifications organisational guidelines business plan or model journals of industry and professional associations relevant standards. <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> review of reports completed by the candidate recommending technology change verbal or written questioning to assess candidate's ability to apply technical knowledge in the preliminary analysis of emerging technology according to organisational requirements or practices.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and</p>

	<p>the work being performed.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p> <p>In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.</p>
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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.

<i>Industry standards</i> may include:	<ul style="list-style-type: none"> • review of software and hardware currently used in the industry, which can be obtained from: <ul style="list-style-type: none"> • conferences • industry publications and websites • professional groups: <ul style="list-style-type: none"> • ICT groups • Sector-specific.
<i>Hardware</i> may include:	<ul style="list-style-type: none"> • cabling infrastructure • internet access • modems and other connectivity devices • networks • personal computers • remote sites • servers • wireless networks • workstations.
<i>Project risks</i> may include:	<ul style="list-style-type: none"> • variations in locating and obtaining hardware influenced by changes in: <ul style="list-style-type: none"> • scope • time • cost • quality.
<i>Appropriate person</i> may include:	<ul style="list-style-type: none"> • authorised business representative • client • supervisor.

Unit Sector(s)

General ICT