



Australian Government

Department of Education, Employment and Workplace Relations

PUADEFTE001A Plan testing and evaluation processes

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers the competency required to plan a test and evaluation process which may be complex in terms of scope; degree of risk; environmental, political, cultural and social factors that apply; consequences of failure; and degree of control. It includes the requirement to identify the scope of the testing process, to determine the testing methodology and to prepare the plan.

Application of the Unit

Application of the Unit

This unit was developed for Defence test and evaluation workers but is applicable to individuals who work in this field.

Typically these individuals work independently or as part of a team under direct and indirect supervision, use discretion and judgement, and take responsibility for the quality of their output. All activities are carried out in accordance with relevant organisational policy and procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Pre-requisite Unit/s Nil

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. **Identify testing requirements and undertake scoping**

- 1.1 ***Critical analysis*** of the need for testing is conducted in accordance with ***organisational policy and procedures***
- 1.2 Definition study is undertaken, where necessary, to determine scope of testing process
- 1.3 Scoping is completed in accordance with organisational policy and procedures, and identifies a rationale for the testing that includes the purpose and outcomes
- 1.4 ***Stakeholders*** are identified and canvassed to ensure that their requirements are addressed in planning

ELEMENT**PERFORMANCE CRITERIA****2. Determine testing methodology**

- 2.1 Research and analysis is undertaken to identify impacts and risks, ***constraining factors*** and alternate options
- 2.2 Methodology technical feasibility, supportability and cost effectiveness are analysed and outcome is reported to key stakeholders
- 2.3 Alternatives for testing design are assessed and preferred option that fits organisational requirements is identified and reported
- 2.4 Relevant specialists are consulted to determine extent of ***potential risks***
- 2.5 Business case is prepared and ***approvals*** to proceed with test development are obtained in accordance with organisational policy, procedures and guidelines

ELEMENT**PERFORMANCE CRITERIA****3. Develop test and evaluation plans**

- 3.1 Aims, objectives and impacts are defined in **test plan** and timeframes, and resources are identified to complete quality deliverables on time and within budget
- 3.2 Test methods are determined by consideration of resource constraints, environmental constraints, evidence requirements, existing capabilities and their compatibility with existing procedures
- 3.3 Testing outcomes are recorded in measurable and achievable forms, and indicators to monitor test performance are developed and agreed by relevant parties
- 3.4 Potential risks are investigated and identified in the plan and a risk management process is established to analyse information and **options to manage risks**
- 3.5 Skills, roles and responsibilities of team members and stakeholders are clarified and agreed, and reporting requirements are identified
- 3.6 **Management** of test **parameters** is addressed in the plan and evaluation criteria are designed in accordance with organisational policy and procedures
- 3.7 **Management tools** are utilised for planning in accordance with test requirements and the process is designed and documented, in consultation with **specialists**, to meet user requirements

4. Promulgate and maintain test plans

- 4.1 Security and confidentiality of data is maintained in accordance with workplace and regulatory requirements
- 4.2 Test plans are promulgated as required in accordance with organisational policy and procedures
- 4.3 Test plans are maintained in accordance with test and evaluation requirements, and organisational policy and procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- access/prepare information electronically or in hard copy
- apply risk management techniques
- communicate with stakeholders using a range of communication styles to suit different audiences and purposes
- detail requirements, write recommendations and prepare plans requiring precision of expression
- include workplace safety issues in planning requirements
- negotiate timelines, roles and responsibilities with stakeholders and team members
- schedule testing activities
- use management tools suited to planning testing processes
- use planning techniques related to testing and evaluation that may be complex in terms of scope; degree of risk; environmental, political, cultural and social factors that apply; consequences of failure; degree of control
- use public relations strategies to promote and gain endorsement

Required Knowledge

- approval processes
- integrated logistics support
- legislation, organisational policy and procedures that may impact on the test and evaluation process
- management tools suited to implementing testing processes
- organisational change management
- principles relating to the implementation phase of testing processes
- resource plans
- resource scheduling packages
- test and evaluation implementation methods which may be complex in terms of scope; degree of risk; environmental, political, cultural and social factors that apply; consequences of failure; degree of control
- work breakdown structures (WBS)

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Nil

Consistency in performance

Competency should be demonstrated over time and should be observed in a range of actual or simulated work contexts.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in the workplace or in a simulated workplace environment.

Specific resources for assessment

Access is required to:

- computer and relevant software
- legislation, guidelines, procedures and protocols relating to test and evaluation processes
- testing plans
- workplace documentation.

EVIDENCE GUIDE

Guidance information for assessment

In all cases, assessment should be supported by questions to assess required knowledge and those aspects of competency which are difficult to assess directly. Questioning techniques should suit the language and literacy levels of the candidate.

Assessment methods should reflect workplace demands such as literacy and the needs of particular groups

Assessment methods suitable for valid and reliable assessment of this unit may include, but are not limited to, a combination of:

- authenticated evidence from the workplace and/or training programs
- case studies
- demonstration
- feedback from supervisors and peers regarding the candidate's ability
- observation
- portfolios
- projects
- questioning
- reviews or reports prepared by the candidate
- scenarios
- simulation or role plays.

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 in the Performance Criteria is detailed below.

Critical analysis may include

Cost-benefit analysis
Internal and external environment scan
Operational imperatives
Policies likely to be impacted
Political imperatives
Previous activities that may affect testing requirements

Organisations may include

Defence
Defence contractors and sub-contractors
Defence Materiel Organisation
Defence Science and Technology Organisation
International test agencies
Universities

Policy and procedures may include

Relevant commonwealth, state/territory and local legislation affecting organisation's administration such as:

- financial management, and accounting legislation and regulations
- occupational health and safety (OH&S) legislation
- public sector management acts

Government and organisational policy, guidelines and procedures relating to:

- delegation approvals
- industrial agreements
- procurement guidelines
- resourcing
- risk management
- security
- strategic or operational plans
- technical and regulatory framework
- testing and evaluation
- training

RANGE STATEMENT**Stakeholders may include**

Clients or customers (internal and external)
 End user/s
 General public
 Industry
 Landowner/s
 Organisation's senior management
 Other agencies
 Other functional areas within the organisation
 Project teams
 Relevant interest groups
 Sponsor/funding bodies
 Steering committee members
 Supplier/service provider
 Unions

Constraining factors may include

Cultural
 Environmental
 Financial
 Industrial
 Legislative
 Logistical support
 Operational
 Political
 Resources
 Safety
 Security/privacy
 Social
 Technical

Potential risks may include

Financial
 Probity
 Security
 Scheduling

RANGE STATEMENT**Approvals may include**

Technical

Business owner

Chief executive officer, manager or management representative

Customer or client

Environmental authorities

Funding body

Line manager

Program manager

Regulatory authority

Specialist management office

Testing sponsor

Test plans may include

Acquisition strategies

Budget and financial management strategy

Contract management

Cost estimates

Evaluation criteria

Expected/measurable outcomes

Facilities

Functional performance specifications

Governance strategy

Implementation strategy

Inclusions and exclusions

Information/communication strategy

Intellectual property strategies

Milestones

Objectives

Occupational concept document

People plan including human resource management and human resource development

Performance criteria/indicators

Purpose

RANGE STATEMENT

	Quality assurance
	Quality control
	Quality standards
	Rationale
	Required resources
	Resource management
	Risk management
	Roles and responsibilities
	Safety criteria
	Schedule/timeline
	Specific equipment, instrumentation, and/or specialised facilities and required conditions
	Task/WBS
	Test and evaluation master plan (TEMP) criteria
	Test concept document
	Testing control mechanisms
	Testing deliverables and their acceptance criteria
Options to manage risks may include	Acceptance
	Avoidance
	Minimisation
	Transfer
Management may include	Change management
	Communication, including reporting
	Financial management
	Logistics management
	OH&S management
	People management
	Procurement management
	Quality management
	Resources management
	Risk management
	Schedule management

RANGE STATEMENT**Parameters may include**

Scope management
 Acquisition/procurement
 Change management
 Communications including reporting requirements
 Cost
 Delivery requirements
 Evaluation
 Feasibility
 Governance structure
 Integration of testing within organisation
 Intellectual property
 Monitoring through testing processes
 Operational flexibility
 Organisational structure
 People required for test including specialist expertise
 Pilot outcomes
 Quality control
 Resources
 Risks associated with test including people, environment, resources, technology change during the life of the process (if applicable)
 Scope including outcomes, objectives, deliverables
 Skills required for testing team
 Steering committee arrangements
 Timeframe and milestones
 Transition arrangements

Management tools may include

Communications plan
 Life cycle cost analysis
 Logistics support analysis
 Organisational testing governance framework
 Recording systems - electronic and manual
 Reporting framework

RANGE STATEMENT

	Risk analysis
	Test and evaluation management software and other tools:
	• cost schedule control system • critical path method • Gantt and bar charts • program evaluation and review technique (PERT) charts • spreadsheets
Specialists may include	Environmental
	Financial
	Legal
	Logistics
	Operators
	Other functional areas
	Other relevant agencies
	Regulatory
	Safety
	Technical

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil