



Australian Government

DEFTE001A Plan testing and evaluation processes

Release: 2

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Modification History

Release	TP version	Comments
2	DEF12 V2	Layout adjusted.
1	DEF12 V1	First release.

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

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

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 required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in 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
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
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

ELEMENT**PERFORMANCE CRITERIA**

- 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

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

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

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

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.

<i>Critical analysis</i> 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
<i>Organisations</i> may include:	• Defence • Defence contractors and sub-contractors • Defence Materiel Organisation • Defence Science and Technology Organisation • International test agencies • Universities
<i>Policy and procedures</i> may include:	• Relevant commonwealth, state/territory and local legislation affecting organisation's administration such as: • financial management, and accounting legislation and regulations • work health and safety (WHS) 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
<i>Stakeholders</i> 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 • Technical
Approvals may include:	• 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 • 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 • WHS management • People management • Procurement management • Quality management • Resources management • Risk management • Schedule management • Scope management
Parameters may include:	• 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 • 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.