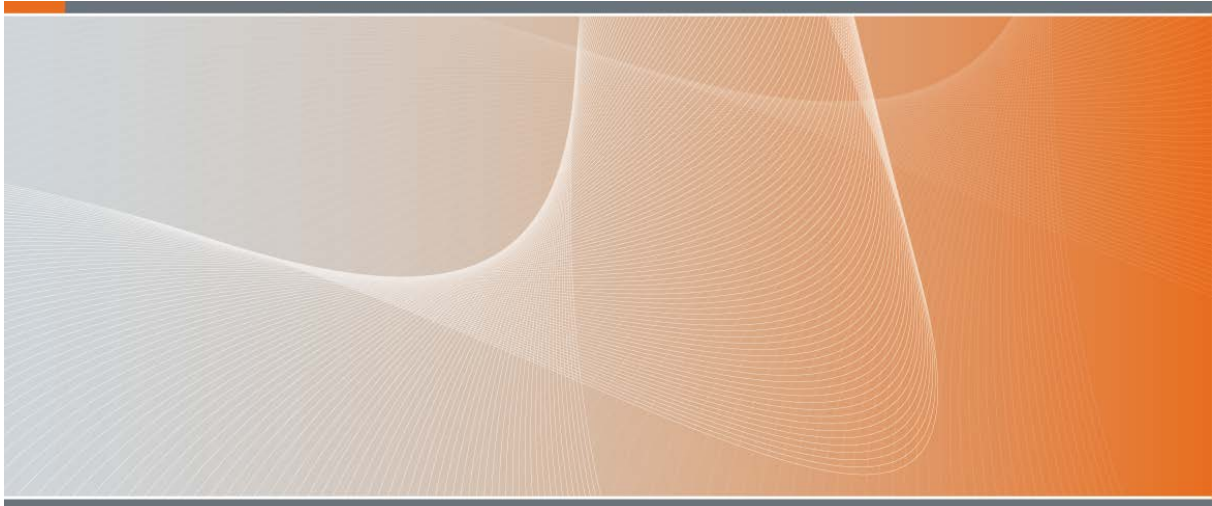




Australian Government

Department of Defence

DEFENCE TEST AND EVALUATION POLICY



A handwritten signature in black ink, appearing to read "Kathy Toohy".

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MAJGEN
HFI**

Department of Defence
CANBERRA ACT 2600
11 October 2019

DEFENCE TEST AND EVALUATION POLICY

Date Issued:	Defence test and evaluation policy has been issued by Head Force Integration with the authority of Vice Chief of the Defence Force on 11 October 2019.
Purpose:	This policy describes Defence's approach to test and evaluation across the capability life cycle. It provides a coordinated and standardised environment for capability managers to manage domain specific test and evaluation functions throughout the capability life cycle.
Scope and applicability:	<p>Defence test and evaluation policy is an administrative policy framework document (framework document) and applies to all Defence personnel.</p> <p>The terms of a relevant contract may extend the application of this policy to a person/s engaged under a contract.</p> <p>Defence Instruction – Administrative policy should be read in conjunction with this policy. In accordance with Defence Instruction – Administrative Policy, the Secretary and the CDF require Defence personnel to comply with this policy.</p> <p>Defence personnel who award or manage contracts should consider whether there is a specific and documented reason to include the requirement to comply. If so, include such terms in the contract.</p>
Management:	Defence test and evaluation policy will be reviewed five years from its date of issue or sooner if necessitated by business requirements and to ensure it continues to meet the intended policy outcomes. Minor amendments may be made at quarterly intervals commencing three months after the date of issue.
Availability:	The latest version of the Defence test and evaluation policy is at http://intranet.defence.gov.au/home/documents/departme.htm Its currency cannot be guaranteed if sourced from other locations. It is available for public release.
Policy domain:	Military command support
Accountable officer:	The Vice Chief of the Defence Force
Policy owner:	Head Force Integration
Policy contact:	Director Defence Test and Evaluation
Cancellation:	The publication of this policy cancels the Interim Defence Test and Evaluation Manual
Definitions:	Definitions that apply to the Defence test and evaluation policy are at Annex 1A .

DEFENCE TEST AND EVALUATION POLICY

POLICY STATEMENT

1.1 The results of test and evaluation are fundamental for capability management decision making because test and evaluation provides essential, practical and real information about safety, effectiveness and suitability at all levels. It is an essential element for informed decision making, providing objective quality evidence to support the assessment of a capability system or system-of-systems.

WHAT IS TEST AND EVALUATION?

1.2 Test and evaluation is defined in [Annex 1A](#). Test and evaluation is complementary to the many design and integration activities necessary in realising the future joint force.¹

1.3 Results of test and evaluation are fundamental for validating operational concepts; simulation models; end-user requirements; evaluating designs or modifications; identifying alternative designs; comparing and analysing trade-offs when capability specifications cannot be met; verifying contract compliance; evaluating system performance and confirming that fundamental inputs to capability are in place. The results of test and evaluation may confirm whether or not risk is contained within acceptable boundaries and therefore informs decision making.

1.4 Test and evaluation can be used for all methods of acquisition employed by Defence. Test and evaluation is best utilised within the life cycle management of capability systems when:

- a. developing project information evidence and records;
- b. de-risking capability proposals during their development, solicitation and contract so that there is every chance of success of the right projects (preview test and evaluation);
- c. making informed decisions, based on quality objective evidence, at critical milestones during the acquisition of capabilities through verification and validation (development/acceptance test and evaluation) and introduction into service of new or upgraded capability;
- d. validating the operational effectiveness and suitability of the capabilities in a phased and structured way during introduction into service (operational test and evaluation);
- e. comparing the acquired system against the required capability once it achieves introduction into service for closing an acquisition business case;
- f. assessing the ongoing operational suitability and effectiveness of a capability against the contemporary environment (in-service test and evaluation); and
- g. assessing the integration of capability systems across the joint force.

¹ [Interim Capability life cycle manual](#) Chapter 3, Paragraph 3.38.

TYPES OF TEST AND EVALUATION

1.5 Defence test and evaluation policy recognises the following types of test and evaluation, as defined at [Annex 1A](#):

- a. preview test and evaluation;
- b. developmental test and evaluation;
- c. acceptance test and evaluation;
- d. operational test and evaluation; and
- e. in-service test and evaluation.²

ROLES AND RESPONSIBILITIES

1.6 The **Vice Chief of the Defence Force** is responsible for:

- a. managing Defence test and evaluation policy;
- b. planning, conducting and reporting test and evaluation in support of joint force assurance; and
- c. coordinating cross-domain test and evaluation to enable efficient and effective test and evaluation.

1.7 **Director General Capability Integration, Test and Evaluation** is responsible for:

- a. establishing and maintaining a standardised environment for capability managers to plan, conduct and report test and evaluation activities throughout the capability life cycle;
- b. developing and maintaining test and evaluation policy and implementation procedures;
- c. assuring VCDF that capability managers comply with test and evaluation policy;
- d. assuring VCDF that capability managers consider preview test and evaluation in all major capability submissions to Government (if applicable) prior to Gate 2³;
- e. assuring VCDF that capability managers conduct test and evaluation planning for project/program integration and interoperability requirements;
- f. planning, conducting and reporting force level test and evaluation;
- g. coordinating cross-domain test and evaluation;
- h. managing Defence engagement with other government departments and international test and evaluation agencies;
- i. performing test and evaluation governance; and
- j. conducting test and evaluation enterprise reporting.

² In some instances test and evaluation can be accelerated to meet Defence needs such as during rapid acquisitions. Information on accelerated test and evaluation requirements can be found [here](#).

³ Gate 0, 1 and 2 are defined in the relevant capability life cycle policy.

- 1.8 **Capability managers** are responsible for:
- a. issuing Group or Service level test and evaluation policy;
 - b. conducting test and evaluation planning for their programs, projects and products, throughout the capability life cycle;
 - c. conducting and reporting test and evaluation, as directed by the Vice Chief of the Defence Force, in support of joint force integration;
 - d. ensuring test and evaluation master plans are endorsed by all affected Groups and Services, test and evaluation accountable units, delivery groups, and all other relevant stakeholders, prior to approval by the capability manager or delegate⁴;
 - e. the biennial review of test and evaluation master plans, including consulting with all affected Groups and Services, test and evaluation accountable units, delivery groups, and all other relevant stakeholders;
 - f. ensuring there are appropriate links between the program strategy and the program test and evaluation plan;
 - g. ensuring Project Directives and Product Delivery Agreements include reference to test and evaluation master plans, and appropriate governance and reporting requirements;
 - h. conducting preview test and evaluation early in the capability life cycle to inform program and project risks whenever possible and applicable;
 - i. overseeing and supporting developmental test and evaluation/acceptance test and evaluation during the acquisition phase to reduce technical and operational risk during introduction into service;
 - j. assessing the effectiveness and suitability of their capability systems through operational test and evaluation for introduction into service;
 - k. conducting in-service test and evaluation to identify and explore capability gaps and feedback results into the force design process;
 - l. ensuring that all Defence test and evaluation personnel operate within an appropriate test and evaluation competency framework;
 - m. ensuring that test and evaluation is conducted in compliance with applicable Work Health and Safety legislation and the amplifying safety assurance programs/regulations imposed by Defence;
 - n. providing necessary and appropriate resources in support of test and evaluation;
 - o. performing test and evaluation governance functions;
 - p. advising the adequacy and supportability of ranges and laboratories to support test and evaluation activities within their domain; and
 - q. allocation of a test and evaluation principal to represent the interests of the capability manager at the test and evaluation principals' forum, and coordinate

⁴ Further detail on test and evaluation plan endorsement and approval requirements can be found at the [T&E Policy website](#).

assurance of test and evaluation accountable units under that capability manager.

1.9 Capability managers must determine the most efficient and effective means to conduct test and evaluation, either by establishing test and evaluation accountable units, contracting with an outsourced service provider, or via agreement with other Groups, Services or foreign militaries.

1.10 The **Chief Information Officer** is responsible for completing the capability manager responsibilities for those projects in the Enterprise ICT Program that do not have a defined capability manager.

1.11 **Delivery groups** are responsible for managing, coordinating and enabling the following on behalf of the capability manager, as documented in the approved test and evaluation master plan:

- a. sufficient preview test and evaluation to ensure robust requirement development;
- b. sufficient preview test and evaluation to ensure informed and risk appropriate solicitation decisions;
- c. sufficient developmental test and evaluation, and acceptance test and evaluation, to verify agreed function performance requirements and certification requirements;
- d. sufficient support to operational test and evaluation to finalise program and project validation of capabilities to agreed operational concepts;
- e. ensuring that all Defence test and evaluation personnel operate within an appropriate test and evaluation competency framework;
- f. ensuring test and evaluation activities are incorporated into the integrated project management plan;
- g. coordination of test and evaluation stakeholders to ensure the conduct of test and evaluation is in accordance with the integrated project management plan;
- h. conduct governance and reporting as detailed in Project Directives and Product Delivery Agreements; and
- i. allocation of a test and evaluation principal to represent the interests of the delivery group at the test and evaluation principals' forum.

1.12 The **Chief Defence Scientist** is responsible for:

- a. identifying risks through technical risk assessments, or equivalent, to support the conduct of preview test and evaluation and/or the preparation of test and evaluation planning documents; and
- b. providing assistance to test and evaluation sponsored by capability managers.

1.13 **Deputy Secretary Estate and Infrastructure** is responsible for:

- a. providing facilities support in maintaining Defence test and evaluation ranges;
- b. assessing the effectiveness and suitability of their fundamental inputs to capability through the results of test and evaluation; and
- c. providing agreed estate resources in support of test and evaluation.

- 1.14 **Test and evaluation accountable units** are responsible for:
- a. producing the required test and evaluation products, including but not limited to test plans, data and test reports;
 - b. ensuring that Defence test and evaluation personnel operate within an appropriate test and evaluation competency framework;
 - c. planning, conducting and reporting test and evaluation activities and Defence trials in accordance with approved standards and processes; and
 - d. where applicable, maintaining test and evaluation resources (including managing the operational aspects of ranges, with particular application to their role), and identifying and funding generic equipment needs.

TEST AND EVALUATION PLANNING

1.15 A deliberate, evidence-based process of test and evaluation to support the assessment of capability systems and inform risk-based decision making throughout the capability life cycle requires appropriate planning.

1.16 Through-life test and evaluation planning is a risk-based and tailorable process used to set the overarching framework for detailed planning of future test and evaluation activities and Defence trials. Early test and evaluation planning enables capability managers to consider the most effective and efficient way to use test and evaluation as a tool to aid decision making. Specifically, through-life test and evaluation planning is used by capability managers to:

- a. develop and maintain an enduring program test and evaluation master plan; and
- b. develop and maintain project/product test and evaluation master plans for the duration of their capability life cycle.

1.17 Capability managers are responsible for through-life test and evaluation planning, with support from delivery groups, test and evaluation accountable units and other stakeholders through the integrated project team. During planning capability managers should, through the integrated project team⁵:

- a. consider, based on risk, the need for sufficient preview test and evaluation (try-before-you-buy) for all major capital investment projects, including for military off the shelf capabilities;
- b. recognise and/or enable sufficient development test and evaluation to integrate components, systems, sub-systems from different providers or introduce new capabilities with legacy systems and capabilities already resident within Defence before commitment to production;
- c. ensure identification of sufficient resources to manage and conduct test and evaluation activities;
- d. plan sufficient acceptance test and evaluation to provide evidence for the purposes of decisions required for contractual acceptance, inclusive of any

⁵ The test and evaluation master plan should document the reasons for the level of test and evaluation adopted.

specific technical regulatory certification aspects required for commissioning into operational service;

- e. plan sufficient operational test and evaluation to the satisfaction of the capability manager to support introduction into service; and
- f. plan sufficient test and evaluation during the in-service/disposal phase to support ongoing assessment of capability, including Joint Force considerations, and timely feedback of capability gaps into the force design process.

1.18 Gate 0 early test and evaluation considerations. At the program level an enduring test and evaluation master plan should be maintained by the capability manager and provide necessary input into the overarching program strategy. At the project/product level test and evaluation needs are first identified in the joint capability narrative, produced through the contested force design process. Test concepts should then be documented by the capability manager as early as possible in the capability life cycle to inform the submission for Gate 0.

1.19 Project/product test and evaluation considerations prior to Gate 0 will enable and guide preview test and evaluation activities during the Requirements and Risk Mitigation Phase of the CLC and should be included in the Gate 0 business case (refer CLC Manual 2.32). The extent of test and evaluation planning pre-Gate 0 is constrained by the amount of information available early in the capability life cycle, but should include identification of test and evaluation responsibilities, test and evaluation strategy, key event timeframes, planned use of international test and evaluation arrangements, and an estimate of the test and evaluation budget. Additionally, any test and evaluation conducted prior to Gate 0 should be identified in the business case. If the project strategy is to proceed directly to Gate 2, Capability Managers are to articulate preview test and evaluation requirements in the Gate 0 business case. Additional guidance on Gate 0 test and evaluation considerations can be found at the [T&E Policy website](#).

1.20 Documenting through-life test and evaluation master plans. Following Gate 0 a project/product test and evaluation master plan must be developed by the Capability Manager, through the integrated project team. It will then be maintained for the remainder of the project's capability life cycle as the overarching project/product level test and evaluation master plan, under which detailed test and evaluation planning is conducted. The fidelity of the test and evaluation master plan will increase over time and it will be passed to the systems project office after the acquisition phase. The test and evaluation master plan should outline how test and evaluation detailed planning will be conducted in Defence trials and in subordinate test planning documents during each stage of the capability life cycle. Guides for the development of program and project/product test and evaluation master plans can be found at the [T&E Policy website](#).

1.21 While capability managers can tailor test and evaluation activities based on technical and operational risks, they should demonstrate adequate consideration of test and evaluation through the conduct of through-life test and evaluation workshops, designed to elicit common risks. Integrated project teams should develop test and evaluation plans through a series of workshops starting before Gate 0. The workshops should run sequentially as each artefact is produced i.e. the operational concept document (to produce an operational test and evaluation plan), functional performance

specification (for the acceptance test and evaluation and integration/developmental test and evaluation plan), technical risk assessment (for any preview test and evaluation or other developmental test and evaluation required) or their substitute. All relevant test and evaluation accountable units and stakeholders should be present to ensure the plan takes in all relevant considerations in order to generate a realistic schedule and accurate costings. Details of the test and evaluation workshops can be found at the [T&E Policy website](#).

DETAILED PLANNING OF DEFENCE TRIALS

1.22 Detailed planning of Defence trials may be performed by test and evaluation accountable units or individuals at the request of the capability manager in any stage of the capability life cycle. Detailed test and evaluation planning conducted by test and evaluation accountable units must be consistent with the requirements set by that capability manager in the overarching program and project/product test and evaluation master plans. Test and evaluation planning in Defence trials must be conducted by competent test and evaluation personnel who:

- a. generate an approved test plan;
- b. verify test equipment/instrumentation performance (if applicable); and
- c. demonstrate test readiness through successful completion of a test readiness review (or equivalent) prior to the conduct phase (requirements for successful completion of the test readiness review are available on the [T&E Policy website](#)).

1.23 The test and evaluation plans should as a minimum:

- a. detail verifiable, quantifiable, achievable and necessary test requirements, developed from the user requirements;
- b. detail results of previous testing;
- c. detail any limitations to scope;
- d. detail command and control arrangements;
- e. detail a build-up approach to testing (i.e. increasing safety and technical and operational complexity);
- f. identify the required test and evaluation resources, instrumentation, tools and test equipment;
- g. confirm the physical and functional configuration of the test article/system under test;
- h. detail the required test environment;
- i. detail the required test techniques, tolerances and procedures;
- j. detail data collection, storage handling and reduction requirements;
- k. identify the test and evaluation personnel competency requirements;
- l. provide a test schedule and budget/costs; and
- m. analyse test hazards, mitigations and corrective actions as applicable.

TEST AND EVALUATION CONDUCT

1.24 Deliberate, evidence based test and evaluation activities will be conducted to support the assessment of capability systems and inform risk based decision making throughout the capability life cycle.

1.25 Different types of test and evaluation may be conducted throughout the capability life cycle including preview test and evaluation, development test and evaluation, acceptance test and evaluation, operational test and evaluation, and in-service test and evaluation. Detailed guidance for their conduct throughout the capability life cycle are contained at the [T&E Policy website](#).

1.26 Defence trials require execution of the test plan by competent Defence test and evaluation personnel who as a minimum should:

- a. generate test data cards;
- b. brief test and evaluation participants;
- c. accurately record the system under test configuration;
- d. accurately record the test conditions;
- e. collect and store test data; and
- f. debrief test and evaluation participants.

TEST AND EVALUATION REPORTING

1.27 Deliberate, evidence-based test and evaluation activities are reported to support the assessment of capability systems and inform risk based decision making throughout the capability life cycle.

1.28 Test and evaluation reporting must be performed by competent Defence test and evaluation personnel who as a minimum should:

- a. analyse the test data;
- b. detail the level of confidence in the data (if available); and
- c. generate and brief (as required) an approved test and evaluation report.

1.29 Test and evaluation reports must as a minimum:

- a. detail test requirements and any limitations to scope;
- b. detail the configuration of the system tested;
- c. detail the test conditions under which the test was performed;
- d. detail the test techniques used;
- e. present the data collected or provide access to the data;
- f. analyse and discuss the data as required;
- g. detail the mission relation of any deficiencies found;
- h. detail the conclusions and recommendations from analysis of the data; and
- i. detail the specification compliance if required.

1.30 Where test and evaluation activities are contracted out, the test and evaluation accountable unit is to ensure that the planning, conduct and reporting meets the requirements of this policy.

SPECIALIST TEST AND EVALUATION ACTIVITIES

1.31 Some areas of test and evaluation have unique characteristics, critical resources, or require further development as a test and evaluation capability. They warrant special consideration to ensure adequate planning, conduct and reporting. Specialist test and evaluation activities include the following:

- a. **Cyber test and evaluation.** Cyber threats to military systems are becoming more advanced and effective as electronic information systems and software-intensive systems become the standard. To ensure the security and survivability of all Defence systems against cyber threats, all operational test and evaluation is to include representative cyber threats as soon as reasonably practicable. Programs and projects must develop requirements that include testing against these threats. Guidance on cyber test and evaluation can be found at the [T&E Policy website](#). Noting the criticality of cyber-survivability and the maturing state of defence cyber test and evaluation practice, project sponsors are to seek early concurrence on the necessary level of cyber test and evaluation required. This to be considered shortly after Gate 0 and then incorporated into the test and evaluation master plan. Assistance to develop appropriate cyber test and evaluation can be obtained from Defence Test and Evaluation Directorate. The level of cyber test and evaluation to be incorporated into the test and evaluation master plan is to include:
 - (1) a cyber vulnerability risk assessment considering consequences (project's integration and interoperability importance, criticality of the project's capability to the joint force) and causes (cyber vulnerability vectors); and
 - (2) a current assessment/forecast of Defence's capacity/capability to undertake the required cyber test and evaluation.
- b. **Explosive ordnance test and evaluation.** Explosive ordnance, including guided weapons, is a critical component of military capability. Activities involving explosive ordnance are inherently hazardous, and present credible safety risks to Defence personnel, materiel and the general public throughout the capability life cycle. The safety of an item of explosive ordnance is not static; explosive ordnance components are susceptible to degradation from both environmental and abnormal stimuli and have finite limits within which they can be considered Safe and Suitable for Service (S3). Development, acceptance, operation and in-service test and evaluation of explosive ordnance is required to inform whole of lifecycle management of safety and performance risks. Joint Proof and Experimental Unit is Defence's lead explosive ordnance test and evaluation accountable unit. While the services undertake aspects of explosive ordnance test and evaluation, Joint Proof and Experimental Unit is responsible for providing Defence with proof, test and evaluation of explosive ordnance, weapon and associated computation systems (fire control). Specific capabilities of Joint Proof and Experimental Unit include dynamic testing (all-up round and weapon testing), static testing

- (explosive ordnance component testing, pyrotechnic and blast effects), environmental testing (testing against climatic, mechanical and induced environments) and non-destructive testing (x-ray).
- c. **Information and communications technology test and evaluation.** Chief Information Officer Group has issued the [*Information and communications technology software testing manual*](#) which details the new information and communications technology software test framework. Underpinning the framework is ISO/IEC/IEEE 29119, the internationally agreed set of software testing standards. The framework also includes an information and communications technology software test policy and process coupled with effective governance and assurance that targets both the testing of software and its supporting infrastructure. This test framework meets the Defence acceptance test and evaluation requirements.
- d. **Flight test and evaluation.** Flight test and evaluation includes flight test operations conducted under the authority of a Military Permit To Fly (MPTF) and operational evaluation activities conducted by a Military Air Operator (MAO) with assurance from the Delegate of the Safety Authority – Flight Test (DoSA-FT). The activities conducted under a MPTF are regulated under Defence Aviation Safety Regulations - Flight Test (DASR-FT). Flight test operations and personnel competencies are managed by the Air Warfare Centre (Air Force), Fleet Air Arm (Navy) and Forces Command (Army) MAOs with airworthiness assurance oversight by a DoSA-FT in accordance with DASR-FT. Flight test capability requirements should be identified early, given the long lead time to train and develop personnel.⁶
- e. **Environmental qualification test and evaluation.** Australia has one of the most diverse and demanding environments for military capabilities anywhere in the world with respect to salinity, turbidity, solar radiation, lightning, wind conditions, marine life and hot/wet tropical areas, as defined in DEF(AUST) 5168. Procurements from the US and Europe frequently require operational workarounds and protections to safely operate in Australia. Effective environmental qualification test and evaluation by the necessary laboratories, where necessary underpinned by qualified read-across of foreign certification, should be undertaken to ensure safe and effective use in a well-documented operational environment with adequate package, handling, storage and transport.

TEST AND EVALUATION GOVERNANCE

1.32 Capability managers conduct test and evaluation functions, working within a standardised environment set by the governance requirements of this policy. Two separate assurance frameworks support Defence test and evaluation as described below:

⁶ The types of T&E defined at paragraph 1.6 reflect T&E activities in support of the phases of the capability management lifecycle. Airworthiness approval for Australian military Flight Test activities under DASR are based on the certification and modification status of the aircraft regardless of the juncture at which they occur in the CM lifecycle. Refer to DASR FT 05 for detail on the four Categories of flight test and associated airworthiness management implications.

- a. Defence meets its safety requirements for the conduct of test and evaluation through compliance with work health and safety legislation and the amplifying safety assurance programs/regulations imposed by Defence.
- b. Test and evaluation needs to be planned, conducted and reported in such a way to produce objective, cost effective, reliable and timely information, supporting decision making at all levels. Test and evaluation performance assurance is achieved by setting test and evaluation competency, product and process/tools standards and then reviewing and assuring against these standards. Australian Defence Force Headquarters conducts a test and evaluation performance assurance mapping process to set the standard. The level of independence of this assurance is then tailored to the level of project risk determined through the Smart Buyer decision making framework and type of test and evaluation conducted.⁷ An overview of the test and evaluation governance framework is included at the [T&E Policy website](#) and the required competency, product and process/tool standards are described below.

1.33 Test and evaluation competencies. Clearly defined and assured test and evaluation competencies are a fundamental input to the test and evaluation process integrity. The results of test and evaluation activities may be used to ensure that end-users' requirements are met and in some cases are used as an input to system safety. Test and evaluation results therefore need to be complete, accurate and defensible. A competency framework ensures that test and evaluation staff and the organisations for which they work are appropriately assured to plan, conduct and report on the necessary test and evaluation and to assure the integrity of the test and evaluation process. Without this competency framework, decision makers risk relying on opinions that are not based on appropriately evaluated and tested results. Capability managers must therefore ensure test and evaluation staff have the relevant competencies, experience and training for their roles. Further detail on competencies can be found at the [T&E Policy website](#).

1.34 Test and evaluation products. Test and evaluation products are generated from test and evaluation planning, conduct and reporting. Products from each phase include (but not limited to) the test and evaluation plan, data, and the test and evaluation report. Capability managers must assure their test and evaluation products in accordance with the test and evaluation performance assurance framework and product requirements detailed in this policy or an equivalent standard, agreed by the relevant test and evaluation principal.

1.35 Test and evaluation process and tools. Robust test and evaluation planning, conduct and reporting processes, implemented with adequate, suitable, calibrated and current test and evaluation instrumentation/tools will help assure test and evaluation outputs. Capability managers must assure their test and evaluation process and tools in accordance with the test and evaluation performance assurance framework and process requirements detailed in this policy or an equivalent standard, agreed by the relevant test and evaluation principal. This will underline the capability manager's confidence in test and evaluation as an effective and efficient tool,

⁷ Where the outputs from the test and evaluation process directly impact safety, a level of test and evaluation capability assurance above what is described in this policy may be required by the respective capability manager.

supporting decision making at all levels. Capability managers should also consider detailing the required data confidence levels.

1.36 **Test and evaluation accountable units.** A test and evaluation accountable unit is defined in [Annex 1A](#). Test and evaluation accountable units consist of enduring test and evaluation units under capability managers and within delivery Groups and major projects.⁸ A list of test and evaluation accountable units is to be maintained by each of the test and evaluation Principals and advised annually at the test and evaluation principal's forum. The current list of approved test and evaluation accountable units and their approved scope of test and evaluation can be found at the [T&E Policy website](#).

1.37 **Test and evaluation principals' forum.** The Defence test and evaluation principals' forum is the primary governance meeting for Defence test and evaluation and must convene at least annually. Director General Capability Integration, Test and Evaluation chairs the test and evaluation principals' forum. The aim of the principal's forum is to foster an enterprise approach to planning, management and the application of test and evaluation by addressing test and evaluation needs of the Defence organisations and individuals involved in the life cycle management of capability systems. Each capability manager and delivery group is to nominate a lead representative as their test and evaluation principal. Test and evaluation accountable units and stakeholders may be invited as observers to the test and evaluation principals' forum. Specific roles, responsibilities and representation for the forum are detailed on the [T&E Policy website](#).

1.38 **Test and evaluation enterprise level performance monitoring.** Enterprise monitoring informs the VCDF and capability managers with enterprise-level advice on the coordination, monitoring and evaluation of the adequacy and results of Defence test and evaluation activities. The framework for advice, coordination and reporting along with common management tools are detailed at the [T&E Policy website](#) and consist of:

- a. **Defence test and evaluation enterprise report.** A Defence test and evaluation enterprise report is to be provided to VCDF based on the past financial years performance and on preparedness of test and evaluation across Defence to meet forecast demand. The governance advice, provided by the chair of the test and evaluation principals' forum, is to use key performance indicators to measure the health, efficiency and effectiveness of Defence test and evaluation.
- b. **Defence test and evaluation monitoring.** Defence test and evaluation monitoring includes oversight of the test and evaluation activities of the Defence test and evaluation accountable units. This monitoring is to be coordinated by Director Defence Test and Evaluation, who is to provide centralised, common management tools to assist the test and evaluation practitioners and program and project staff in their roles. Test and evaluation information is to be provided by the respective groups and services and is also used to populate selected key performance indicators for the Defence test and evaluation enterprise report. Monitoring includes:

⁸ Risk as defined by the Smart Buyer risk framework

- (1) tracking the adequacy and applicability of test planning documentation proceeding to gate reviews;
- (2) providing advice of the intent to conduct Defence Trials in order to adequately bound risk for advice to capability managers;
- (3) monitoring the availability of sufficient, appropriately trained test and evaluation personnel in specific competency areas; and
- (4) reviewing test and evaluation activities to quantify its effectiveness, identify improvements in policy, procedures and conduct, and as a mechanism for continuous improvement.

1.39 **Test and evaluation training.** Defence Test and Evaluation Directorate in Capability Integration, Test and Evaluation Branch will, as per the [Defence learning manual](#) part 1 paragraph 3.18, act as the subject matter expert for generic Defence test and evaluation training. Capability managers are responsible for the management of specialist test and evaluation training standards identified. While Groups and Services may promulgate minimum training requirements, Director Defence Test and Evaluation will have the responsibility for:

- a. maintaining competency requirements for general test and evaluation roles; and
- b. sponsorship of Australian Industry Skills Council test and evaluation specific training.

ALLIED TEST AND EVALUATION SUPPORT AND CONDUCT

1.40 The support and cooperation of allied nations is important to realising the real potential of defence capabilities. Access to allied test and evaluation support improves efficiency and effectiveness of Defence test and evaluation.

1.41 Effectiveness is improved in a number of ways including:

- a. access to allied nation's test and evaluation ranges, instrumentation and facilities not available in Australia; and
- b. leveraging of allied test and evaluation skill sets not currently available in Australia.

1.42 Efficiency is improved in a number of ways including:

- a. sharing of test and evaluation tasks between allied nations to achieve a common outcome;
- b. sharing of test and evaluation data between allied nations; and
- c. achieving economies of scale only available through the international test and evaluation community.

1.43 International test and evaluation is managed through a series of International Agreements in the form of memorandums of understanding. These are managed by Director General Capability Integration, Test and Evaluation as the management agent and include:

- a. the bilateral Test and Evaluation Program memorandum of understanding between the United States and Australia, and

b. the Multinational Test and Evaluation memorandum of understanding between Australia, Canada, New Zealand, the United Kingdom and the United States.

1.44 Under these agreements subordinate project arrangements can be created to support bi-lateral or multi-national cooperative test and evaluation, reciprocal use of test facilities or test and evaluation working groups. Director Defence Test and Evaluation is the point of contact for these facilities.

DEFINITIONS

The following list of terms are defined in [Defence Instruction – Administrative policy](#). The definitions are intended to apply to their use in administrative policy framework documents:

Accountable officer
Administrative policy
Australian Public Service employee
Commander
A person/s engaged under a contract
Defence
Defence civilian
Defence locally engaged employee
Defence member
Defence personnel
Defence-wide administrative policy framework document
Framework documents
Manager
Period of effect
Policy domain
Policy owner
Supervisor

For the purpose of the policies described in this document, the following definitions also apply:

Acceptance test and evaluation. Test and evaluation carried out to demonstrate whether the materiel developed and produced fulfils the contractual requirements and specifications. When acceptance test and evaluation is performed by an Outsourced Service Provider, a Defence representative must ensure that the test and evaluation is conducted in accordance with the approved plan, usually through witnessing key events. Acceptance test and evaluation may also include some testing conducted to assist in making decisions regarding system acceptance.

Defence trials. Are those test and evaluation trials conducted by Defence consisting of:

- a. test and evaluation trials directed by Government or Chief of the Defence Force and coordinated under the authority of Vice Chief of the Defence Force, Director General Capability Integration Test and Evaluation; and
- b. test and evaluation trials conducted under the authority of the respective capability managers in the Air, Land, Sea, Joint and Information domains.

To enable enterprise level monitoring and efficient feedback to customers, Defence trials are to have key information recorded and tracked in centralised, common management tools.

Developmental test and evaluation. Is used in the system design and development process and supports verification of technical or other performance criteria and objectives. Developmental test and evaluation is conducted to assist with the

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development of a system, product or service. It is used to integrate components, systems and sub systems as well as legacy platforms with the new capability.

In-service test and evaluation. Is that test and evaluation conducted by the capability manager during the in-service/disposal phase. In-service test and evaluation may aim to explore capability gaps in the existing force and feed information back to the force design cycle.

Objective quality evidence. Any statement of fact, either quantitative or qualitative, pertaining to the quality of a product or service based on observations, measurements, or tests which can be verified. Evidence will be expressed in terms of specific quality requirements or characteristics. These characteristics are identified in drawings, specifications, and other documents which describe the item, process, or procedure.

Off the shelf. Systems, hardware or software that already exists or is confirmed in service for an equivalent purpose and requires no, or minimal change. Sometimes expressed as commercial off-the-shelf or military off-the-shelf.

Operational effectiveness. The ability of a capability system, or defined subset, to perform its intended function over its intended operational spectrum, in the expected operational environment, and in face of expected threats when operated by typical operational personnel.

Operational suitability. The capacity of a capability system, or defined subset, when operated and maintained by typical operational personnel in the expected numbers and at the expected level of competency, to be reliable, maintainable, available, logistically supportable, compatible, interoperable, safe, environmentally compliant and ergonomically satisfactory.

Operational test and evaluation. Test and evaluation that is conducted under realistic operational conditions with representative users of the system, and in the expected operational context. The purpose of operational test and evaluation is to determine the system's operational effectiveness and suitability to perform the role and fulfil the requirement that it was intended to satisfy. It also needs to consider the logistical aspects (e.g. training, maintenance and supply support) required for the capability to perform its objectives. Operational test and evaluation can be subdivided into Initial Operational test and evaluation and Follow-on operational test and evaluation.

Initial operational test and evaluation. Is the first time that the system is tested on production representative test articles used by typical operators with typical field equipment in a realistic environment. The objective of initial operational test and evaluation is to determine operational effectiveness and suitability through the resolution of Critical Operational Issues, and to ensure deficiencies discovered in earlier operational assessments/evaluations have been corrected. Initial operational test and evaluation may overlap with acceptance test and evaluation and vice versa. Where overlap is identified, this should be planned as early as possible to ensure all stakeholders and resources are aligned.

Follow on test and evaluation. Is used to verify operational effectiveness and suitability of the system through testing of any deferred or incomplete test items from Initial operational test and evaluation, and to assess modifications to the original system. Follow on test and evaluation is usually performed after Initial Operational Capability is achieved, and can also occur when a capability manager identifies a deficiency in a system, changes the role or environment of that system, or an

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enhanced capability is required such as integrating the new capability at formation vice unit level.

Preview test and evaluation. Is that test and evaluation conducted through a Defence trial prior to Gate 2. The purpose of preview test and evaluation is to provide information in the form of evidence to the capability manager as early as possible in the capability life cycle. Preview test and evaluation can be used to inform requirements, inform technical and other project risks, assist in option down selection, understand integration and FIC implications and test the maturity of the system. Preview test and evaluation is conducted by competent test personnel and representative end users.

Test and evaluation. A process or an activity to obtain information to support the objective assessment of a capability system with known confidence, and to confirm whether or not a risk is contained within acceptable boundaries across all facets of a system's life cycle. A test is an activity in which a scientific method is used to obtain quantitative or qualitative data relating to the safety, performance, functionality, contractual compliance and supportability of a system. Evaluation is the analysis of test results to determine (verify) or prove (validate) something.

Test and evaluation accountable unit. A unit which requires a higher level of test and evaluation performance assurance due to risk or complexity. Test and evaluation accountable units are assured by a test and evaluation principal to conduct test and evaluation within a given scope. A test and evaluation accountable unit may be an enduring test and evaluation unit under a capability manager, within a delivery Group, or may be a program/project with high technical or integration risk or complexity identified through a Technical Risk Assessment, Integration & Interoperability assessment, or as part of the Smart Buyer process. Test and evaluation accountable units are identified and assured by a test and evaluation principal on behalf of a Capability Manager.

Test and evaluation products. The outputs from the test and evaluation planning, conduct and reporting process. They are the test and evaluation plan, test and evaluation data and the test and evaluation report, respectively.

Test and evaluation stakeholder. An entity or organisation that will be involved to assist or enable the test and evaluation plan. It may be subordinate to a test and evaluation accountable unit.

Validation. Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled.

Verification. Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled.