Test and Evaluation Master Plan (TEMP)

for

CHURCH AUTHORITY

Date

Prepared by

Office the Chaplin

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**TEST AND EVALUATION MASTER PLAN**

**FOR**

ACRONYM

**ACAT Level**

Program Elements

Frost

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SUBMITTED BY

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Program Executive Officer DATE

or Developing Agency (if not under the Program Executive Officer structure)

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DoD Component Acquisition Executive (Acquisition Category I) DATE

Milestone Decision Authority (for less-than-Acquisition Category I)

Note: For Joint/Multi Service or Agency Programs, each Service or Defense Agency should provide a signature page for parallel staffing through its CAE or Director, and a separate page should be provided for OSD Approval

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OSD APPROVAL

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**Guidance:** The recommended TEMP format for all programs, regardless of Acquisition Category. While this format is not mandatory, the document reflects staff expectations. Programs beyond Milestone B using another TEMP format may continue that format or convert to this format at the discretion of the Program Manager. The inclusion of all information shown is required for programs under OSD Test and Evaluation oversight. This new format applies to new programs, programs that are being restructured, and any other program at their discretion.

**Guidance:** Determine whether FOUO is applicable per DoDM 5200.01, Volume 4, “DoD Information Security Program: Controlled Unclassified Information (CUI),” February 24, 2012.

**Guidance Source:**  <http://www.dtic.mil/whs/directives/corres/pdf/520001_vol4.pdf>.

**Instructions:** PEO-specific instructions will be added here.

**References:**

1. [Defense Acquisition Guide paragraph 9.5.5 (Test and Evaluation Master Plan)](https://acc.dau.mil/CommunityBrowser.aspx?id=504127#9.5.5.3)
2. [AFI 99-103 paragraph 5.14](http://www.e-publishing.af.mil/shared/media/epubs/AFI99-103.pdf)
3. [Defense Acquisition Guide paragraph 9.6.2](https://acc.dau.mil/dag_9.6.2)

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PART I - INTRODUCTION

## Purpose.

Click here to enter text.

Guidance: State the purpose of the Test and Evaluation Master Plan (TEMP). Identify if this is an initial or updated TEMP. State the Milestone (or other) decision the TEMP supports. Reference and provide hyperlinks to the documentation initiating the TEMP (i.e., Initial Capability Document (ICD), Capability Development Document (CDD), Capability Production Document (CPD), Acquisition Program Baseline (APB), Acquisition Strategy Report (ASR), Concept of Operations (CONOPS)). State the Acquisition Category (ACAT) level, operating command(s), and if listed on the OSD T&E Oversight List (actual or projected)

## Mission Description.

Click here to enter text.

Guidance: Briefly summarize the mission need described in the program capability requirements documents in terms of the capability it will provide to the Joint Forces Commander. Describe the mission to be accomplished by a unit equipped with the system using all applicable CONOPS and Concepts of Employment. Incorporate an OV-1 of the system showing the intended operational environment. Also include the organization in which the system will be integrated as well as significant points from the Life Cycle Sustainment Plan, the Information Support Plan, and Program Protection Plan. Provide links to each document referenced in the introduction. For business systems, include a summary of the business case analysis for the program.

System Description.

### 1.3.0.x. FYDP

Click to enter FYDP here.

Guidance: Repeat for FYDP years as needed.

#### 1.3.0.x.1. System Configuration.

Click here to enter text.

Guidance: For each system, describe the system configuration for the planned increments within the Future Years Defense Program (FYPD)

#### 1.3.0.x.1.1. Key Features.

Click here to enter text.

Guidance: For each system, identify key features for the planned increments within the FYDP.

#### 1.3.0.x.1.2.Subsystems.

Click here to enter text.

Guidance: For each system, identify subsystems for the planned increments within the FYDP.

#### 1.3.0.x.1.3. Hardware.

Click here to enter text.

Guidance: For each system, identify hardware for the planned increments within the FYDP.

#### 1.3.0.x.1.4. Software.

Click here to enter text.

Guidance: For each system, identify software for the planned increments within the FYDP. (Include such items as architecture, system and user interfaces, security levels, and reserves.)

### System Threat Assessment.

Click here to enter text.

Guidance: Succinctly summarize the threat environment (to include cyber-threats) in which the system will operate. Reference the appropriate DIA or component-validated threat documents for the system.

Program Background.

### 1.3.2.01. Background Information for Proposed System.

Click here to enter text.

Guidance: Reference the Analysis of Alternatives (AoA), the APB and the materiel development decision to provide background information on the proposed system.

#### 1.3.2.02. Overarching Strategies.

Click here to enter text.

Guidance: Briefly describe the overarching Acquisition Strategy (for space systems, the Integrated Program Summary (IPS)), and the Technology Development Strategy (TDS).

#### 1.3.2.03. System Procurement.

Click here to enter text.

Guidance: Address whether the system will be procured using an incremental development strategy or a single step to full capability.

#### Evolutionary Acquisition Strategy.

Click here to enter text.

Guidance: If it is an evolutionary acquisition strategy, briefly discuss planned upgrades, additional features and expanded capabilities of follow-on increments. The main focus must be on the current increment with brief descriptions of the previous and follow-on increments to establish continuity between known increments.

#### Previous Testing.

Click here to enter text.

Guidance: Discuss the results of any previous tests that apply to, or have an effect on, the test strategy.

### 

### Key Capabilities.

Click here to enter text.

Guidance: In tabular form, identify the Key Performance Parameters (KPPs) and Key System Attributes (KSAs) for the system. For each listed parameter, provide the threshold and objective values from the CDD/CPD and reference the paragraph.

#### Key Interfaces.

Click here to enter text.

Guidance: Identify interfaces with existing or planned systems’ architectures that are required for mission accomplishment. Address integration and modifications needed for commercial items. Include interoperability with existing and/or planned systems of other Department of Defense (DoD) Components, other Government agencies, or Allies. Provide a diagram of the appropriate DoD Architectural Framework (DoDAF) system operational view from the CDD or CPD.

#### Special test or certification requirements.

Click here to enter text.

Guidance: In tabular format, identify unique system characteristics or support concepts that will generate special test, analysis, and evaluation requirements (e.g., security test and evaluation, Information Assurance (IA) Certification and Accreditation (C&A), post deployment software support, resistance to chemical, biological, nuclear, and radiological effects; resistance to countermeasures; resistance to reverse engineering/exploitation efforts (Anti-Tamper); development of new threat simulation, simulators, or targets.

#### Systems Engineering (SE) Requirements.

Click here to enter text.

Guidance: Reference all SE-based information that will be used to provide additional system evaluation targets driving system development. Examples could include hardware reliability growth and software maturity growth strategies. The SEP should be referenced in this section and aligned to the TEMP with respect to SE Processes, methods, and tools identified for use during T&E.

PART II – TEST PROGRAM MANAGEMENT AND SCHEDULE

## T&E Management.

Click here to enter text.

Guidance: Discuss the test and evaluation responsibilities of all participating organizations (such as developers, testers, evaluators, and users).

### 2.1.01. Role of Contractor.

Click here to enter text.

Guidance: Describe the role of contractor testing in early system development.

### 2.1.02. Role of Government Developmental Testers.

Click here to enter text.

Guidance: Describe the role of government developmental testers to assess and evaluate system performance.

### 2.1.03. Role of Operational Test Agency (OTA)

Click here to enter text.

Guidance: Describe the role of the Operational Test Agency (OTA) /operational testers to confirm operational effectiveness, operational suitability and survivability.

### T&E Organizations Construct.

Click here to enter text.

Guidance: Identify the organizations or activities (such as the T&E Working-level Integrated Product Team (WIPT) or Service equivalent, LFT&E IPT, etc.) in the T&E management structure, to include the sub-work groups, such as modeling & simulation, or reliability. Provide sufficient information to adequately understand the functional relationships.

#### 2.1.1.01. Specific Responsibilities and Deliverable Items.

Click here to enter text.

Guidance: Reference the T&E WIPT charter that includes specific responsibilities and deliverable items for detailed explanation of T&E management. These items include TEMPs and Test Resource Plans (TRPs) that are produced collaboratively by member organizations.

## Common T&E Database Requirements.

Click here to enter text.

Guidance: Describe the requirements for and methods of collecting, validating, and sharing data as it becomes available from the contractor, Developmental Test (DT), Operational Test (OT), and oversight organizations, as well as supporting related activities that contribute or use test data (e.g., information assurance C&A, interoperability certification, etc.). Describe how the pedigree of the data will be established and maintained. The pedigree of the data refers to understanding the configuration of the test asset, and the actual test conditions under which the data were obtained for each piece of data. State who will be responsible for maintaining this data.

## Deficiency Reporting.

Click here to enter text.

Guidance: Briefly describe the processes for documenting and tracking deficiencies identified during system development and testing. Describe how the information is accessed and shared across the program. The processes should address problems or deficiencies identified during both contractor and government test activities. The processes should also include issues that have not been formally documented as a deficiency (e.g., watch items).

## TEMP updates.

Click here to enter text.

Guidance: Reference instructions for complying with DoDI 5000.02 required updates or identify exceptions to those procedures if determined necessary for more efficient administration of document. Provide guidelines for keeping TEMP information current between updates. For a Joint or Multi-Service TEMP, identify references that will be followed or exceptions as necessary.

Integrated Test Program Schedule.

### Integrated Program Test Schedule.

Click here to enter text.

Guidance: Display (see Figure 2.1) the overall time sequencing of the major acquisition phases and milestones (as necessary, use the NSS-03-01 time sequencing). Include the test and evaluation major decision points, related activities, and planned cumulative funding expenditures by appropriation by year. Include event dates such as major decision points as defined in DoD Instruction 5000.02, e.g., operational assessments, preliminary and critical design reviews, test article availability; software version releases; appropriate phases of DT&E; LFT&E; Joint Interoperability Test Command (JITC) interoperability testing and certification date to support the MS-C and Full-Rate Production (FRP) Decision Review (DR). Include significant Information Assurance certification and accreditation event sequencing, such as Interim Authorization to Test (IATT), Interim Authorization to Operate (IATO) and Authorization to Operate (ATO). Also include operational test and evaluation; Low-Rate Initial Production (LRIP) deliveries; Initial Operational Capability (IOC); Full Operational Capability (FOC); and statutorily required reports such as the Live-Fire T&E Report and Beyond Low-Rate Initial Production (B-LRIP) Report.

Provide a single schedule for multi-DoD Component or Joint and Capstone TEMPs showing all related DoD Component system event dates.

**Figure 2.1 SAMPLE Integrated Program Test Schedule**

PART III – TEST AND EVALUATION STRATEGY

## T&E Strategy.

Click here to enter text.

Guidance: Introduce the program T&E strategy by briefly describing how it supports the acquisition strategy as described in Section 1.3.2. This section should summarize an effective and efficient approach to the test program. Briefly describe the relative emphasis on methodologies (e.g., Modeling and Simulation (M&S), Measurement Facility (MF), Systems Integration Laboratory (SIL), Hardware-In-the-Loop Test (HILT), Installed System Test Facility (ISTF), Open Air Range (OAR)).

### Developmental and Operational Test Objectives.

Click here to enter text.

Guidance: The developmental and operational test objectives are discussed separately below; however this section must also address how the test objectives will be integrated to support the acquisition strategy by evaluating the capabilities to be delivered to the user without compromising the goals of each major kind of test type. Where possible, the discussions should focus on the testing for capabilities, and address testing of subsystems or components where they represent a significant risk to achieving a necessary capability. As the system matures and production representative test articles are available, the strategy should address the conditions for integrating DT and OT tests.

### Evaluations.

Click here to enter text.

Guidance: Evaluations shall include a comparison with current mission capabilities using existing data, so that measurable improvements can be determined. If such evaluation is considered costly relative to the benefits gained, the PM shall propose an alternative evaluation strategy. Describe the strategy for achieving this comparison and for ensuring data are retained and managed for future comparison results of evolutionary increments or future replacement capabilities.

## Evaluation Framework.

Click here to enter text.

Guidance: Describe the overall evaluation approach focusing on key decisions in the system lifecycle and addressing key system risks, program unique Critical Operational Issues (COIs) or Critical Operational Issue Criteria (COIC), and Critical Technical Parameters (CTPs). Specific areas of evaluation to address are related to the:

(1) Development of the system and processes (include maturation of system design)

(2) System performance in the mission context

(3) OTA independent assessments and evaluations

(4) Survivability and/or lethality

(5) Comparison with existing capabilities, and

(6) Maturation of highest risk technologies

### Related Systems in the Evaluation Approach.

Click here to enter text.

Guidance: Describe any related systems that will be included as part of the evaluation approach for the system under test (e.g., data transfer, information exchange requirements, interoperability requirements, and documentation systems).

### Configuration Differences.

Click here to enter text.

Guidance: Also identify any configuration differences between the current system and the system to be fielded. Include mission impacts of the differences and the extent of integration with other systems with which it must be interoperable or compatible.

### Evaluation and Sources of the Data.

Click here to enter text.

Guidance: Describe how the system will be evaluated and the sources of the data for that evaluation. The discussion should address the key elements for the evaluations, including major risks or limitations for a complete evaluation of the increment undergoing testing. The reader should be left with an understanding of the value-added of these evaluations in addressing both programmatic and warfighter decisions or concerns. This discussion provides rationale for the major test objectives and the resulting major resource requirements shown in Part IV - Resources.

### Top-Level Evaluation Framework Matrix.

Click here to enter text.

Guidance: Include a Top-Level Evaluation Framework matrix that shows the correlation between the KPPs/KSAs, CTPs, key test measures (i.e., Measures of Effectiveness (MOEs) and Measures of Suitability (MOSs)), planned test methods, and key test resources, facility or infrastructure needs. When structured this way, the matrix should describe the most important relationships between the types of testing that will be conducted to evaluate the Joint Capabilities Integration and Development System (JCIDS)-identified KPPs/KSAs, and the program’s CTPs. Figure 3.1 shows how the Evaluation Framework could be organized. Equivalent Service-specific formats that identify the same relationships and information may also be used. The matrix may be inserted in Part III if short (less than one page), or as an annex. The evaluation framework matrix should mature as the system matures. Demonstrated values for measures should be included as the acquisition program advances from milestone to milestone and as the TEMP is updated.

The suggested content of the evaluation matrix includes the following:

• Key requirements & T&E measures – These are the KPPs and KSAs and the top-level T&E issues and measures for evaluation. The top-level T&E issues would typically include COIs/Critical Operational Issues and Criteria (COICs), CTPs, and key MOEs/MOSs. System-of-Systems and technical review issues should also be included, either in the COI column or inserted as a new column. Each T&E issue and measure should be associated with one or more key requirements. However, there could be T&E measures without an associated key requirement or COI/COIC. Hence, some cells in figure 3.1 may be empty.

• Overview of test methodologies and key resources – These identify test methodologies or key resources necessary to generate data for evaluating the COIs/COICs, key requirements, and T&E measures. The content of this column should indicate the methodologies/resources that will be required and short notes or pointers to indicate major T&E phases or resource names. M&S should be identified with the specific name or acronym.

• Decisions Supported – These are the major design, developmental, manufacturing, programmatic, acquisition, or employment decisions most affected by the knowledge obtained through T&E.

**Figure 3.1, Top-Level Evaluation Framework Matrix**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Key Requirements and T&E Measures** | | | | **Test Methodologies/Key Resources (M&S, SIL, MF, ISTF, HITL, OAR)** | **Decision**  **Supported** |
| **Key**  **Reqs** | **COIs** | **Key MOEs/**  **MOSs** | **CTPs & Threshold** |  |  |
| **KPP#1:** | **COI #1.** Is the XXX effective for…? | **MOE 1.1.** | Engine thrust | Chamber measurement  Observation of performance profiles OAR | PDR  CDR |
|  | **COI #2.** Is the XXX suitable for…? |  | Data upload time | Component level replication  Stress and Spike testing in SIL | PDR  CDR |
|  | **COI #3.** Can the XXX be…? | **MOS 2.1.** |  |  | MS-C  FRP |
|  |  | **MOE 1.3.** |  |  | Post-CDR  FRP |
|  |  | **MOE 1.4.** | Reliability based on growth curve | Component level stress testing  Sample performance on growth curve  Sample performance with M&S augmentation | PDR  CDR  MS-C |
| **KPP #2** |  | **MOS 2.4.** | Data link |  | MS-C  SRR |
| **KPP #3** | **COI #4.** Is training…? | **MOE 1.2.** |  | Observation and Survey | MS-C  FRP |
| **KSA #3.a** | **COI #5.** Documentation | **MOS 2.5.** |  |  | MS-C  FRP |

## Developmental Evaluation Approach.

Guidance: CTPs are measurable critical system characteristics that, if not achieved, preclude the fulfillment of desired operational performance capabilities. While not user requirements, CTPs are technical measures derived from desired user capabilities. Testers use CTPs as reliable indicators that the system is on (or behind) the planned development schedule or will likely (or not likely) achieve an operational capability. Limit the list of CTPs to those that support the COIs. Using the system specification as a reference, the chief engineer on the program should derive the CTPs to be assessed during development.

### 3.3.0.1. Top Level Approach.

Click here to enter text.

Guidance: Describe the top-level approach to evaluate system and process maturity.

#### 3.3.0.1.1. System Capabilities.

Click here to enter text.

Guidance: Describe the system capabilities expected at acquisition milestones and decision review points.

3.3.0.1.2. Limitations.

Click here to enter text.

Guidance: Describe the limitations expected at acquisition milestones and decision review points.

#### 3.3.0.1.3. Logistics.

Click here to enter text.

Guidance: Discuss the logistics aspects of the system.

### 3.3.0.1.4. Reliability Growth.

Click here to enter text.

Guidance: Discuss the reliability growth aspects of the system.

### 3.3.0.1.5. System Performance.

Click here to enter text.

Guidance: Discuss the system performance aspects.

## 3.3.0.1.6. CTPs.

Click here to enter text.

Guidance: Discuss rationale for CTPs. (See guidance 3.3. above for a description of how to derive CTPs.)

### 3.3.0.1.7. Key System or Process Risks.

Click here to enter text.

Guidance: Discuss key system or process risks.

### 3.3.0.1.8. Certifications Required.

Click here to enter text.

Guidance: List any certifications required (e.g. weapon safety, interoperability, spectrum approval, information assurance).

### 3.3.0.1.9. Technology or Subsystem.

Click here to enter text.

Guidance: Describe any technology or subsystem that has not demonstrated the expected level of technology maturity at level 6 (or higher), system performance, or has not achieved the desired mission capabilities for this phase of development.

### 3.3.0.1.10. Degree of Stabilization.

Click here to enter text.

Guidance: Discuss the degree to which system hardware and software design has stabilized so as to determine manufacturing and production decision uncertainties.

### 3.3.0.1.11. Key Issues and Scope.

Click here to enter text.

Guidance: Discuss key issues and the scope for logistics and sustainment evaluations, and reliability thresholds when the testing is supporting the system’s reliability growth curve.

Mission-Oriented Approach.

Guidance: A mission context focuses on how the system will be employed. Describe the rationale for the COIs or COICs.

#### Influencing Design.

Click here to enter text.

Guidance: Describe the approach to evaluate the system performance in a mission context during development in order to influence the design.

#### Managing Risk.

Click here to enter text.

Guidance: Describe the approach to evaluate the system performance in a mission context during development in order to influence managing risk.

#### Predicting Operational Effectiveness.

Click here to enter text.

Guidance: Describe the approach to evaluate the system performance in a mission context during development in order to predict operational effectiveness.

#### Operational Suitability.

Click here to enter text.

Guidance: Describe the approach to evaluate the system performance in a mission context during development in order to influence operational suitability.

### Developmental Test Objectives.

Click here to enter text.

Guidance: Summarize the planned objectives and state the methodology to test the system attributes defined by the applicable capability requirement document (CDD, CPD, CONOPs) and the CTPs that will be addressed during each phase of DT as shown in Figure 3.1, Top-Level Evaluation Framework matrix and the Systems Engineering Plan. Subparagraphs can be used to separate the discussion of each phase. For each DT phase, discuss the key test objectives to address both the contractor and government developmental test concerns and their importance to achieving the exit criteria for the next major program decision point. If a contractor is not yet selected, include the developmental test issues addressed in the Request For Proposals (RFPs) or Statement of Work (SOW). .

#### Environmental Expectations of Developmental Testing.

Click here to enter text.

Guidance: Discuss how developmental testing will reflect the expected operational environment to help ensure developmental testing is planned to integrate with operational testing. Also include key test objectives related to logistics testing. All objectives and CTPs should be traceable in the Top-Level Evaluation Framework matrix to ensure all KPPs/KSAs are addressed, and that the COIs/COICs can be fully answered in operational testing.

#### Summary of Developmental Test Events.

Click here to enter text.

Guidance: Summarize the developmental test events, test scenarios, and the test design concept. Quantify the testing sufficiently (e.g., number of test hours, test articles, test events, test firings) to allow a valid cost estimate to be created. Identify and explain how models and simulations, specific threat systems, surrogates, countermeasures, component, or subsystem testing, test beds, and prototypes will be used to determine whether or not developmental test objectives are achieved.

#### Identify Required Reports.

Click here to enter text.

Guidance: Identify the DT&E reports required to support decision points/reviews and OT readiness.

#### Reliability Growth Strategy, Goals, and Targets.

Click here to enter text.

Guidance: Address the system’s reliability growth strategy, goals, and targets and how they support the Evaluation Framework. Detailed developmental test objectives should be addressed in the System Test Plans and detailed test plans.

Modeling & Simulation.

#### Key Models & Simulations.

Click here to enter text.

Guidance: Describe the key models and simulations and their intended use. Include the developmental test objectives to be addressed using M&S to include any approved operational test objectives. Identify data needed and the planned accreditation effort.

#### Supplementing Test Scenarios with M&S.

Click here to enter text.

Guidance: Identify how the developmental test scenarios will be supplemented with M&S, including how M&S will be used to predict the Sustainment KPP and other sustainment considerations. Identify who will perform M&S verification, validation, and accreditation. Identify developmental M&S resource requirements in Part IV.

### Test Limitations.

Click here to enter text.

Guidance: In tabular form, discuss any developmental test limitations that may significantly affect the evaluator's ability to draw conclusions about the maturity, capabilities, limitations, or readiness for dedicated operational testing. Also address the impact of these limitations, and resolution approaches.

Live Fire Test and Evaluation Approach.

### 3.4.0.1. Live Fire Approach.

Click here to enter text.

Guidance: If live fire testing is required, describe the approach to evaluate the survivability/lethality of the system, and (for survivability LFT&E) personnel survivability of the system's occupants.

### 3.4.0.2. Overall Live Fire Evaluation Strategy.

Click here to enter text.

Guidance: If live fire testing is required, include a description of the overall live fire evaluation strategy to influence the system design (as defined in Title 10 U.S.C. § 2366), critical live fire evaluation issues, and major evaluation limitations.

#### 3.4.0.3. Management of the LFT&E Program.

Click here to enter text.

Guidance: Discuss the management of the LFT&E program, to include the shot selection process, target resource availability, and schedule.

#### 3.4.0.4. Waiver and the Alternative Strategy

Click here to enter text.

Guidance: Discuss a waiver, if appropriate, from full-up, system-level survivability testing, and the alternative strategy.

### Live Fire Test Objectives.

Click here to enter text.

Guidance: State the key live fire test objectives for realistic survivability or lethality testing of the system.

### 3.4.1.1. LFT&E Strategy Tests Matrix.

Click here to enter matrix.

Guidance: Include a matrix that identifies all tests within the LFT&E strategy, their schedules, the issues they will address, and which planning documents will be submitted for DOT&E approval and which will be submitted for information and review only. Quantify the testing sufficiently (e.g., number of test hours, test articles, test events, test firings) to allow a valid cost estimate to be created.

Modeling & Simulation.

#### Key Models/Simulations and Test Objectives.

Click here to enter text.

Guidance: Describe the key models and simulations and their intended use. Include the LFT&E test objectives to be addressed using M&S to include operational test objectives.

#### Data Needs and Planned Accreditation Effort.

Click here to enter text.

Guidance: Identify data needed and the planned accreditation effort.

#### How Test Scenarios will be Supplemented with M&S.

Click here to enter text.

Guidance: Identify how the test scenarios will be supplemented with M&S.

#### Resources performing M&S Verification, Validation, and Accreditation.

Click here to enter text.

Guidance: Identify who will perform M&S verification, validation, and accreditation.

#### Source Requirements.

Click here to enter text.

Guidance: Identify M&S resource requirements in Part IV.

### Test Limitations.

Click here to enter text.

Guidance: In tabular form, discuss any test limitations that may significantly affect the ability to assess the system’s vulnerability and survivability. Also address the impact of these limitations, and resolution approaches.

## Certification for Initial Operational Test and Evaluation (IOT&E).

Click here to enter text.

Guidance: Explain how and when the system will be certified safe and ready for IOT&E. Explain who is responsible for certification and which decision reviews will be supported using the lead Service’s certification of safety and system materiel readiness process. .

### DT&E Predictive Analysis.

Click here to enter text.

Guidance: List the DT&E information (i.e., reports, briefings, or summaries) that provides predictive analyses of expected system performance against specific COIs and the key system attributes - MOEs/MOSs. Discuss the entry criteria for IOT&E and how the DT&E program will address those criteria

## Operational Evaluation Approach.

### 3.6.01. Independent Evaluation of System.

Click here to enter text.

Guidance: Describe the approach to conduct the independent evaluation of the system.

### 3.6.02. Periods for Operational Assessments and Evaluations.

Click here to enter text.

Guidance: Identify the periods during integrated testing that may be useful for operational assessments and evaluations.

3.6.03. Resolution of COIs.

Click here to enter text.

Guidance: Outline the approach to conduct the dedicated IOT&E and resolution of the COIs. COIs must be relevant to the required capabilities and of key importance to the system being operationally effective, operationally suitable and survivable, and represent a significant risk if not satisfactorily resolved. A COI/COIC is typically phrased as a question that must be answered in the affirmative to properly evaluate operational effectiveness (e.g., "Will the system detect the threat in a combat environment at adequate range to allow successful engagement?") and operational suitability (e.g., "Will the system be safe to operate in a combat environment?"). COIs/COICs are critical elements or operational mission objectives that must be examined. COIs/COICs should be few in number and reflect total operational mission concerns.

#### 3.6.04. Use of Documents to Develop COI/COICs.

Click here to enter text.

Guidance: Use existing documents such as capability requirements documents, Business Case Analysis, AoA, APB, war fighting doctrine, validated threat assessments and CONOPS to develop the COIs/COICs. COIs/COICs must be formulated as early as possible to ensure developmental testers can incorporate mission context into DT&E. If every COI is resolved favorably, the system should be operationally effective and operationally suitable when employed in its intended environment by typical users.

### Operational Test Objectives.

Click here to enter text.

Guidance: State the key MOEs/MOSs that support the COIs/COICs. Ensure the operational tests can be identified in a way that allows efficient DOT&E approval of the overall OT&E effort in accordance with Title 10 U.S.C. § 139(d).

#### Scope of Operational Test.

Click here to enter text.

Guidance: Describe the scope of the operational test by identifying the test mission scenarios and the resources that will be used to conduct the test.

#### Events and Personnel.

Click here to enter text.

Guidance: Summarize the operational test events, key threat simulators and/or simulation(s) and targets to be employed, and the type of representative personnel who will operate and maintain the system.

#### Planned Sources of Information.

Click here to enter text.

Guidance: Identify planned sources of information (e.g., developmental testing, testing of related systems, modeling, simulation) that may be used to supplement operational test and evaluation.

#### Quantify Testing.

Click here to enter text.

Guidance: Quantify the testing sufficiently (e.g., number of test hours, test articles, test events, test firings) to allow a valid cost estimate to be created.

### Modeling & Simulation (M&S).

Click here to enter text.

Guidance: Describe the key models and simulations and their intended use. Include the operational test objectives to be addressed using M&S.

#### Operational Test Objectives.

Click here to enter text.

Guidance: Identify data needed and the planned accreditation effort.

#### How Test Scenarios will be Supplemented with M&S.

Click here to enter text.

Guidance: Identify how the operational test scenarios will be supplemented with M&S.

#### Performance of M&S Verification, Validation, and Accreditation.

Click here to enter text.

Guidance: Identify who will perform the M&S verification, validation, and accreditation.

#### Resource Requirements.

Click here to enter text.

Guidance: Identify operational M&S resource requirements in Part IV.

### Test Limitations.

Click here to enter text.

Guidance: In tabular format, discuss test limitations including threat realism, resource availability, limited operational (military; climatic; Chemical, Biological, Nuclear, and Radiological (CBNR), etc.) environments, limited support environment, maturity of tested systems or subsystems, safety, that may impact the resolution of affected COIs. Describe measures taken to mitigate limitations. Indicate if any system contractor involvement or support is required, the nature of that support, and steps taken to ensure the impartiality of the contractor providing the support according to Title 10 U.S.C. §2399. Indicate the impact of test limitations on the ability to resolve COIs and the ability to formulate conclusions regarding operational effectiveness and operational suitability. Indicate the COIs affected in parenthesis after each limitation.

## Other Certifications.

Click here to enter text.

Guidance: In tabular format, identify key testing prerequisites and entrance criteria, such as required certifications (e.g. DoD Information Assurance Certification and Accreditation Process (DIACAP) Authorization to Operate, Weapon Systems Explosive Safety Review Board (WSERB), flight certification, etc.)

## Reliability Growth.

Click here to enter text.

Guidance: Since reliability is a driver during system development, identify, in tabular format, the amount of operating time being accrued during the each of the tests listed in the Figure 2.1. Table should contain the system configuration, operational concept, etc. Reference and provide hyperlinks to the reliability growth planning document.

## Future Test and Evaluation.

Click here to enter text.

Guidance: Summarize all remaining significant T&E that has not been discussed yet, extending through the system life cycle. Significant T&E is that T&E requiring procurement of test assets or other unique test resources that need to be captured in the Resource section. Significant T&E can also be any additional questions or issues that need to be resolved for future decisions. Do not include any T&E in this section that has been previously discussed in this part of the TEMP.

PART IV-RESOURCE SUMMARY

## Introduction.

Click here to enter text.

Guidance: In this section, specify the resources necessary to accomplish the T&E program. Testing will be planned and conducted to take full advantage of existing DoD investment in ranges, facilities, and other resources wherever practical.

#### 4.1.0.1 T&E Government Resource Summary Table.

Click here to enter text.

Guidance: Provide a list in a table format (see Table 4.1) including schedule (Note: ensure list is consistent with Figure 2.1 schedule) of all key test and evaluation government resources that will be used during the course of the current increment. Include long-lead items for the next increment, if known. Specifically, identify the following test resources and identify any shortfalls, impact on planned testing, and plan to resolve shortfalls.

#### 4.1.0.2 T&E Contractor Resource Summary Table.

Click here to enter text.

Guidance: Provide a list in a table format (see Table 4.1) including schedule (Note: ensure list is consistent with Figure 2.1 schedule) of all key test and evaluation contractor resources that will be used during the course of the current increment. Include long-lead items for the next increment if known. Specifically, identify the following test resources and identify any shortfalls, impact on planned testing, and plan to resolve shortfalls.

### Test Articles.

Click here to enter text.

Guidance: In tabular format, identify the actual number of and timing requirements for all test articles, including key support equipment and technical information required for testing in each phase of DT&E, LFT&E, and OT&E. If key subsystems (components, assemblies, subassemblies or software modules) are to be tested individually, before being tested in the final system configuration, identify each subsystem in the TEMP and the quantity required. Specifically identify when prototype, engineering development, or production models will be used.

### Test Sites and Instrumentation.

Click here to enter text.

Guidance: In tabular format, identify the specific test ranges/facilities and schedule to be used for each type of testing. Compare the requirements for test ranges/facilities dictated by the scope and content of planned testing with existing and programmed test range/facility capability. Identify instrumentation that must be acquired specifically to conduct the planned test program.

### Test Support Equipment.

Click here to enter text.

Guidance: In tabular format, identify test support equipment and schedule specifically required to conduct the test program. Anticipate all test locations that will require some form of test support equipment. This may include test measurement and diagnostic equipment, calibration equipment, frequency monitoring devices, software test drivers, emulators, or other test support devices that are not included under the instrumentation requirements.

### Threat Representation.

Click here to enter text.

Guidance: In tabular format, identify the type, number, availability, fidelity requirements, and schedule for all representations of the threat (to include threat targets) to be used in testing. Include the quantities and types of units and systems required for each of the test phases. Appropriate threat command and control elements may be required and utilized in both live and virtual environments. The scope of the T&E event will determine final threat inventory.

### Test Targets and Expendables.

Click here to enter text.

Guidance: In tabular format, specify the type, number, availability, and schedule for all test targets and expendables, (e.g. targets, weapons, flares, chaff, sonobuoys, smoke generators, countermeasures) required for each phase of testing. Identify known shortfalls and associated evaluation risks. Include threat targets for LFT&E lethality testing and threat munitions for vulnerability testing.

### Operational Force Test Support.

Click here to enter text.

Guidance: For each test and evaluation phase, in tabular format, specify the type and timing of aircraft flying hours, ship steaming days, and on-orbit satellite contacts/coverage, and other operational force support required. Include supported/supporting systems that the system under test must interoperate with if testing a system-of-systems or family-of-systems. Include size, location, and type unit required.

### Models, Simulations, and Testbeds.

Click here to enter text.

Guidance: For each test and evaluation phase, in tabular format, specify the models and simulations to be used, including computer-driven simulation models and hardware/software-in-the-loop test beds. Identify opportunities to simulate any of the required support. Identify the resources required to validate and accredit their usage, responsible agency and timeframe.

### Joint Mission Environment.

Click here to enter text.

Guidance: Describe the live, virtual, or constructive components or assets necessary to create an acceptable environment to evaluate system performance against stated joint requirements. Describe how both DT and OT testing will utilize these assets and components.

### Special Requirements.

Click here to enter text.

Guidance: Identify requirements and schedule for any necessary non-instrumentation capabilities and resources such as: special data processing/data bases, unique mapping/charting/geodesy products, extreme physical environmental conditions or restricted/special use air/sea/landscapes.

### 4.1.9.1. Items Impacting Contract or Required by Statute or Regulation.

Click here to enter text.

Guidance: Briefly list any items impacting the T&E strategy or government test plans that must be put on contract or which are required by statute or regulation. These are typically derived from the JCIDS requirement (i.e., Programmatic Environment, Safety and Occupational Health Evaluation (PESHE) or Environment, Safety and Occupational Health (ESOH)).

#### 4.1.9.1.1. Contractor Responsibilities.

Click here to enter text.

Guidance: Include key statements describing the top-level T&E activities the contractor is responsible for and the kinds of support that must be provided to government testers.

Federal, State, and Local Requirements.

### Compliance with Federal, State, and Local Regulations

Click here to enter text.

Guidance: All T&E efforts must comply with federal, state, and local environmental regulations. Current permits and appropriate agency notifications will be maintained regarding all test efforts.

### National Environmental Policy Act Documentation.

Click here to enter text.

Guidance: Specify any National Environmental Policy Act documentation needed to address specific test activities that must be completed prior to testing and include any known issues that require mitigations to address significant environmental impacts. Describe how environmental compliance requirements will be met.

## Manpower/Personnel and Training.

Click here to enter text.

Guidance: Specify manpower/personnel and training requirements and limitations that affect test and evaluation execution. Identify how much training will be conducted with M&S.

Test Funding Summary.

### T&E Funding Summary Table.

Click here to enter text.

Guidance: In tabular format, summarize cost of testing by FY separated by major events or phases and within each Fiscal Year (FY) DT and OT dollars.

### T&E Funding Summary Table Footnotes.

Click here to enter text.

Guidance: When costs cannot be estimated, identify the date when the estimates will be derived.

Table 4.1 Test Sites and Instrumentation Example

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Fiscal Year |  | 06 | 07 | 08 | 09 | 10 | 11 | 12 | TBD |
| TEST EVENT  TEST RESOURCE |  | IT-B1 | IT-B2 | IT-B2 / IT-C1 | IT-C1 | IT-C1 | IT-C2 | OT-C1 | OT-D1 |
| Integration Lab |  | X | X | X | X | X | X |  |  |
| Radar Integration Lab |  | X | X | X | X | X | X |  |  |
| Loads (flights) |  |  |  |  |  |  |  |  |  |
| Operating Area #1 (flights) |  |  | X(1) | X(1) |  |  |  | X (1) | X (2) |
| Operating Area #2 (flights) |  |  | 50(1) | 132(1) | 60 | 100 | 140 | X (1) | X (2) |
| Northeast CONUS Overland (flights) |  |  | 10 |  |  |  |  | X (1) | X (2) |
| SOCAL Operating Areas (flights) |  |  |  |  | X |  | X |  |  |
| Shielded Hangar (hours) |  |  |  | 160 |  |  | 160 |  |  |
| Electromagnetic Radiation Facility (hours) |  |  |  | 40 |  |  | 40 |  |  |
| Arresting Gear  (Mk 7 Mod 3)(events) |  |  |  |  | 10 |  | 10 |  |  |
| NAS Fallon |  |  |  |  | 5 | 5 | A/R | X (1) | X (2) |
| Link-16 Lab, Eglin AFB |  |  |  |  |  |  |  | X |  |
| NAWCAD WD, China Lake Range |  |  |  |  |  |  |  | X |  |
| Eglin AFB ESM Range |  |  |  |  |  |  |  | X |  |

1. Explanations as required.

2. Enter the date the funding will be available.

APPENDIX A – BIBLIOGRAPHY

APPENDIX B – ACRONYMS

APPENDIX C – POINTS OF CONTACT

ADDITIONAL APPENDICES AS NEEDED