2.1.2 Actively Participate in the Development of the RFP for TMRR Phase

The Milestone A TEMP and the approved Acquisition Strategy inform development of the RFPs for any TMRR Phase contracts. The PM, in coordination with the T&E WIPT, should work to ensure that the RFP describes:

- T&E requirements/information needed for a successful T&E program
- T&E data management including T&E data rights
- M&S details, to include pertinent verification, validation, and accreditation (VV&A) reports or plans, if available
- T&E resources
- Cyber contract guidance
- Software management
- Reliability, availability, and maintainability program requirements, including contractual design-for-reliability requirements

The Contract Data Requirements List (CDRL) should identify: 1) required contractor-generated test data, 2) planned contractor T&E objectives and schedules, 3) M&S details, to include capabilities and limitations to be used by the contractor, 4) verification and validation procedures, 5) planned contractor test facility acquisitions, 6) other system information needed to support an adequate T&E, and 7) test assets needed for early live fire testing.

2.1.3 Conduct the Milestone A Independent Technical Risk Assessment (ITRA)

Since 2017, independent technical risk assessments (ITRAs) are required on MDAPs before approval of Milestone A, Milestone B, and any decision to enter into low-rate initial production or full-rate production. T&E professionals are integral ITRA team members. The Milestone A ITRA provides senior leaders with an independent view of program technical risk, including the maturity of critical technologies and manufacturing processes that need to be matured. Specific guidance on the responsibilities and criteria for conducting ITRAs can be found in DoDI 5000.88, Engineering of Defense Systems.

2.2 Technology Maturation and Risk Reduction (TMRR) Phase

Government T&E activities within the Technology Maturation and Risk Reduction Phase include:

- Generate the Milestone B TEMP
- Review the Logistics Risk Assessment
- Conduct the Technology Readiness Assessment
- Participate in the Preliminary Design Review
- Observe or participate in prototype demonstrations or tests
- Participate in the System Requirement and System Functional Reviews
- Participate in the Capability Development Document (CDD) Validation
- Conduct the DT&E Developmental RFP Release Program Assessment (DTA)
- Conduct the Milestone B Independent Technical Risk Assessment (ITRA)
- Conduct the Milestone B DT&E Sufficiency Assessment (DTSA)
- Conduct an early operational assessment, if applicable

- Support the Development RFP Release Decision for the EMD Phase
- Support the Milestone B decision

2.2.1 Generate the Milestone B TEMP

The Milestone B TEMP should expand on and update the Milestone A TEMP content. For example, the Milestone B TEMP should:

- Adapt the IDSK, the evaluation framework, and associated fidelity of test and M&S events, to include verification and validation to leverage and build on the contractor and government testing, M&S, and analysis conducted in the previous phase
- Include the IOT&E design completed by the OTA to define operational test requirements and support test resource estimates
- If applicable, commit to FUSL live fire testing, or the Program Office, in coordination with the T&E WIPT, should submit a FUSL waiver request and detail the alternative LFT&E strategy in the TEMP in accordance with Title 10, Section 4172 USC
- Update the estimates of test risks that may prevent or delay the satisfactory execution of the test events
- Discuss safe test procedures and adequate environmental protections
- Update the projected resource and schedule requirements, including simulated threat environments and targets

2.2.2 Review the Logistics Risk Assessment

The Logistics Risk Assessment is an analysis of a program's product support strategy across the system lifecycle, including sustainment costs. The T&E WIPT should review the logistics risk assessment and leverage it during development of the Milestone B TEMP.

2.2.3 Conduct the Technology Readiness Assessment (TRA)

The TRA is a systematic, metrics-based process that assesses the maturity of, and the risk associated with, critical technologies to be used in MDAPs. The assessment should be based on objective evidence gathered during events, such as tests, demonstrations, pilots, or physics-based simulations. Program Managers conduct TRAs with the assistance of an independent team of subject matter experts that can include T&E professionals. For programs for which an ITRA is conducted, a technology readiness assessment report is not required as the ITRA report subsumes the TRA findings. Programs will continue to assess and document the technology maturity of all critical technologies consistent with the USD(R&E) technology readiness assessment guidance.

2.2.4 Participate in Preliminary Design Review (PDR)

The PDR is the first opportunity for T&E professionals to closely observe the contractor's hardware and software design. The PDR occurs after preliminary system design efforts but before drafting the detailed system designs. During the PDR, the

contractor describes the rationale for the system's preliminary design, outlining all the designs considered, changes that were made as a result of trade studies, and the resulting design decisions.

2.2.5 Conduct the DT&E Developmental RFP Release and Milestone B Program Assessment (DTA)

The USD(R&E) provides the MDA with a program assessment at the development RFP release decision point and Milestone B. These programs, if designated for DT oversight by the USD(R&E), can include MDAPs, other programs categorized as ACAT I; major systems, usually categorized as ACAT II; automated information systems (AIS) (not managed by other acquisition pathways); and other capabilities developed via the MCA Pathway. The Developmental RFP assessment reviews the overall proposed RFP and the Contract Data Requirement List for inclusion of T&E execution support. The assessment will address the adequacy of the proposed approach on T&E technical data, including management, ownership, control, timely access, and delivery of the T&E data, to include raw test data, to support future program development. Given the early maturity of the program at this stage with minimal test data available, the DT&E Milestone B program assessment focuses on the adequacy of planned testing for evaluating technical performance and technology, demonstrated capabilities, integration maturity, sustainment, and survivability.

2.2.6 Conduct the Milestone B Independent Technical Risk Assessment (ITRA)

The Milestone B ITRA considers the full spectrum of technology, engineering, and integration risk. These areas could include mission capability, technology, system development, MOSA, software, security, manufacturing, sustainment, testing adequacy, and their potential impacts to cost, schedule, and performance. Specific guidance on the responsibilities and criteria for conducting ITRAs can be found in DoDI 5000.88, Engineering of Defense Systems

2.2.7 Conduct the Milestone B DT&A Sufficiency Assessment (DTSA)

In accordance with 10 U.S.C. §4252, when the USD(A&S) is the MDA, the USD(R&E) will conduct DT&E sufficiency assessments for MDAPs. Milestone B DT&E sufficiency assessments will include a focus on reliability, interoperability, and cybersecurity, concentrating on the adequacy of planned testing. The assessment will address the sufficiency of:

- The DT&E plans within the TEMP
- The DT&E schedule, including a comparison to historic, analogous systems
- The DT&E resources (facilities, personnel, test assets, data analytics tools, and M&S capabilities)
- The mitigation of known risks of developmental test and production concurrency
- The developmental test criteria for entering the production phase

Findings should be included in the Milestone B brief summary report provided to the congressional defense committees. When the Service or the Component acquisition

executive is the MDA, the senior official within the Military Department, Defense Agency or DoD Field Activity with responsibility for DT&E will conduct the Milestone B Sufficiency Assessments and report the results to the congressional defense committees. An example of the Milestone B DT&E sufficiency assessment is at Appendix B.

2.2.8 Conduct an Early Operational Assessment (EOA)

EOAs and relevant live fire testing should be conducted to provide a means to evaluate a program's progress early in the process toward developing an operationally effective, suitable, survivable, and lethal system. An EOA is conducted in accordance with a test plan approved by DOT&E for programs under T&E oversight. EOAs are typically an analysis, based on a review of current program plans and documentation, as well as data from early developmental testing, technology assessments, M&S, and program reviews, to include PDR. EOAs enable the OTA to provide early input on key operational strengths and risks inherent to the design that, if not corrected, could have a detrimental effect on the determination of operational effectiveness, suitability, survivability, and lethality. EOAs examine the links and consistency between the concept of operations, requirements, and technology limitations to provide recommendations to the program and the requirements authority. DOT&E (when applicable), and the appropriate OTA should report EOA findings to their Service Chief and the MDA to support the Milestone B decision.

2.2.9 Support the Development of RFP Release Decision for the EMD Phase

The Development RFP Release Decision commits the program to releasing the Development RFP to industry. The Development RFP Release Decision should be based on the program's executability and affordability prior to releasing the EMD solicitation. The goal is to avoid any major program delays at Milestone B, when source selection is already complete and award is imminent. At the Development RFP Release Decision, the PM provides a draft Milestone B TEMP for the EMD Phase. The T&E WIPT also assists in developing the RFP to ensure it addresses:

- Government T&E requirements identified in the Milestone B TEMP
- Contractor T&E activities critical for program success

2.3 Engineering and Manufacturing Development (EMD) Phase

Government T&E activities within the EMD Phase include:

- Generate the Milestone C TEMP
- Participate in the Critical Design Review
- Conduct Government T&E
  - Conduct DT&E on Components, Subsystems, and Prototype Systems
  - Conduct Operational Assessment(s)
  - Live Fire T&E Activities
- Support the Production & Deployment RFP Release
- Conduct the Milestone C DT&E Program Assessment

- Conduct the Low-Rate Initial Production (LRIP) Independent Technical Risk Assessment (ITRA)
- Conduct the Milestone C DT&E Sufficiency Assessment
- Support Milestone C and LRIP decisions

2.3.1 Generate the Milestone C TEMP

The Milestone C TEMP should expand on and update the Milestone B TEMP content. For example, the Milestone C T&E TEMP should:

- Adapt the IDSK, the evaluation framework, and the fidelity of test and M&S events, to include VV&A, to leverage and build on the contractor and government testing, M&S, and analysis conducted in the previous phase
- Detail the Initial Operational Test & Evaluation (IOT&E), which is required by 10 U.S.C. § 4171 and all other planned data collection events
- Detail the LFT&E Full-Up System-Level (FUSL) testing, required by 10 U.S.C. § 4172
- Update the estimates of test risks that may prevent or delay the satisfactory execution of the test events
- Update the projected resource and schedule requirements, including simulated threat environments and targets

Delays in system development can pose a schedule risk for T&E activities. If the PM decides to compress the T&E activities laid out in the integrated program schedule within the TEMP, testers should characterize the risk of failing to obtain the information detailed in the developmental and operational evaluation frameworks and the LFT&E Strategy.

2.3.2 Participate in the Critical Design Review (CDR)

The CDR is the decision point for certifying the system design has sufficiently matured for hardware fabrication to begin with acceptable risk. The T&E WIPT representatives should attend the CDR and provide an up-to-date assessment of the system. In particular, the CDR assesses design maturity, documentation, and risks, and establishes the initial system baseline.

2.3.3 Conduct Government T&E

2.3.3.1 Conduct Government DT&E on Components, Subsystems, and Prototype Systems

Government testers should continue to leverage contractor testing when appropriate to supplement government DT&E. Programs are encouraged to include military users in government-conducted DT&E to support early problem identification and user acceptance. Involving users in government-conducted DT&E also encourages integrated T&E activities by increasing the relevance of the data to the OT&E stakeholders.

2.3.3.2 Conduct Operational Assessment(s)

OTAs typically execute one or more operational assessments (OA) during the EMD Phase to provide timely and frequent feedback on capabilities as they are developed during this phase. The data for OAs may include multiple test events (DT, IT, and OT) and data analysis efforts conducted before initial production units are available and which incorporates substantial operational realism. OAs may include evaluations that range from operational analysis of system designs to assess potential design operational strengths or risks to test events that include military users with varying degrees of operational missions' realism based on the level of system maturity. An OA may be combined with developmental test activity and/or training events. The lead OTA conducts an OA in accordance with a test plan approved by DOT&E for programs under T&E oversight. As a general criterion for proceeding through Milestone C, the lead OTA will conduct and report results of at least one OA. The OTA supports the Milestone C decision by reporting the findings of any relevant DT, IT, and OT&E conducted to date. The OTA Report should focus on progress toward operational effectiveness, suitability, survivability, and lethality and any associated risks. The OTA report should also include an assessment of significant trends noted in development efforts, adequacy of performance against operational and technical requirements, and the program's ability to support adequate operational testing.

2.3.3.3 Live Fire T&E Activities

LFT&E can generate information supporting the evaluation of a system's operational effectiveness, suitability, survivability and lethality. The DOT&E approves LFT&E strategies and LFT&E test plans (including survivability and lethality test plans) for covered systems as defined in Section 4172 of Title 10, U.S.C., as well as the quantity of test articles procured for all LFT&E test events for any system under LFT&E oversight. LFT&E occurs over the course of a program, beginning with component-level testing during the initial design stage. T&E continues as the system matures from assemblies to sub-systems, and finally, unless waived, to FUSL configuration. During FUSL testing, the weapon system is fully equipped for combat with all sub-systems operational and powered. Survivability and lethality tests should be carried out sufficiently early in the development phase of the system or program to allow for the correction of design deficiencies discovered during testing before proceeding beyond low-rate initial production.

Although there is no waiver from LFT&E, the law contains provisions for a waiver from the requirements for FUSL testing. The Program Executive Officer will provide a memorandum to the Service Acquisition Executive asserting that the survivability or lethality tests required by 10 USC 4172 are unreasonably expensive and impractical. The SAE will provide a similar memorandum to USD(A&S) as the Defense Acquisition Executive requesting a waiver from the requirement of FUSL testing on that basis. The waiver must be approved by USD(A&S) as the DAE, even in cases where acquisition authority has been delegated to the Service.

USD(A&S) will request that DOT&E certify that the live fire testing and evaluation laid out in the TEMP (or previously in the Live Fire Strategy/Alternative Live Fire Test and Evaluation Plan) is adequate to evaluate the survivability or lethality of the system

without using FUSL assets. DOT&E will provide a memorandum affirming this to be the case, along with the approved TEMP (or the appropriate live fire sections of the TEMP) to USD(A&S). In accordance with 10 USC 4172 (c)(3), USD(A&S) will then submit memoranda and the live fire plan to the chairs and ranking members of the congressional defense committees, informing them of the granting of the waiver.

The waiver package sent to Congress consists of these two parts: 1) certification that the waiver is needed and 2) an LFT&E plan for evaluating survivability or lethality.

2.3.4 Support the Production and Deployment RFP Release

Given the maturity of the program at this stage in the acquisition cycle, programs may need to update the RFP. The updated RFP may include changes to T&E requirements, but should be consistent with the Milestone C TEMP and the Acquisition Strategy.

2.3.5 Conduct the Milestone C DT&E Program Assessment (DTA)

The USD(R&E) provides the MDA with an assessment to inform the Milestone C decision for those programs designated for DT oversight. These can include MDAPs, other programs categorized as ACAT I; major systems, usually categorized as ACAT II; automated information systems (AIS) (not managed by other acquisition pathways); and other capabilities developed via the MCA Pathway. The USD(R&E) uses all available test data to evaluate technical performance and technology, demonstrated capabilities, integration maturity, sustainment, and survivability. The USD(R&E) coordinates with the Director, Operational Test and Evaluation on the integration of developmental and operational test and evaluation to minimize duplicative testing and reporting to the maximum extent possible and achieve greater efficiencies.

2.3.6 Conduct the Low-Rate Initial Production (LRIP) Independent Technical Risk Assessment (ITRA)

An ITRA is required for MDAPs before approval of any decision to enter into LRIP. The LRIP ITRA assessment areas include mission capability, technology, system development, MOSA, software, security, manufacturing, sustainment, testing adequacy in, and their potential impacts to program cost, schedule, and performance. Specific guidance on the responsibilities and criteria for conducting ITRAs can be found in DoDI 5000.88, Engineering of Defense Systems.

2.3.7 Conduct the Milestone C DT&E Sufficiency Assessment (DTSA)

In accordance with 10 U.S.C. §4253 when the USD(A&S) is the MDA, the USD(R&E) will conduct a DTSA to support the Milestone C decision and entry into the P&D Phase for MDAPs. The Milestone C DTSA focuses on the sufficiency of completed testing, the risks identified during that testing, and the plans for remaining testing. The reportable elements that the USD(R&E) provides to the USD(A&S) for inclusion in their Milestone C Brief Summary Report submitted to the congressional defense committees are:

- DT&E completed
- DT&E Plans (for remaining DT&E)

- Risks to Production and Deployment
- DT&E Resources (for remaining DT&E)
- Readiness for IOT&E

When the Service or the Component acquisition executive is the MDA, the senior official within the Military Department, Defense Agency, or DoD Field Activity with responsibility for DT&E will conduct and report the DTSA results to the MDA for their Milestone C Brief Summary Report to the congressional defense committees.

2.3.8 Support the Production and Deployment RFP Release

Given the maturity of the program at this stage in the acquisition cycle, programs may need to update the RFP. The updated RFP may include changes to T&E requirements, but should be consistent with the Milestone C TEMP and the Acquisition Strategy.

2.4 Production and Deployment Phase

Government T&E activities within the Production and Deployment Phase include:

- Generate the Full-Rate Production (FRP) TEMP, as necessary
- Conduct Government T&E, to include any remaining DT&E and LFT&E (e.g., FUSL Testing if applicable), IOT&E
- Generate an IOT&E Report
- Conduct the FRP Independent Technical Risk Assessment (ITRA)

2.4.1 Generate the Full-Rate Production TEMP

At any point after the FRP or full deployment decision, DOT&E and/or Director, DTE&A may direct the DoD Component Acquisition Executive (CAE) to provide TEMP updates or addendums to articulate additional testing (e.g., FOT&E, Verification of Correction of Deficiencies periods, or test programs for future increments). The OTA may also request TEMP updates or addendums to articulate additional testing.

2.4.2 Conduct Government T&E

2.4.2.1 First Article Testing (FAT):

The purpose of FAT is to evaluate how production processes and environmental stress affect system performance. FAT should be conducted expeditiously because the production line may continue to flow while testing is conducted and results are being analyzed.

2.4.2.2 Acceptance Testing (AT):

The purpose of AT is to ensure that each system that comes off the production line functions properly. AT is critical because it is the point where the government accepts ownership and responsibility of the system, and may also be the date on which warranty coverage begins.

Both FAT and AT are normally conducted either by Program Management Office personnel or by the contractor using government-approved test plans and under the oversight of government personnel resident at the contractor facility.

2.4.2.3 Production Qualification Tests (PQT):

PQT is conducted post-Milestone C to ensure the effectiveness of the manufacturing process, equipment, and procedures, and provides data for the independent evaluation required for materiel release so that the evaluator can address the adequacy of the materiel with respect to the stated requirements. These tests are conducted on a number of samples taken at random from the first production lot. PQT is repeated if the process or design is changed significantly and when a second or alternative source is brought on line.

2.4.2.4 Initial Operational Test and Evaluation (IOT&E):

An IOT&E, a test event mandated by 10 U.S.C. § 4171, provides Congress, the Secretary of Defense, the Milestone Decision Authority, and the warfighter an independent evaluation of a system's operational effectiveness, suitability, survivability, and lethality. The lead OTA conducts an IOT&E in accordance with a test plan approved by the DOT&E for programs under OT & LFT&E oversight.

IOT&E uses production or production-representative test articles that, at a minimum, will incorporate the same materials and processes, including system parts and software items, to be used in production articles. Properly qualified integrated test data collected during EMD may be used to fulfill some IOT&E requirements subject to DOT&E approval or the OTA approval in the absence of DOT&E oversight. IOT&E also requires more than an evaluation based exclusively on computer modeling, simulation, or an analysis of system requirements, engineering proposals, design specifications, or any other information contained in program documents. It requires end-to-end testing of system capabilities, including all interrelated systems needed to employ and support those capabilities when operated by typical (trained) users or units under conditions simulating combat stress, or if applicable, peacetime operations. Individuals employed by the contractor for the system being developed may only participate in IOT&E to the extent they are planned to be involved in the operation, maintenance, and other support of the system when deployed in combat.

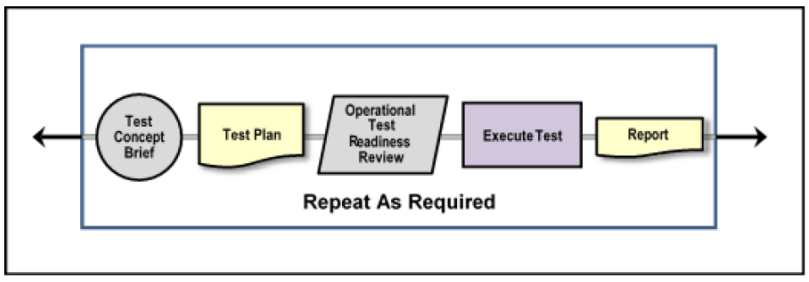

Figure 4. Typical sequence of OT&E activities

2.4.2.5 Full-Up System-Level (FUSL) Tests

FUSL testing fulfills the requirements of Title 10, U.S.C. Section 4172 for "realistic survivability" and "realistic lethality" testing. "Realistic survivability testing" means testing for the susceptibility, vulnerability, force protection, and recoverability of the system and its crew in a contested operational environment using adversary-

representative threats fired against the production-representative system equipped with any available countermeasures. “Realistic lethality testing” means testing for lethality by engaging the production-representative weapon against adversary-representative targets configured for combat equipped with any associated countermeasures.

DOT&E approves LFT&E plans for select live fire test events, as identified in the TEMP. Examples include FUSL tests, Total Ship Survivability Trials, Full Ship Shock Trials, M&S plans, and similar. The document approval matrix in the TEMP specifies which planning documents will be submitted for DOT&E approval and which will be submitted for information and review only. The Service OTA or assigned test activity conducts LFT&E events, executing the planned events in accordance with the LFT&E strategy and approved LFT&E plan.

2.4.3 Generate an IOT&E Report

For programs on OT or LFT&E oversight, DOT&E issues an IOT&E report to the MDA, Secretary of Defense, and Congress. The report includes the Director’s independent assessment of test adequacy and an evaluation of the system’s operational effectiveness, suitability, survivability, and lethality. For programs on the T&E Oversight List, operational and live fire testing occurs in accordance with the DOT&E-approved TEMP and subsequent operational test and LFT&E plans. For programs only on LFT&E oversight, the Director will submit a report at the conclusion of survivability or lethality testing.

If a decision is made to proceed to operational use or make procurement funds available prior to the completion of IOT&E, DOT&E will submit a report to the Secretary of Defense as soon as practicable, referred to as an Early Fielding report. An Early Fielding report will document test adequacy and provide an assessment of operational effectiveness, suitability, survivability, and lethality.

2.4.4 Conduct the Full-Rate Production Independent Technical Risk Assessment (ITRA)

An ITRA is required for MDAPs before approval of any decision to enter into Full-Rate Production (FRP). The FRP ITRA assessment areas include demonstrated mission capability, technology, system development, MOSA, software, security, manufacturing, sustainment, testing adequacy and their potential impacts to program cost, schedule, and performance. Specific guidance on the responsibilities and criteria for conducting ITRAs can be found in DoDI 5000.88, Engineering of Defense Systems.

2.5 Operations and Support (O&S) Phase

Government T&E activities within the Operations and Support Phase does not end upon full-rate decision. The O&S phase focuses on executing the product support strategy, satisfying materiel readiness and operational performance requirements, and sustaining the system. Effective sustainment of systems results from the design and development of supportable, reliable, and maintainable systems. Sustainment strategies can evolve throughout the system’s life cycle. The PM works with system users to document performance and sustainment requirements in agreements specifying objective outcomes,

measures, resource commitments, and stakeholder responsibilities. The Services, with system users, conduct continuing reviews of sustainment strategies to compare performance expectations against actual performance measures. When appropriate, follow-on activities include planning for a Follow-on Operational Test & Evaluation (FOT&E) conducted by the OTA's to evaluate operationally significant improvements, modifications, and corrective actions made to the system subsequent to the IOT&E. Surveillance testing and shelf-life extension testing.

2.5.1 Follow-on Operational Test & Evaluation (FOT&E)

An FOT&E is a test event that may be conducted, if necessary, after IOT&E to determine whether deficiencies identified during IOT&E were corrected, or to evaluate aspects of system performance not tested during IOT&E due to test or system limitations or because system updates were required. An FOT&E is conducted in accordance with a DOT&E-approved test plan for systems on T&E oversight. FOT&E should be conducted in a realistic tactical environment similar to IOT&E and use production systems with appropriate modifications, upgrades, or increments. FOT&E verifies and evaluates the operational effectiveness, suitability, survivability, and lethality of the production system in light of any changes to the system or operational environment. Additional FOT&E may be conducted over the life of the system to refine doctrine, tactics, techniques, and training programs, and to evaluate future increments, modifications, and upgrades. Specific objectives of FOT&E include testing modifications to be incorporated into production systems. The tests are also used to evaluate the system in a different platform application for new tactical applications or against new threats.

Appendix A. Acronyms & Glossary

ACAT	Acquisition Category
AT	Acceptance Testing
BLRIP	Beyond Low-Rate Initial Production
CDRL	Contract Data Requirements List
CDD	Capability Development Document
CDR	Critical Design Review
CDT	Chief Developmental Tester
COI	Critical Operational Issue
CONOPS	Concept of Operations
CTP	Critical Technical Parameter
DEF	Developmental Evaluation Framework
DOT&E	Director, Operational Test and Evaluation
DSQ	Decision Support Question
DTA	Developmental Test Assessment
DT&E	Developmental Test and Evaluation
D,DTE&A	Director, Developmental Test and Evaluation
DTSA	Developmental Test Sufficiency Assessment
EMD	Engineering and Manufacturing Development
EOA	Early Operational Assessment
FAT	First Article Testing
FD	Full Deployment
FOT&E	Follow-on Operational Test and Evaluation
FRP	Full-Rate Production
FUSL	Full-Up System-Level
ICD	Initial Capabilities Document

IDSK	Integrated Decision Support Key
IOT&E	Initial Operational Test and Evaluation
ITRA	Independent Technical Risk Assessment
JMETC	Joint Mission Environment Test Capability
KPP	Key Performance Parameter
KSA	Key System Attribute
LFT&E	Live Fire Test and Evaluation
LRIP	Low-Rate Initial Production
LVC	Live, Virtual, or Constructive
M&S	Modeling and Simulation
MCA	Major Capability Acquisition
MCF	Mission Critical Function
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Program
MP	Mission Profile
MRTFB	Major Range and Test Facility Base
MSA	Material Solution and Analysis
O&S	Operations and Support
OA	Operational Assessment
OEF	Operational Evaluation Framework
OMS	Operational Mode Summary
OPM	Operational Performance Measure
OT&E	Operational Test and Evaluation
OTA	Operational Test Agent
OTP	Operational Test Plan
P&D	Production and Deployment
PDR	Preliminary Design Review

PM	Program Manager
RFP	Request for Proposals
T&E	Test and evaluation
TBPM	Technical Baseline Performance Measure
TEMP	Test and Evaluation Master Plan
TMRR	Technology Maturation and Risk Reduction
TPM	Technical Performance Measure
TRA	Technology Readiness Assessment
VV&A	Verify, Validate, and Accredit
VOLT	Validated Online Lifecycle Threat
WIPT	Working-level Integrated Product Team

Appendix B. DT&E Sufficiency Assessment Memorandum Examples

Milestone B DT&E Sufficiency Assessment Memorandum Example

[OFFICE LETTERHEAD]

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT [OR COMPONENT/SERVICE ACQUISITION EXECUTIVE]

SUBJECT: Developmental Test and Evaluation Sufficiency Assessment for the <*name of program*> Program in Support of the Milestone B Brief Summary Report

This memorandum provides my assessment of the sufficiency of developmental test and evaluation (DT&E) plans for the <*name of program*> program as required by section 2366b(c)(1)(G) of Title 10, United States Code.

I have conducted a formal review of the program's DT&E efforts and, on the basis of such review, assess that the DT&E is <*sufficient*><*not sufficient*> to support Milestone B and entry into the Engineering and Manufacturing Development (EMD) phase. During my review and assessment, I have determined the following:

DT&E Planning. The DT&E plans within the Test and Evaluation Master Plan are <*sufficient*><*not sufficient*> to support the EMD phase.

Basis for Assessment. *Provide a brief discussion supporting assessment of DT&E planning. Summarize DT&E planning concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

DT&E Schedule. The DT&E integrated master schedule for EMD is <*sufficient*><*not sufficient*>.

Basis for Assessment. *Provide a brief discussion supporting assessment of the DT&E schedule. Summarize DT&E schedule concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

DT&E Resources. The planned DT&E resources (including facilities, personnel, test assets, automated data analytics tools, and modeling and simulation capabilities) supporting EMD are *<sufficient><not sufficient>*.

Basis for Assessment. *Provide a brief discussion supporting assessment of DT&E resources. Summarize DT&E resource planning concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

Risks of Developmental Test and Production Concurrency. The mitigation of known risks of developmental test and production concurrency is *<sufficient><not sufficient>*.

Basis for Assessment. *Provide a brief discussion identifying DT&E risks and supporting DT&E risk mitigation. Summarize DT&E risk concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

DT&E Entrance Criteria for Production Phase. The developmental test criteria for entering the production phase are *<sufficient><not sufficient>*.

Basis for Assessment. *Provide a brief discussion supporting DT&E production phase entrance criteria. Summarize DT&E entrance criteria concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

Additional Information (optional). *Provide the MDA with any relevant information (e.g. Supply Chain Security) appropriate to this DT&E sufficiency assessment. Use an attachment, if necessary.*

The point of contact for additional details and analysis supporting this DT&E sufficiency assessment is *<Name, Email Address, and Phone Number>*.

<Signature block of the D(DTE&A)> or

<Signature block of senior official within the Military Department, Defense Agency, or DoD Field Activity with responsibility for DT&E >

cc:

USD(R&E) or DD(Engineering) if Component signed
DOT&E

Milestone C DT&E Sufficiency Assessment Memorandum Example

[OFFICE LETTERHEAD]

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION AND SUSTAINMENT [OR COMPONENT/SERVICE ACQUISITION EXECUTIVE]

SUBJECT: Developmental Test and Evaluation Sufficiency Assessment for the <*name of program*> Program in Support of the Milestone C Brief Summary Report

This memorandum provides my assessment of the sufficiency of developmental test and evaluation (DT&E) completed for the <*name of program*> program as required by section 2366c(a)(4) of Title 10, United States Code.

I have conducted a formal review of the program's completed DT&E and assess on the basis of such review that the DT&E completed is <*sufficient*><*not sufficient*> to support Milestone C and entry into the Production and Deployment (P&D) phase. During my review and assessment, I have determined the following:

Completed DT&E. The evaluation of results from DT&E completed to date is <*sufficient*><*not sufficient*> to support entry into the P&D phase.

Basis for Assessment. *Provide a brief discussion supporting assessment of completed DT&E. Summarize DT&E completion concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

DT&E Remaining Plans and Resources. The plans and resources available for remaining DT&E are <*sufficient*><*not sufficient*> to support the P&D phase.

Basis for Assessment: *Provide a brief discussion supporting assessment of remaining DT&E plans and resources. Summarize DT&E remaining plans and resources concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

Risks to the P&D Phase Identified During DT&E. The mitigation of risks identified during DT&E to the P&D phase is <*sufficient*><*not sufficient*>.

Basis for Assessment. *Provide a brief discussion supporting DT&E risk mitigation. Summarize DT&E risk concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

System Readiness for Initial Operational Test and Evaluation (IOT&E). The system is *<ready/not ready>* for scheduled IOT&E.

Basis for Assessment. *Provide a brief discussion supporting system readiness for IOT&E assessment. Summarize DT&E IOT&E readiness concerns with recommendations to resolve any issues. Use an attachment, if necessary.*

Additional Information (optional). *Provide the MDA with any relevant information (e.g. Supply Chain Security) appropriate to this DT&E sufficiency assessment. Use an attachment, if necessary.*

The point of contact for additional details and analysis supporting this DT&E sufficiency assessment is *<Name, Email Address, and Phone Number>*.

<Signature block of the D(DTE&A)> or

<Signature block of senior official within the Military Department, Defense Agency, or DoD Field Activity with responsibility for DT&E >

cc:

USD(R&E) or DD(Engineering) if Component signed

DOT&E