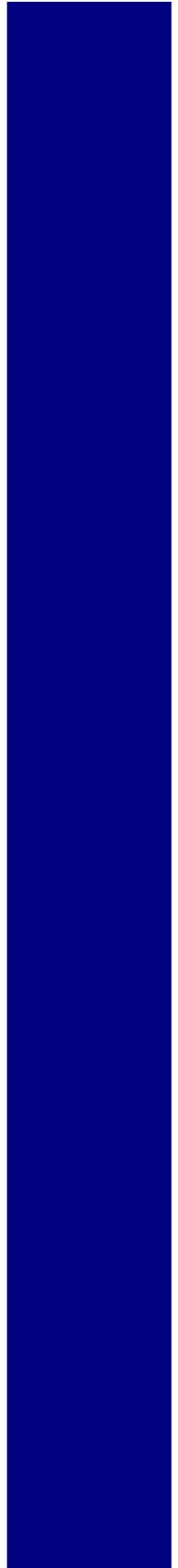


# Defense Acquisition Guidebook

Chapter 11 - Program Management Activities

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# DEFENSE ACQUISITION GUIDEBOOK

## Chapter 11 -- Program Management Activities

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## 11.0. Overview

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#### 11.0.1. Purpose

The purpose of this chapter is to describe and explain some of the activities and decisions available to and required of the program manager as he or she manages and executes the program.

#### 11.0.2 Contents

Chapter 11 covers the following topics:

- [Joint Programs](#)
- [International Programs](#)
- [Integrated Program Management](#)
- [Earned Value Management](#)
- [Contract Funds Status Report](#)
- [Quality Management](#)
- [Reporting](#)

- [Knowledge-Based Acquisition](#)
- [Technical Representatives at Contractor Facilities](#)
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- [Government Property in the Possession of Contractors](#)
- [Modeling and Simulation \(M&S\) Support to the Entire Product](#)

Acquisition Additional information regarding Program Management can be found at the [DAU Acquisition Community Connection website](#) , the [Program Management Community of Practice](#).

## **11.1. Joint Programs**

### **11.1.1. Identifying Joint Capabilities**

#### **11.1.2. Joint Acquisition Management**

##### **11.1.2.1. Designation**

##### **11.1.2.2. Execution**

## **11.1. Joint Programs**

There are two aspects of "jointness" to consider when discussing joint program management: the jointness of the capability and the jointness of the development and production of the system.

### **11.1.1. Identifying Joint Capabilities**

As part of the [Joint Capabilities Integration and Development System \(JCIDS\)](#) , the Joint Staff J-8, with the assistance of the DoD Components, evaluates all JCIDS documents, regardless of Acquisition Category or previous delegation decisions to determine whether the proposal has joint force implications. The Joint Staff documents, [CJCS Instruction 3170.01](#) and the [JCIDS Manual](#) , provide full detail and direction on this topic.

### **11.1.2. Joint Acquisition Management**

Acquisitions that contribute to joint capabilities may be managed as joint acquisition programs. A "joint acquisition" is any acquisition system, subsystem, component, or technology program with a strategy that includes funding by more than one DoD Component during any phase of a systems life cycle. [DoD Instruction 5000.02, Enclosure 10, paragraph 4](#) addresses DoD Component fiscal responsibilities associated with participation in programs under joint acquisition management.

#### **11.1.2.1. Designation**

Considering the recommendation of the Joint Staff and the Heads of the DoD Components, the Milestone Decision Authority decides whether to place the program under joint acquisition management. The Milestone Decision Authority should make this decision and, if appropriate,

designate the Lead Executive DoD Component, as early as possible in the acquisition process.

The DoD Components should periodically review their programs to determine the potential for joint cooperation. The DoD Components should structure program strategies to encourage and to provide an opportunity for multi-Component participation.

#### **11.1.2.2. Execution**

The designated Lead Executive DoD Component for a joint acquisition should act on behalf of all DoD Components involved in the acquisition.

A Memorandum of Agreement should specify the relationship and respective responsibilities of the Lead Executive DoD Component and the other participating components. The Memorandum of Agreement should address system capabilities and the development of capabilities documents, funding, manpower, and the approval process for other program documentation.

The following additional considerations have proven effective in managing joint programs:

- The assignment of a Lead Executive DoD Component should consider the demonstrated best business practices of the DoD Components, including plans for effective, economical, and efficient management of the joint program; and the demonstrated willingness of the DoD Component to fund the core program, essential to meeting joint program needs.
- The Milestone Decision Authority and DoD Components should consolidate and co-locate the supporting efforts of the joint program at the Lead Executive DoD Component's program office, to the maximum extent practicable.
- The Component Acquisition Executive of the Lead Executive DoD Component should optimally use the acquisition organizations, test organizations, and other facilities of all Military Departments.
- The designated Lead Executive DoD Component selects the qualified program manager for the designated program under joint acquisition. The single program manager should then be fully responsible and accountable for the cost, schedule, and performance of the development system.
- If the joint program results from a consolidation of several different DoD Component programs, each with a separate program manager, the selected joint program manager should have the necessary responsibility and authority to effectively manage the overall system development and integration.
- A designated program under joint acquisition should have one quality assurance program, one program change control program, one integrated test program, and one set of documentation and reports (specifically: one set of capabilities documents, (with Service unique capability requirements identified), one [Information Support Plan](#) , one [Test and Evaluation Master Plan](#) , one [Acquisition Program Baseline](#) , etc.).
- The Milestone Decision Authority should designate the lead Operational Test Agency to coordinate all operational test and evaluation. The lead Operational Test Agency should produce a single operational effectiveness and suitability report for the program.
- Documentation for decision points and periodic reporting should flow only through the

Lead Executive DoD Component acquisition chain, supported by the participating components.

- The program should use inter-DoD Component logistics support to the maximum extent practicable, consistent with effective support to the operational forces and efficient use of DoD resources.
- Unless statute, the Milestone Decision Authority, or a memorandum of agreement signed by all DoD Components directs otherwise, the Lead Executive DoD Component should budget for and manage the common Research, Development, Test, and Evaluation funds for the assigned joint programs.
- Individual DoD Components should budget for their unique requirements.

## **11.2. International Programs**

### **11.2.1. International Cooperative Programs**

#### **11.2.1.1. International Considerations and Program Strategy**

## **11.2. International Programs**

### **11.2.1. International Cooperative Programs**

An international cooperative program is any acquisition program or technology project that includes participation by one or more foreign nations, through an international agreement, during any phase of a systems life cycle. The key objectives of international cooperative programs are to reduce weapons system acquisition costs through cooperative development, production, and support; and to enhance interoperability with coalition partners.

#### **11.2.1.1. International Considerations and Program Strategy**

[Title 10 U.S.C. 2350a\(e\)](#) as amended by Section 1251 of the National Defense Authorization Act for Fiscal Year 2008 requires an analysis of potential opportunities for international cooperation for all Acquisition Category I programs before the first milestone or decision point. [DoD Directive 5000.01, Enclosure 1](#), and [DoD Instruction 5000.02, Enclosure 10, paragraph 5](#), specify the requirements for international cooperative program management; amplifying guidance and information appears in this Guidebook. DoD Directive 5000.01 requires International Armaments Cooperation; requires interoperability with U.S. coalition partners; and establishes the preference for a cooperative development program with one or more Allied nations over a new, joint, or DoD Component-unique development program.

During the development of the [Technology Development Strategy \(TDS\)](#) for Milestone A or the initial [Acquisition Strategy](#) for Milestone B for a new program, the potential for international cooperative research, development, production, and logistic support should be addressed, and thereafter, the potential for international cooperation should be considered in every phase of the acquisition process. DoD Components should periodically review their programs to determine the potential for international cooperation. Milestone Decision Authorities may recommend forming international cooperative programs based on the TDS or Acquisition Strategy

considerations; DoD Component Heads may also recommend forming international cooperative programs. The Milestone Decision Authority should make the decision to establish an international cooperative program as early as possible in the Defense Acquisition Management System.

The Milestone Decision Authority, with the advice and counsel of the DoD Components and the Joint Requirements Oversight Council, makes the decision to pursue an international cooperative program. The decision process should consider the following:

- Demonstrated best business practices, including a plan for effective, economical, and efficient management of the international cooperative program;
- Demonstrated DoD Component willingness to fully fund their share of international cooperative program needs;
- The long-term interoperability and political-military benefit's that may accrue from international cooperation; and
- The international program's management structure as documented in the international agreement. The designated program manager (U.S. or foreign) is fully responsible and accountable for the cost, schedule, and performance of the resulting system.

The DoD Component remains responsible for preparation and approval of most statutory, regulatory, and contracting reports and milestone requirements, as listed in [DoD Instruction 5000.02, Enclosure 4](#) . Documentation for decision reviews and periodic reports flow through the DoD Component acquisition chain, supported by the participating nation(s).

International cooperation can add stability to the program. DoD Instruction 5000.02 prevents DoD Components from terminating or substantially reducing participation in international cooperative programs under signed international agreements without Milestone Decision Authority notification, and in some cases, Milestone Decision Authority approval.

Additional information may be found in the Director, International Cooperation, [International Cooperation in Acquisition, Technology and Logistics Handbook](#) .

#### **11.2.1.2. International Considerations within the Defense Acquisition Management System**

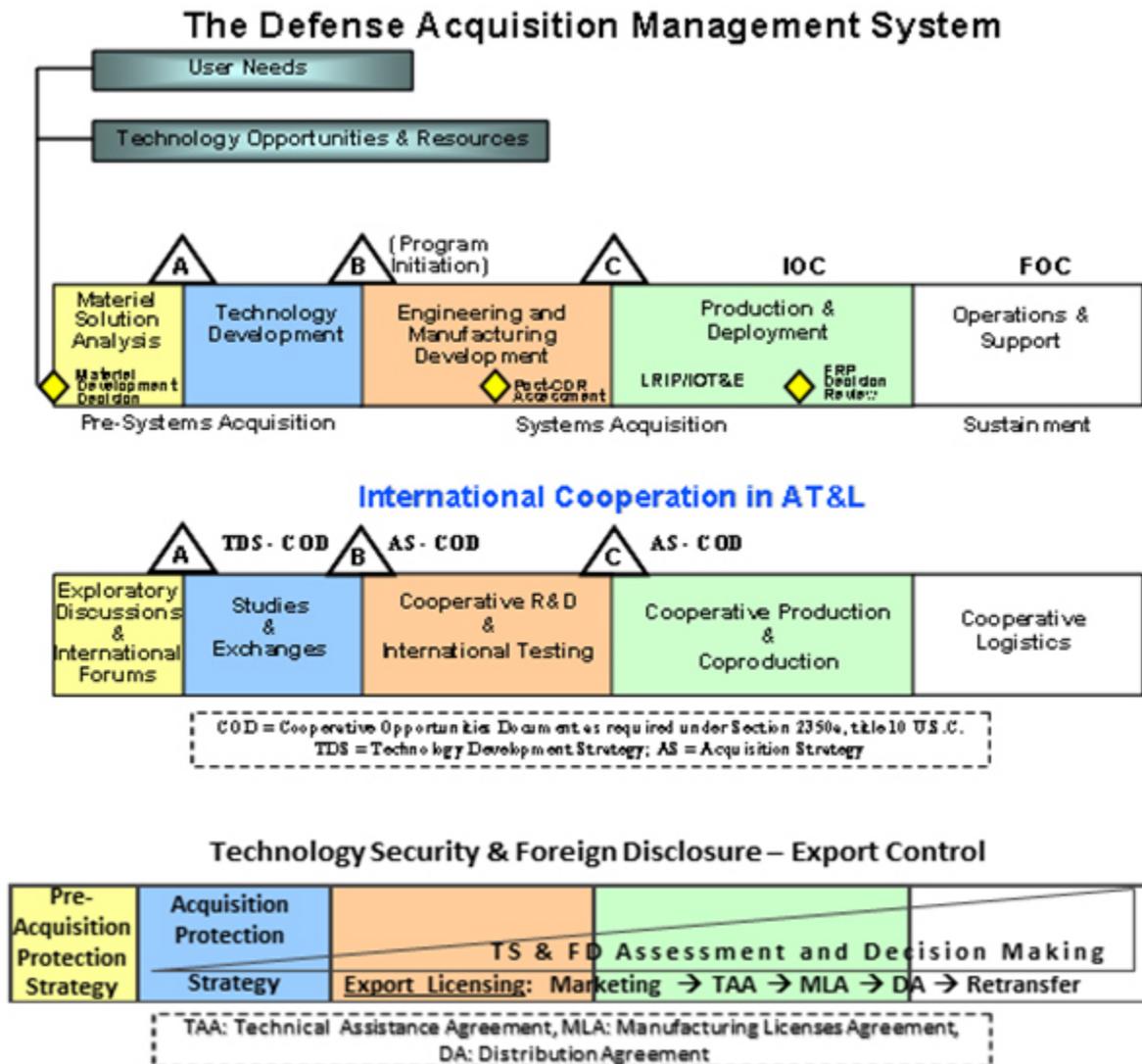
#### **11.2.1.2. International Considerations within the Defense Acquisition Management System**

*Establishing and maintaining cooperative relationships with friends and Allies are critical to achieving interoperability of equipment and services to be used by the U.S. Armed Forces and our coalition partners; to achieving access to technology from sources worldwide; to achieving economies of scale with our investment resources; and to expanding our influence in critical areas of the world (USD(AT&L) Memorandum, Support for International Armaments Cooperation Activities, January 23, 2006)*

International programs may be established at any point in the [defense acquisition management system](#) when justified as a prudent business judgment. Figure 11.2.1.2.F1 depicts the key considerations for each phase to include consideration of program protection concerns, which are

part of the overshadowing technology security and foreign disclosure process, further discussed in 11.2.1.3.

**Figure 11.2.1.2.F1. Key International Cooperative Considerations During Acquisition.**



**Determination of User Needs & Exploring Technology Opportunities (Early Technology Projects).** The efforts needed to identify cooperative development opportunities before entering into a formal acquisition program are often challenging, but such activities capitalize on high payoffs in cost savings and interoperability when successful. Formulation of cooperative development programs involves resolution of issues in the areas of requirements harmonization, cost sharing, work sharing, intellectual property rights, technology transfer, including technology security and foreign disclosure (TS&FD) considerations, and many others. While multinational force compatibility may increase system acquisition cost, it can provide more cost-effective defense for the whole force through increased interoperability and reduced life-cycle costs. Cooperative opportunities identification and formulation should be pursued during the earliest

stages of the pre-systems acquisition research and development process to maximize the chance for success. [DoD Instruction 5000.02, Enclosure 3, paragraph 2](#) , identifies technology projects and initiatives.

Using the [Joint Capabilities Integration and Development System](#) process, representatives from multiple DoD communities formulate broad, time-phased, operational goals, and describe requisite capabilities in the Initial Capabilities Document. They examine multiple concepts and materiel approaches to optimize the way the Department of Defense provides these capabilities. This examination includes robust analyses that consider affordability, technology maturity, and responsiveness.

Several important mechanisms available to provide insight into the needs of potential foreign partners are exploratory discussions, international forums, studies, and the exchanges of information and personnel:

**Exploratory Discussions.** Before entering into an international project, many forms of dialogue can take place with potential partners. These informal discussions are usually called exploratory discussions or technical discussions--they are NOT called "negotiations," which requires a legal authority and formal permission from the Office of the Secretary of Defense. Exploratory discussions are characterized by the avoidance of any binding commitments on the part of the U.S. Government, and the absence of any draft, international agreements. Other than the two exclusions above, the parties may discuss most other topics, provided release authority has been obtained for any information provided by DoD representatives or defense contractors.

**International Forums.** There are many international forums dedicated to discussing mutual armaments needs and early technology projects. These forums include the [Conference of National Armaments Directors \(CNAD\)](#) , whose U.S. representative is the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)). The CNAD's subsidiaries are the "Main Armaments Groups," particularly the NATO Army Armaments Group, [NATO Navy Armaments Group](#) , and the [NATO Air Force Armaments Group](#) . The [NATO Science and Technology Organization](#) conducts and promotes cooperative research and information exchange in NATO. [The Technical Cooperation Program](#) with Australia, Canada, New Zealand, and the United Kingdom is another multilateral forum dedicated to cooperation in conventional military technology development. In addition there are about 30 bilateral forums, such as the U.S.-Japan Systems and Technology Forum and the U.S./Canadian Armaments Cooperation Management Committee, that have a similar purpose. Also see [International Cooperation in Acquisition, Technology and Logistics Handbook](#), Chapter 11.

**Studies.** It is normal for the DoD and potential partners to conduct studies before entering into a cooperative acquisition project. These studies can be conducted years before the project starts, and are often called feasibility studies, or pre-feasibility studies. Industry, government agencies, or a combination of both generally conduct the feasibility studies, with the objective of providing a technical appraisal of the feasibility of developing and producing equipment. These studies can develop input for the [Analysis of Alternatives](#) required by DoD before the start of a new acquisition program.

**International Exchanges of Information and Personnel.** A common source for cooperative program opportunity identification is the [Defense Research, Development, Test and Evaluation Information Exchange Program \(IEP\)](#) , which provides a standardized way of conducting bilateral science and technology information exchange (formerly called data exchange). The [IEP has proven extremely useful](#) as a means of cooperative opportunities formulation. Another source for identifying cooperative opportunities is the [Defense Personnel Exchange Program](#) , especially the [Engineers and Scientists Exchange Program \(ESEP\)](#) .

**Pre-Systems Acquisition.** Decisions made during the Materiel Solution Analysis and Technology Development phases of Pre-Systems Acquisition generally define the nature of the entire program. Once the program enters the Engineering and Manufacturing Development phase, it is difficult to adopt major changes without significant schedule or cost adjustments. Consequently, the decision to include international partners needs to be addressed as early as possible, preferably during development of the Initial Capabilities Document, but no later than during the Materiel Solution Analysis phase.

To meet the requirements of [Title 10 U.S.C. 2350a\(e\)](#) , the Technology Development Strategy (TDS) prepared for Milestone A or the Acquisition Strategy for Milestones B and C must follow the mandatory TDS and Acquisition Strategy (AS) outline addressed and provided in [DAG Chapter 2.8](#) . The outline addresses milestone document preparation, including a section for international involvement.

International involvement must be addressed in the TDS and AS as follows:

#### International Involvement

- Indicate any limitations on foreign contractors being allowed to participate at the prime contractor level.
- International Cooperation.
  - Summarize any plans for cooperative development with foreign governments or cognizant organizations. List the memorandums of agreement (MOAs) in place and identify the contracting activities.
  - Summarize plans to increase the opportunity for coalition interoperability as part of the developing DoD program.
  - Employ the AT&L-developed [Technology Development Strategy/Acquisition Strategy](#) template to provide a coalition interoperability section in the Acquisition Strategy. Using the template will satisfy the cooperative opportunities document requirement of 10 USC 2350a.
- Foreign Military Sales. Specify the potential or plans for Foreign Military and/or Direct Commercial Sale and the impact upon program cost due to program protection and exportability features.

These considerations are based on 10 U.S.C. 2350a requirements. They encourage the consideration of alternative forms of international cooperation. Even if cooperative development is impractical, cooperative production, foreign military sales, licensed production, component/subcomponent co-development, or incorporation of subsystems from allied or

friendly foreign sources should be considered where appropriate.

DoD Components should fully investigate potential cooperative opportunities as part of the Technology Development Strategy and Acquisition Strategy development. Program proponents should consult with the appropriate international programs organization to obtain assistance in addressing international considerations during Technology Development Strategy or Acquisition Strategy development for programs in all acquisition categories.

**The Defense Exportability Features (DEF) Pilot Program.** DEF was established in the fiscal year 2011 National Defense Authorization Act to develop and incorporate technology protection features into a system or subsystem during its research and development phase. By doing this, exportable versions of a system or subsystem could be sold earlier in the Production and Development phase, thereby (1) enabling capability to be available to allies and friendly companies more rapidly and (2) lowering the unit cost of DoD procurements. Prior to the Engineering and Manufacturing Development Phase, programs should investigate the necessity and feasibility (from cost, engineering, and exportability perspectives) of the design and development of differential capability and enhanced protection of exportable versions of the system or subsystem.

Acquisition programs candidates may be considered for the DEF pilot program via nominations from the DoD components. AT&L / International Cooperation (IC) is available for consultation regarding potential DEF candidate nominations. After a favorable preliminary assessment of exportability and differential capability / program protection needs, AT&L / IC will approve DEF candidates. Specific differential capability / program protection requirements will be determined by DoD technology security, foreign disclosure, anti-tamper processes. With sufficient industry and government support, a feasibility study will be conducted to determine the cost to implement the differential features and the associated design specifications. If a DEF candidate is pre-Milestone A, the feasibility study should be incorporated into the appropriate technology development requests for proposal (RFPs) and contracts. Otherwise, the feasibility study should be contracted through the prime contractor if funding is available. If government and industry agree that the differential capability / protection determined by the feasibility study should be implemented, and funding arrangements are agreed upon, the required design specifications should be incorporated into the engineering and manufacturing development RFP and/or contract, depending on when the feasibility study was completed.

**Engineering and Manufacturing Development.** After program initiation, during Engineering and Manufacturing Development, key elements of the system design are defined, and system/subsystem development begins. Major changes often present schedule delays that program managers are unwilling to accept; however, there have been numerous examples of successful subsystem cooperative development partnerships that have been formed during the Engineering and Manufacturing Development Phase. Once a program has reached this phase, absent cooperation in earlier stages, there will be only limited opportunity to bring other nations on as full cooperative development partners. Consequently, if the opportunity for cooperation in subsystem development arises prior to or during Engineering and Manufacturing Development, consult with the appropriate international programs organization to obtain further assistance.

**Foreign Comparative Testing.** A viable alternative to development is the acquisition of commercial items. While individual acquisition programs can conduct evaluations with their own resources, the Foreign Comparative Testing Program offers a structured and funded means for program offices to evaluate the suitability of a foreign developed item for purchase in lieu of developing a similar U.S. item.

**International Test Operations Procedures.** The International Test Operations Procedures (ITOP) program provides for international agreements that document state-of-the-art test techniques for technical testing of military material and allows the exchange of test data to avoid redundant testing when foreign equipment is purchased. Currently there are over 130 ITOPs with Germany, France, and the UK covering a variety of test types and/or equipment class. Through ITOPs, the U.S. has access to latest test technology and procedures of our allies, which could possibly be utilized by DoD program managers. The ITOP program is managed at OSD by the Office of the Director, Operational Test and Evaluation. See the [International Cooperation in Acquisition, and Logistics Handbook](#) Chapter 6 Section 6.4.3.

**Production and Deployment Phase.** There are three basic mechanisms for transfer of U.S. produced defense articles and associated production capability to other nations: sales, co-production and cooperative production. Sales under the Foreign Military Sales Program foreign co-production of a U.S. developed system, fall under the purview of the [Defense Security Cooperation Agency \(DSCA\)](#) . The Department of State is responsible for transfer of defense articles and associated production capability under export licenses. Both DSCA and the Defense Technology Security Administration coordinate closely with the responsible DoD Component regarding the development and implementation of DoD co-production policy in their respective areas of responsibility. USD(AT&L) is responsible for oversight of the third basic mechanism, cooperative production. Cooperative production is a joint or concurrent international production arrangement arising from a cooperative development project. Examples of this type of production program are the [Rolling Airframe Missile](#) and the [Multi-Functional Information Distribution System](#) . Cooperative production falls under the authority of the [Arms Export Control Act Section 2751](#) .

**Operations & Support Phase.** Cooperative logistics refers to cooperation between the U.S. and allied or friendly nations or international organizations in the logistical support of defense systems and equipment. Cooperative logistics is part of the acquisition process, but as a substantial part of military operations, much of the implementation process involves Security Assistance processes and procedures.

Cooperative logistics support includes:

- Logistics Cooperation international agreements (IAs), used to improve sharing of logistics support information and standards, and to monitor accomplishment of specific cooperative logistics programs;
- Acquisition and Cross-Servicing Agreements;
- Host Nation Support;
- Cooperative Logistics Supply Support Arrangements;
- Cooperative Military Airlift Agreements;

- War Reserve Stocks for Allies;
- Agreements for acceptance and use of real property or services;
- Standardization of procedures under American/British/Canadian/Australian/New Zealand auspices;
- International Standardization Agreements developed in conjunction with member nations of the North Atlantic Treaty Organization and other allies and coalition partners, as described in [DoD 4120.24-M, "Defense Standardization Program \(DSP\) Policies and Procedures"](#) and as listed in the [Acquisition Streamlining and Standardization Information System \(ASSIST\) database](#) (login required);
- Consideration of the interoperability implications of these agreements when constructing Work Breakdown Structures; and
- Planning support provided by the [Program Manager's e-Tool Kit](#) .

Each participant or party involved in cooperative logistics agreements should benefit from the agreement. Benefits could be tangible, such as the U.S. receiving support for its naval vessels when in a foreign port; or intangible, such as the foreign nation receiving the implied benefit of a visible, U.S. naval presence in the region. Other cases are more obviously quid-pro-quo: [cross-servicing agreements](#) , for example. In a cross-servicing agreement, each party receives the equivalent of the materiel or services provided to the other party. Besides the obvious material benefit's, such agreements have the collateral effects of opening dialog and creating relationships between the parties. Such dialog and relationships may serve to strengthen political bonds. While not a program manager responsibility, DoD acquisition personnel should be aware of the international consequences of their activities and appropriately support such efforts. See the [International Cooperation in Acquisition, and Logistics Handbook](#) Chapter 5.

### **[11.2.1.3. International Aspects of Program Protection](#)**

#### **[11.2.1.3.1. Classification Guide](#)**

#### **[11.2.1.3.2. Program Security Instruction \(PSI\)](#)**

#### **[11.2.1.3.3. Delegation of Disclosure Authority Letter \(DDL\)](#)**

#### **[11.2.1.3.4. Technology Release Roadmap \(TRR\)](#)**

### **11.2.1.3. International Aspects of Program Protection**

Program protection considerations play a major role in international programs for obvious reasons. The program manager should consider [technology security and foreign disclosure \(TS&FD\) factors](#) in a program with international aspects. The TS&FD Office (TSFDO), located at the [Defense Technology Security Administration](#) in concert with DoD Component. Program managers should contact their DoD Component TS&FD organization early enough in the process to ensure that TS&FD factors that may affect international program aspects are taken into consideration.

Early consideration of TS&FD requirements as well as export control planning in international

programs will enable the program to achieve maximum benefit from international participation while avoiding negative impacts on cost, schedule and performance goals. The program manager should consider technology release in the initial planning of a program with international aspects through a review of existing TS&FD guidance and development of elements of their [Program Protection Plan](#). The Deputy Secretary of Defense established a TS&FD Review Group in July 2010 to investigate options for harmonizing and streamlining existing DoD TS&FD processes. The Arms Transfer and Technology Release Senior Steering Group, established in 2008, sponsored the effort. As of July 2011, a Directive-Type Memorandum is in coordination to initiate detailed design efforts for DoD TS&FD process consolidation with the thirteen existing DoD and interagency TS&FD processes. As noted above, a new TSFDO was established to improve the TS&FD system operations on a DoD-wide basis. To do this, TSFDO screens, prepares, and tracks DoD High Level Decisions (HLDs) to ensure all HLDs are identified in a timely fashion and appropriately routed to and addressed by all relevant DoD TS&FD processes and subject matter experts. Program Managers should work with their DoD Component TS&FD organizations and the TSFDO if they encounter challenges in identifying or processing HLDs related to the international aspects of their programs.

[DoD Instruction 5000.02, Enclosure 10, paragraph 5](#), and the tables of [enclosure 4](#) establish international cooperative program protection policy requirements. [Chapter 13.2](#) of this Guidebook provides additional insights into this policy.

#### **11.2.1.3.1. Classification Guide**

In addition to the [Program Protection Plan](#) required by all programs containing Critical Program Information, and the [Technology Assessment/Control Plan](#), [DoDM 5200.01](#) requires international programs to develop a classification guide for all programs containing classified information of either party. The classification guide, as prescribed in [DoD Directive 5230.11](#), identifies the items or information to be protected in the program, and indicates the specific classification to be assigned to each item.

#### **11.2.1.3.2. Program Security Instruction (PSI)**

A PSI details security arrangements for the program and harmonizes the requirements of the participants' national laws and regulations. Using the Under Secretary of Defense for Acquisition, Technology and Logistics [international agreements streamlined procedures](#) authorized by [DoD Instruction 5000.02, Enclosure 10, paragraph 5](#), the [International Agreements Generator](#) will lead the program manager through the considerations for, and the development of, a PSI. Additional information about the PSI is found in the [International Cooperation in Acquisition, Technology and Logistics Handbook](#) Chapter 7, Section 7.6..

If all security arrangements to be used in an international program are in accordance with an existing industrial security arrangement between the participants, a separate PSI is not required.

#### **11.2.1.3.3. Delegation of Disclosure Authority Letter (DDL)**

Per DoD Instruction 5000.02, a written authorization to disclose any classified or controlled

unclassified information must be obtained prior to entering discussions with potential foreign partners. The authorization for release of classified information (developed or used during any part of the life cycle of the program) to any potential or actual foreign participants in the program will be in the form of a [Delegation of Disclosure Authority Letter \(DDL\)](#), as prescribed in [DoD Directive 5230.11](#), or other written authorization issued by the DoD Component Foreign Disclosure Office. The authorization for release of classified or controlled unclassified information must comply with DoD Component policies for release of such information.

#### **11.2.1.3.4. Technology Release Roadmap (TRR)**

Prior to the Engineering and Manufacturing Development phase of an acquisition program with substantial international involvement by foreign industry, the program manager should prepare an export control TRR as part of their [Technology Assessment/Control Plan \(TA/CP\)](#). This TRR will provide a projection of when export licenses will be required in support of the acquisition process, and when critical milestones regarding national disclosure policy implementation will need to be addressed. The TRR must be consistent with the program's TA/CP, [Security Classification Guide \(SCG\)](#), and other disclosure guidance.

The TRR accomplishes the following:

- Provides early DoD Component planning for the program's proposed technology releases to foreign industry consistent with the National Disclosure Policy.
- Provides early planning for higher-level (i.e., above DoD Component-level) special technical reviews and approvals (i.e. Low Observable/Counter Low Observable, anti-tamper, cryptography) needed in support of proposed technology releases to foreign industry.
- Establishes a detailed export license approval planning process for U.S.-foreign industry cooperation to meet critical program and contract timelines.

The TRR includes three sections: 1) A timeline mapping key projected export licenses against the program acquisition schedule; 2) A definition of the technologies involved in each export license; and 3) A list of U.S. contractors (exporters) as well as foreign contractors (end users) for each license.

### **[11.2.2. Office of the Under Secretary of Defense for Acquisition, Technology and Logistics \(USD\(AT&L\)\)-Related International Agreement Procedures](#)**

#### **[11.2.2.1. Preparation and Documentation](#)**

#### **[11.2.2.2. Office of the Under Secretary of Defense for Acquisition, Technology and Logistics \(OUSD\(AT&L\)\) Oversight](#)**

#### **[11.2.2.3. Coordination Processes](#)**

#### **[11.2.2.3.1. International Agreement Streamlining I Process](#)**

### [11.2.2.3.2. International Agreement Streamlining II Process](#)

### [11.2.2.3.3. Coordination of Requests for Authority to Develop and Negotiate \(RADs\), Requests for Final Approval \(RFAs\), Notices of Intent to Negotiate \(NINs\), and Notices of Intent to Conclude \(NICs\) Relating to Nuclear, Chemical, and Biological \(NCB\) Fields](#)

## **11.2.2. Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L))-Related International Agreement Procedures**

An International Agreement (IA) is any agreement concluded with one or more foreign governments including their agencies, instrumentalities, or political subdivisions, or with an international organization. The IA delineates respective responsibilities and is binding under international law. IAs are required by U.S. law for all international cooperative projects.

Per [DoD Instruction 5000.02](#), all AT&L-related international agreements may use the USD(AT&L)-issued streamlined procedures found in this Guidebook and in the [International Cooperation in Acquisition, Technology and Logistics Handbook](#), rather than following the lengthy documentation requirements mandated by [DoD Directive 5530.3](#), "International Agreements."

### **11.2.2.1. Preparation and Documentation**

The following considerations apply to the preparation of and documentation associated with Acquisition, Technology and Logistics-related international agreements:

- Program managers or project leaders consult with the DoD Component's international programs organization, as well as foreign disclosure, legal, and comptroller personnel, to develop international agreements.
- The DoD Components develop international agreements in accordance with the provisions of the most recent version of DoD International Agreement Generator computer software.
- Prior to initiating formal international agreement negotiations, the DoD Components prepare a Request for Authority to Develop and Negotiate (RAD) that consists of a cover document requesting such authority and a Summary Statement of Intent (SSOI) that describes the DoD Component's proposed approach to negotiations. DoD Components that have not been delegated authority to negotiate (currently the three Military Departments and the Missile Defense Agency have such authority) normally are required to provide a copy of the draft international agreement prior to RAD approval.
- Prior to signing an international agreement, the DoD Components prepare a Request for Final Approval (RFA) that consists of a cover document requesting such authority, a revised SSOI that describes the outcome of negotiations, and the full text of the international agreement to be signed on behalf of the Department of Defense.
- The DoD Components should use the [Streamlining I Coordination Process](#) for both the RAD and the RFA. They should apply to Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L))/International Cooperation to be delegated authority to use [Streamlining II](#) procedures for processing International

Agreements. If Streamlining II authority is or has been delegated, the DoD Component should use the streamlined process. (To date, the Office of the USD(AT&L)/International Cooperation has only delegated Streamlining II authority to the Department of the Navy.)

#### **11.2.2.2. Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD(AT&L)) Oversight**

OUSD(AT&L)/International Cooperation provides the following international agreement oversight support:

- Approves and makes available the following agreement process guidance:
  - Request for Authority to Develop (RAD);
  - Request for Final Approval (RFA);
  - Summary Statement of Intent (SSOI);
  - [Arms Export Control Act Section 27](#) Project Certification format requirements; and
  - DoD International Agreement Generator computer software.
- Approves the following agreement process actions:
  - RADs and RFAs for Memoranda of Understanding (MOU)/Memoranda of Agreement (MOA);
  - Project Agreements and Arrangements;
  - [Arms Export Control Act Section 65](#) Loan Agreements;
  - [End-User Certificate \(EUC\) Waivers](#) ;
  - Foreign Military Sales or Direct Commercial Sales of [Major Defense Equipment with Letters of Request \(LOR\) Advisories and Requests for Major Defense Equipment \(MDE\) Prior to Satisfactory Completion of Operational Test and Evaluation \(OT&E\)](#) formerly called Yockey Waivers ; and
  - DoD Component requests for DoD International Agreement Generator text deviations or waivers requested in RAD and RFA submissions.
- Delegates PA negotiation authority under the [Streamlining I Coordination \(Approval\) Process](#) to specifically designated DoD Components.
- Certifies DoD Component international agreement processes to the [Streamlining II](#) standards prior to delegation of RAD/RFA authority to a DoD Component.
- Decertifies a DoD Component international agreement process in the event minimum quality standards are not maintained.
- Resolves RAD/RFA coordination process disputes.
- Oversees the DEF pilot program to include technology protection features during research and development of defense systems under 10 USC 2358.
- Supports satisfaction of the following statutory requirements:
  - Obtains USD(AT&L) determination under [10 U.S.C. 2350a](#) paragraph (b) for all international agreements that rely upon this statute as their legal authority;
  - Notifies Congress of all [Arms Export Control Act Section 27](#) (see [22 U.S.C. Section 2767](#), "Authority of President to enter into cooperative projects with friendly foreign countries") international agreements a minimum of 30 calendar days prior to authorizing agreement signature; and
  - Conducts interagency coordination with the Department of State, Department of

Commerce, and the Department of the Treasury (see 22 U.S.C. 2767 and [DoD Directive 5530.3](#)).

### 11.2.2.3. Coordination Processes

There are two accredited international agreement coordination processes: [Streamlining I](#) and [Streamlining II](#).

#### 11.2.2.3.1. International Agreement Streamlining I Process

Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L))/International Cooperation (IC) uses the following Streamlining I process unless it has delegated coordination authority to the DoD Component:

- **Request for Authority to Develop and Negotiate (RAD) Memorandum of Understanding (MOUs) and Memorandum of Agreements (MOAs)** . The DoD Component prepares the RAD and obtains OUSD(AT&L)/IC approval prior to initiating MOU or MOA negotiations. If applicable, the DoD Component develops and submits Coalition Warfare Program (CWP) funding requests associated with the RAD, in accordance with the CWP Management Plan. OUSD(AT&L)/IC conducts DoD and interagency coordination, as appropriate, using a standard review period of 21 working days, which may expedited at OUSD(AT&L)/IC's discretion.
- **RAD Program Authorizations (PAs) and Section 65 Loan Agreements** . Unless OUSD(AT&L)/IC delegates PA negotiation authority, the DoD Component prepares a RAD and obtains OUSD(AT&L)/IC approval prior to initiating PA or [Section 65 Loan Agreement](#) negotiations. OUSD(AT&L)/IC conducts interagency coordination, as appropriate, using a standard review period of 15 working days, which may be expedited at OUSD(AT&L)/IC's discretion.
- **Negotiation** . Generally, within 9 months of receipt of RAD authority, the DoD Component negotiates the international agreement in accordance with the provisions of the most recent version of DoD International Agreement Generator.
- **Request for Final Approval to Conclude (RFA) MOUs and MOAs** . The DoD Component prepares the RFA and obtains OUSD(AT&L)/IC approval prior to signing the MOU or MOA. RFAs for agreements relying upon [Arms Export Control Act \(AECA\) Section 27](#) as the legal authority for the international agreement will also include a Project Certification. OUSD(AT&L)/IC conducts interagency coordination, as appropriate, based upon a standard review period of 21 working days, which may be expedited at OUSD(AT&L)/IC's discretion. OUSD(AT&L)/IC provides Congress with any required AECA Section 27 notifications.
- **RFA PAs and Section 65 Loan Agreements** . The DoD Component submits RFAs notifying OUSD(AT&L)/IC of its intention to sign PAs and Section 65 Loan Agreements prior to concluding such agreements. AT&L/IC conducts interagency coordination, as appropriate, based upon a review period of 15 working days, which may be expedited at OUSD(AT&L)/IC's discretion. OUSD(AT&L)/IC provides Congress with any required AECA Section 27 notifications.

#### **11.2.2.3.2. International Agreement Streamlining II Process**

Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L))/International Cooperation (IC) may delegate approval authority for the Request for Authority to Develop and Negotiate/Request for Final Approval (RAD/RFA) for all international agreements associated with programs with a total program value of less than \$25M (in FY01 constant dollars) and for Acquisition Category II and Acquisition Category III programs to the DoD Component Acquisition Executive. The DoD Component Acquisition Executive may subsequently re-delegate RAD/RFA authority for programs with a total program value of less than \$10M (in FY01 constant dollars) and Acquisition Category III programs to the Head of the DoD Component's international programs organization. The following procedures will apply:

- The DoD Components will obtain the concurrence of their legal, financial management, and foreign disclosure organizations prior to approving RADs/RFAs.
- The DoD Components will forward coordination disputes to OUSD(AT&L)/IC for resolution.
- The DoD Components will send Notices of Intent to Negotiate (NINs) or Notices of Intent to Conclude (NICs) to OUSD(AT&L)/IC for all approved RADs and RFAs. NINs will include the DoD Component's approval document and program Summary Statement of Intent. NICs will also include the final international agreement text to be signed, plus an [Arms Export Control Act Section 27](#) Project Certification, if required. The DoD Components will not sign international agreements until a 15-working-day period (for PAs and Loans) or 21-working-day period (for Memoranda of Understanding) after AT&L/IC receipt of the NIC has elapsed and any required [10 U.S.C. 2350a](#) approval or AECA Section 27 Congressional notification process has been completed.
- OUSD(AT&L/IC) may, at its discretion, decide to waive these rules on a case-by-case basis and require that certain agreements receive specific OUSD(AT&L/IC) approval before conclusion.
- OUSD(AT&L/IC) will use NINs, NICs and other relevant information to verify DoD Component international agreement process quality.
- Generally, within 9 months of receipt of RAD authority, DoD Component personnel will negotiate the international agreement in accordance with the provisions of the most recent version of DoD International Agreement Generator.

#### **11.2.2.3.3. Coordination of Requests for Authority to Develop and Negotiate (RADs), Requests for Final Approval (RFAs), Notices of Intent to Negotiate (NINs), and Notices of Intent to Conclude (NICs) Relating to Nuclear, Chemical, and Biological (NCB) Fields**

The Office of the Under Secretary of Defense for Acquisition, Technology and Logistics/International Cooperation coordinates all international agreements (including Memoranda of Understanding, Project Arrangements, other similar agreements) and [Information Exchange Program](#) annexes (See IC in AT&L Handbook, Chapter 13.) relating to NCB warfare technologies (including defenses against such technologies) with the Assistant to the Secretary of Defense ( [Nuclear](#) and [Chemical and Biological Defense](#) Programs) prior to approving the agreement. DoD policy requires this coordination for NCB-related RADs for project

arrangements under [Streamlining I](#) authority, and for NINs and NICs under [Streamlining II](#) authority.

### **11.2.3. Acquisition and Cross-Servicing Agreements (ACSAs)**

#### **11.2.3.1. Types of Acquisition and Cross-Servicing Agreements (ACSAs) Authorities**

#### **11.2.3.2. Permitted and Prohibited Uses of Acquisition and Cross-Servicing Agreements (ACSAs)**

#### **11.2.3.3. Repayment of Acquisition and Cross-Servicing Agreement (ACSA) Obligations**

#### **11.2.3.4. Acquisition and Cross-Servicing Agreement (ACSA) Implementation**

### **11.2.3. Acquisition and Cross-Servicing Agreements (ACSAs)**

ACSAs are bilateral international agreements that allow for the provision of cooperative logistics support under the authority granted in [10 U.S.C. Sections 2341-2350](#). They are governed by [DoD Directive 2010.9](#), "Acquisition and Cross-Servicing Agreements" and implemented by [CJCS Instruction 2120.01B](#), "Acquisition and Cross-Servicing Agreements." ACSAs are intended to provide an alternative acquisition option for logistics support in support of exercises or exigencies.

#### **11.2.3.1. Types of Acquisition and Cross-Servicing Agreements (ACSAs) Authorities**

Title 10 of the United States Code provides two legal authorities for foreign logistic support, supplies, and services: an Acquisition-only Authority, and a Cross-Servicing Authority, which includes an acquisition authority and a transfer authority.

**Acquisition-Only Authority** . [10 U.S.C. Section 2341](#), "Authority to acquire logistic support, supplies, and services for elements of the armed forces deployed outside the United States," authorizes elements of the U.S. Armed Forces, when deployed outside the United States, to acquire logistic support, supplies, and services from eligible foreign entities on a reimbursable basis. The authority is not reciprocal and does not require the existence of a cross-servicing agreement or implementing arrangement. This is a very limited authority that has been mainly supplanted by the use of broader authorities in ACSAs. Acquisition-only authority may be used with the governments of NATO members, NATO and its subsidiary bodies, the United Nations Organization, any regional organization of which the United States is a member, and any other countries which meet one or more of the following criteria:

- Has a defense alliance with the United States;
- Permit's the stationing of members of the U.S. armed forces in such country or the home porting of naval vessels of the United States in such country;
- Has agreed to preposition materiel of the United States in such country; or
- Serves as the host country to military exercises which include elements of the U.S. armed

forces or permit's other military operations by the U.S. armed forces in such country.

**Cross-Servicing Authority** . [10 U.S.C. 2342](#), "Cross-servicing agreements," authorizes the Department of Defense, upon coordination with the Secretary of State, to conclude reciprocal agreements with foreign countries and regional and international organizations for the provision of logistics, support, supplies and services. A current listing of these agreements and countries and organizations eligible to negotiate them is maintained by the Director for Logistics, The Joint Staff (J-4). [DoD Directive 2010.9](#) provides the official process for nominating countries for eligibility for such agreements as well as for concluding them.

### **11.2.3.2. Permitted and Prohibited Uses of Acquisition and Cross-Servicing Agreements (ACSAs)**

ACSA is for the transfer of logistics, support, supplies, and services only. Per Section 4.5 of [DoD Directive 2010.9](#), items that may not be acquired or transferred under ACSA authority include weapons systems; the initial quantities of replacement and spare parts for major end items of equipment covered by tables of organization and equipment, tables of allowances and distribution, or equivalent documents; and major end items of equipment. Specific items that may not be acquired or transferred under ACSA authority include guided missiles; naval mines and torpedoes; nuclear ammunition and included items such as warheads, warhead sections, projectiles, and demolition munitions; guidance kit's for bombs or other ammunition; and chemical ammunition (other than riot control agents). General purpose vehicles and other items of non-lethal military equipment not designated as Significant Military Equipment on the United States Munitions List promulgated pursuant to [22 U.S.C. 2778](#), may be leased or loaned for temporary use. Specific questions on the applicability of certain items should be referred to the Combatant Command's legal office for review and approval.

### **11.2.3.3. Repayment of Acquisition and Cross-Servicing Agreement (ACSA) Obligations**

In addition to the use of cash and subject to the agreement of the parties, ACSA obligations may be reconciled by either Replacement-in-Kind or Equal Value Exchange. ACSA obligations not repaid by Replacement-in-Kind or Equal Value Exchange automatically convert to cash obligations after one year.

**Replacement in Kind (RIK)** . RIK allows the party receiving supplies or services under the ACSA to reconcile their obligation via the provision or supplies and services of an identical or substantially identical nature to the ones received. As an example, a country may provide extra water to the United States during a training exercise with the proviso that the United States will provide the same amount of water during a future exercise.

**Equal Value Exchange (EVE)** . EVE enables the party receiving supplies or services under the ACSA to reconcile their obligation via the provision of supplies or services that are considered to by both parties to be of an equal value to those received. As an example, a country may provide extra water to the United States during a training exercise in exchange for the United States providing extra ammunition.

#### **11.2.3.4. Acquisition and Cross-Servicing Agreement (ACSA) Implementation**

[DoD Directive 2010.9](#) and [CJCS Instruction 2120.01B](#) provide management guidance on initiating ACSA orders, receiving support, reconciling bills, and maintaining records. As this is a Combatant Command-managed program, organizations interested in acquiring logistics, support, supplies and services should work through the applicable logistics branch to receive further guidance on this topic.

#### **[11.2.4. Summary of International Cooperation Guidance and Resources](#)**

#### **11.2.4. Summary of International Cooperation Guidance and Resources**

International cooperation offers the opportunity to achieve cost savings from the earliest phases of Pre-Systems Acquisition throughout the life cycle, while enhancing interoperability with coalition partners. All DoD acquisition personnel, in consultation with the appropriate international programs organizations, should strive to identify and pursue international cooperative programs in accordance with [DoD 5000 policy](#). Specific topics are found in the [International Cooperation in Acquisition, Technology and Logistics Handbook](#) at the [OSD/International Cooperation website](#).

#### **[11.3. Integrated Program Management](#)**

#### **11.3. Integrated Program Management**

The program manager should obtain integrated cost and schedule performance data at an appropriate level of summarization to monitor program execution. The program manager should require contractors and government activities to use internal management control systems that accomplish the following:

- Relate time-phased budgets to specific tasks identified in the statement of work;
- Produce data that indicate work progress;
- Properly relate cost, schedule, and technical accomplishment; and
- Produce data that is valid, timely, and auditable.

Unless waived by the Milestone Decision Authority, the program manager should require that the management control systems used to plan and control contract performance comply with American National Standards Institute/Electronic Industries Alliance Standard 748, Earned Value Management Systems ( [ANSI/EIA-748](#) (see [DoD Instruction 5000.02](#) ) in accordance with paragraph 11.3.1.1.. The program manager should not impose a specific system or method of management control or require a contractor to change its system, provided it complies with ANSI/EIA-748.

## **11.3.1. Earned Value Management (EVM)**

### **11.3.1.1. Earned Value Management (EVM) Applicability**

### **11.3.1.2. Earned Value Management (EVM) Requirements**

### **11.3.1.3. Integrated Baseline Reviews (IBRs)**

## **11.3.1. Earned Value Management (EVM)**

EVM is a key integrating process in the management and oversight of acquisition programs, to include information technology projects. It is a management approach that has evolved from combining both government management requirements and industry best practices to ensure the total integration of cost, schedule, and work scope aspects of the program.

Unless waived by the Milestone Decision Authority, EVM applies to contracts as described in the subsections below. The program manager's approach to satisfying the EVM requirement for applicable contracts should be documented in the program acquisition strategy. This strategy then should be reflected in the contract language and CDRLs provided to the contractor for a given contract while not violating the basic tenets of sound EVM implementation.

The Office of Performance Assessment and Root Cause Analysis (PARCA) is responsible for developing, publishing, and maintaining DoD policy and guidance on EVM. For more information on EVM, refer to the OSD PARCA [EVM web site](#) or the [EVM Community of Practice web site](#) on the [Acquisition Community Connection](#) knowledge sharing system.

### **11.3.1.1. Earned Value Management (EVM) Applicability**

The requirement for EVM applies to cost or incentive contracts, subcontracts, intra-government work agreements, and other agreements that meet the dollar thresholds prescribed in [DoD Instruction 5000.02](#) and DFARS Subpart 234.2 . The application thresholds (total contract value including planned options in then-year dollars) are summarized below:

- \$20 million but less than \$50 million EVM implementation compliant with [ANSI/EIA-748](#) is required. No formal Earned Value Management System (EVMS) validation is required.
- \$50 million or greater EVM implementation compliant with the guidelines in ANSI/EIA-748 is required. An EVMS that has been formally validated and accepted by Defense Contract Management Agency (DCMA) (per paragraph 11.3.1.5) in coordination with, the cognizant contracting officer is required.

The program manager will implement EVM on applicable contracts within acquisition, upgrade, modification, or materiel maintenance programs, including highly sensitive classified programs, major construction programs, and automated information systems. EVM should also be implemented on applicable contracts wherein the following circumstances exist: (1) the prime contractor or one or more subcontractors is a non-U.S. source; (2) contract work is to be

performed in government facilities, or (3) the contract is awarded to a specialized organization such as the [Defense Advanced Research Projects Agency \(DARPA\)](#) . In addition, EVM should be implemented on applicable contracts designated as major capital acquisitions in accordance with [Office of Management and Budget Circular A-11, Part 7](#) , and the [Capital Programming Guide](#) .

The application of EVM is not required on contracts, subcontracts, intra-government work agreements, and other agreements valued at less than \$20 million (total contract value including planned options). The decision to implement EVM on these contracts is a risk-based decision at the discretion of the program manager. The program manager is required to conduct a cost-benefit analysis before deciding to implement EVM on these contracts. The purpose of the cost-benefit analysis is to explain the rationale for the decision to require cost/schedule visibility into the contract and to substantiate that the benefit's to the government outweigh the associated costs. If the value of a contract is expected to grow to \$20 million or more, the program manager should impose an EVM requirement on the contract.

The application of EVM is not required on contracts, subcontracts, intra-government work agreements, and other agreements less than 12 months in duration, including options. The decision to implement EVM on these contracts is a risk-based decision at the discretion of the program manager. If the duration of a contract is expected to grow to reach or exceed 12 months, the program manager should impose an EVM requirement on the contract.

The application of EVM on Firm-Fixed Price (FFP) contracts, subcontracts, intra-government work agreements, and other agreements is discouraged regardless of dollar value. If knowledge by both parties requires access to cost/schedule data, the first action is to re-examine the contract type (e.g., is a fixed price incentive contract more appropriate). However, in cases where cost/schedule visibility is required, such as for development or integration efforts valued at or greater than \$20 million, the program manager is required to obtain a waiver for individual contracts from the MDA. In these cases, the program manager is required to conduct a business case analysis that includes rationale for why a cost or fixed price incentive contract was not the proper contracting vehicle. When possible, the business case analysis should be included in the acquisition approach section of the program acquisition strategy.

If a contract type is mixed, the EVM policy should be applied separately to the different parts (contract types).

For Indefinite Delivery/Indefinite Quantity (ID/IQ) or task order types of contracts, the application of EVM based on dollar threshold is assessed at the computed total contract value and not by each separate order. To determine EVM applicability, anticipated cost or incentive orders should be summed to reach the computed total contract value. FFP orders are generally not included in that summation.

### 11.3.1.2. Earned Value Management (EVM) Requirements

The DoD program manager should use [Defense Federal Acquisition Regulation Supplement \(DFARS\) clauses 252.234-7001 and 252.234-7002](#) to place the Earned Value Management System (EVMS) requirement in solicitations and contracts.

The contract should not, either at the time of award or in subsequent modifications, specify requirements in special provisions and/or statements of work that are not consistent with the EVM policy and EVMS guidelines (required by imposition of DFARS 252.234-7002), or which may conflict with offeror's or contractors approved EVM system descriptions. Consult DCMA for guidance on compliance of the contractor's EVMS.

### 11.3.1.3. Integrated Baseline Reviews (IBRs)

An [IBR](#) is a joint assessment of the [Performance Measurement Baseline \(PMB\)](#) conducted by the government program manager and the contractor. The IBR is not a one-time event. It is a process, and the plan should be continually evaluated as changes to the baseline are made (modifications, restructuring, etc.). IBRs should be used as necessary throughout the life of a project to facilitate and maintain mutual understanding of:

- The scope of the PMB consistent with authorizing documents;
- Management control processes;
- Risks in the PMB associated with cost, schedules, and resources; and
- Corrective actions where necessary.

IBRs should be scheduled as early as practicable and the timing of the IBRs should take into consideration the contract period of performance. The process will be conducted not later than 180 calendar days (6 months) after a significant program event or contract change including, but not limited to: (1) contract award, (2) the exercise of large contract options, and (3) the incorporation of major modifications. IBRs are also performed at the discretion of the program manager at any time, even without the occurrence of a major event in the life of a program.

Events that may trigger an IBR include completion of the preliminary design review, completion of the critical design review, a significant shift in the content and/or time phasing of the PMB, or when a major milestone such as the start of the production option of a development contract is reached. Continuous assessment of the PMB will help identify when a new IBR should be conducted with the clause at DFARS 252.234-7002 and [DoD Instruction 5000.02](#) require IBRs on all contracts that require the implementation of Earned Value Management. The IBR is not dependent on the contractor's Earned Value Management System being formally validated as complying with the guidelines in [ANSI/EIA-748](#). Subcontracts, intra-government work agreements, and other agreements also require IBRs as applicable. The scope of the IBRs should be tailored to the nature of the work effort.

The policy allows for the use of IBRs prior to contract award in situations where they may be appropriate and beneficial. If a program manager elects to conduct a pre-award IBR on a DoD

contract, that requirement should be included in the statement of work.

See the NDIA Guide to the Integrated Baseline Review Process(April 2003 version) for additional guidance on IBRs.

#### **11.3.1.4. Contract Performance Management Reporting**

##### **11.3.1.4.1. Integrated Program Management Report (IPMR), Formats 1-7**

##### **11.3.1.4.2. Integrated Program Management Report (IPMR) Format 6, Integrated Master Schedule (IMS)**

#### **11.3.1.4. Contract Performance Management Reporting**

The [Integrated Program Management Report \(IPMR\)](#) applies to all contracts that meet the Earned Value Management (EVM) applicability requirements in [DoD Instruction 5000.02](#). The IPMR combines the CPR (DI-MGMT-81466) and the IMS (DI-MGMT-81650) into a single Data Item Description (DID), DI-MGMT-81861. This new DID was effective as of July 1, 2012. However, for those existing contracts with separate Contract Data Requirements Lists (CDRLs) for the CPR and the IMS, those two DIDs and their content are still contractually applicable. On contracts valued at or greater than \$20 million but less than \$50 million, it is recommended that IPMR reporting be appropriately tailored. Refer to the IPMR DID Implementation Guide for tailoring guidance. See PARCA [EVM Website](#) for the latest version of the guide.

A common, product-oriented Work Breakdown Structure (WBS) that follows the DoD Work Breakdown Structure Standard ([MIL-STD-881C](#)) (current version at time of award) is required for the IPMR and the Contractor Cost Data Report (CCDR). Except for high-cost or high-risk elements, the required level of reporting detail should not normally exceed level three of the contract WBS.

The IPMR for all Acquisition Category (ACAT) I programs must be submitted directly to the EVM Central Repository (CR) by the reporting contractors. The EVM CR, which is managed by the PARCA Deputy Director for EVM, is the sole addressee on the Contract Data Requirements Lists for these reports. See the [EVM CR Manual](#) for additional guidance on the CR requirements.

All formats shall be submitted electronically in accordance with the DoD-approved Extensible Markup Language (XML) schemas located in the [EVM CR](#).

##### **11.3.1.4.1. Integrated Program Management Report (IPMR), Formats 1-7**

The IPMR provides performance data which is used to identify problems early in the contract and forecast future contract performance. The IPMR should be the primary means of documenting the ongoing communication between the contractor and the program manager to report to date cost and schedule metric trends and to permit assessment of their effect on future

performance.

The program manager obtains an IPMR on all cost or incentive contracts, subcontracts, intra-government work agreements, and other agreements valued at or greater than \$20 million. The IPMR is not typically required for cost or incentive contracts valued at less than \$20 million, contracts less than 12 months in duration, or Firm-Fixed Price contracts for production efforts.

Data Item Description (DID) DI-MGMT-81861 (current version at time of award URL: [https://assist.dla.mil/quicksearch/basic\\_profile.cfm?ident\\_number=278901](https://assist.dla.mil/quicksearch/basic_profile.cfm?ident_number=278901) ) is used to obtain the IPMR. The contracting officer and contractor should negotiate reporting provisions in the contract, including frequency and selection of formats, level of detail, submission dates, variance thresholds and analysis, and the Work Breakdown Structure to be used. The program manager should tailor the IPMR, via the contractual CDRL, to the minimum data necessary for effective management control on contracts valued at less than \$50 million. In exceptional cases, the contractor may determine that the performance measurement baseline (PMB) or existing contract schedule cannot be achieved and no longer represents a reasonable basis for management control. With government approval, the contractor may implement an Over Target Baseline (OTB) or Over Target Schedule (OTS). For cost-reimbursement contracts, the contract budget base excludes changes for cost growth increases, other than for authorized changes to the contract scope. The OTB/OTS creates additional budget to complete in-scope work, but it does not increase the negotiated contract cost.

#### **11.3.1.4.2. Integrated Program Management Report (IPMR) Format 6, Integrated Master Schedule (IMS)**

The [IMS](#) is an integrated and networked multi-layered schedule of program tasks required to complete the work effort captured in a related Integrated Master Plan (IMP). The IMS is traceable not only to the IMP but also the contract Work Breakdown Structure, and the statement of work. The IMS is used to verify attainability of contract objectives, to evaluate progress toward meeting program objectives, and to integrate the program schedule activities with all related components.

Data Item Description [DI-MGMT-81861](#) (current version at time of award) Format 6 is used to obtain the IMS. The contracting officer and contractor should negotiate reporting provisions in the contract, including level of detail, submission dates, and frequency of the schedule risk analysis. The program manager should tailor the IMS to the minimum data necessary for effective management control on contracts valued at less than \$50 million.

#### **[11.3.1.5. Earned Value Management System \(EVMS\) Compliance, Validation, and Surveillance](#)**

##### **[11.3.1.5.1. Earned Value Management System \(EVMS\) Compliance and Validation](#)**

##### **[11.3.1.5.2. Earned Value Management System \(EVMS\) Surveillance](#)**

## **11.3.2. Contract Funds Status Report (CFSR)**

### **11.3.1.5. Earned Value Management System (EVMS) Compliance, Validation, and Surveillance**

The [Defense Contract Management Agency](#) (DCMA) has responsibility for EVMS compliance, validation, and surveillance for the Department of Defense, except for those DoD Components that are also part of the Intelligence Community (IC) and are excluded from the requirement to delegate EVMS authorities to DCMA.

#### **11.3.1.5.1. Earned Value Management System (EVMS) Compliance and Validation**

DCMA, or the applicable Intelligence Community Component, will perform EVMS compliance and/or validation reviews, as necessary, at each contractor awarded a contract requiring EVM compliance or validation. The contractor demonstrates EVMS compliance through the use of management processes and program reporting that are consistent with the guidelines in ANSI/EIA-748. The requirement for EVMS validation is mandated only for those contracts, subcontracts, intra-government work agreements, and other agreements valued at or greater than \$50 million.

Validation is achieved by conducting a formal review of the processes defined and used by the contractor to manage major acquisitions that assesses the capability of the contractor's proposed system to comply with the EVMS guidelines in ANSI/EIA-748. It determines that the contractor is using the system as one of its primary program management processes; that the contractor has properly implemented the system on the contract; and that the contractor is using the data from its system in reports to the government. See the [DCMA EVMS Compliance Review Instruction](#) for additional guidance on EVMS compliance and validation.

#### **11.3.1.5.2. Earned Value Management System (EVMS) Surveillance**

Surveillance is required for all contract efforts that require the implementation of an EVMS, regardless of whether a formal system validation is required. For the life of the contract, surveillance will be conducted on a recurring basis and should evaluate both the continuing capability of the contractor's EVMS and the validity of the internal and external performance information generated by the system. The results of surveillance efforts should be documented and identified deficiencies should be monitored and corrected. The responsibility and requirement for government surveillance of contracts should be based on the effectiveness of the contractor's implementation of internal management controls. See the [Defense Contract Management Agency \(DCMA\)'s](#) surveillance process for additional guidance on [surveillance activity](#) where applicable.

The Navy Supervisors of Shipbuilding have the authority to conduct EVMS surveillance activities, issue Advance Agreements, approve EVM processes, and the responsibility to coordinate with DCMA for the contracts under their cognizance. EVM system validation reviews and reviews for cause are the responsibility of DCMA in coordination with the contracting

officer.

### **11.3.2. Contract Funds Status Report (CFSR)**

The CFSR described in this section applies to many defense contracts. It helps to ensure effective program management and supplies funding data about defense contracts to program managers for:

- Updating and forecasting contract funds requirements;
- Planning and decision making on funding changes in contracts;
- Developing funds requirements and budget estimates in support of approved programs;
- Determining funds in excess of contract needs available for deobligation;
- Obtaining rough estimates of termination costs; and
- Determining if sufficient funds are available by fiscal year to execute the contract.

The program manager will obtain a CFSR ([DD Form 1586](#)) on contracts over 6 months in duration. The CFSR has no specific application thresholds; however, the program manager should carefully evaluate application to contracts valued at less than \$1.5 million (in then-year dollars).

[DID DI-MGMT-81468](#) (current version at time of award) is used to obtain the CFSR. The contracting officer and contractor should negotiate reporting provisions in the contract, including level of detail and reporting frequency. The program manager should require only the minimum data necessary for effective management control. The CFSR should not be applied to Firm-Fixed Price contracts unless unusual circumstances dictate specific funding visibility.

The CFSR for all Acquisition Category I programs is submitted directly to the Earned Value Management Central Repository (CR) by the reporting contractors. The CR will be the sole addressee on the CDRL for this report. See the [EVM CR Manual](#) for additional guidance on the CR requirements.

The use of a standard electronic data exchange format is required for all reports unless disclosure of this information would compromise national security. All data will be in a readable digital format (e.g., PDF files are not acceptable). The Extensible Markup Language standard (Project Schedule Cost Performance Management message) is the preferred format. The American National Standards Institute X12 standard (839 transaction set) is also acceptable. On-line access to the data may be provided to augment formal submission.

### **11.3.3. Quality Management**

#### **11.3.3.1. Differentiating Among Offeror's on the Basis of Quality**

##### **11.3.3.1.1. Customer Satisfaction**

##### **11.3.3.1.2. Supply Chain Quality Management**

### 11.3.3.1.3. Top Management Involvement

### 11.3.3.1.4. Continual Improvement of Performance

### 11.3.3.2. Incentivizing Higher Quality in Contracts

### **11.3.3. Quality Management**

According to American National Standards Institute (ANSI), International Organization for Standardization (ISO), and American Society for Quality (ASQ), international standard ANSI/ISO/ASQ Q9000-2005 (ISO 9000), Quality Management Systems-Fundamentals and Vocabulary:

- Quality is the degree to which a set of inherent characteristics fulfills requirements. It may apply to a product or process. Inherent characteristics may be physical, sensory, behavioral, temporal, ergonomic, functional, etc.
- Quality management represents the organized activities to direct and control an organization with regard to quality.
- Quality assurance is the part of quality management focused on providing confidence that quality requirements will be fulfilled.

Effective quality management activities are important for reducing process-related risks to programs. Such risks include:

- Ill-defined or omitted requirements;
- A breakdown in requirements flow down;
- Uneconomically producible designs as a result of inappropriate application of technical processes;
- Inadequate procedures to implement contract requirements;
- Suppliers with inadequate capabilities;
- Decreasing leverage with sub tiers as a result of ineffective supplier management;
- Dissatisfied customer's as a result of ineffective customer engagement; and/or
- Undetected product defects resulting from unidentified verification technologies or failure to implement existing ones.

If not managed and mitigated, these risks may start a chain of events leading to undesirable outcomes such as:

- Product defects discovered in production or testing that may require expensive and time-consuming rework
- Products that may not meet customer needs
- Product deficiencies discovered in the field that may lead to degraded mission effectiveness, early wear out or mishaps
- Cost overruns or delays for current contracts and
- Cost escalation for future contracts

- Parts shortages at the wholesale and retail levels

The later these risks are identified, the greater the cost of corrective action and the greater the delays in schedule. Early identification, management, and mitigation of important process-based risks to a program lead to less expensive and less disruptive corrective actions that break the chain of undesirable outcomes.

While the DoD program manager should encourage and support the contractor's efforts to assure quality, ultimately, the prime contractor is responsible. Therefore, from a DoD perspective, a key program success factor is selecting contractors that can demonstrate effective quality management. This subject is discussed in [section 11.3.3.1](#).

The contract should provide incentive to the contractor to deliver products or services that provide value beyond the basic requirement. Without additional incentives, the systems engineering process will normally lead to decisions that satisfy requirements at the lowest cost. It may however be possible to incentivize the contractor to (1) exceed a basic requirement such as mean time between failures or (2) generate a higher level for an important derived requirement (e.g., one that affects operational flexibility, maintainability, supportability, etc.). [Section 11.3.3.2](#) discusses this topic.

Applying best practices as described in [Sections 11.3.3.1](#) and [11.3.3.2](#) may not be sufficient to manage and mitigate the process-based risks list above. [Section 11.3.3.3](#) discusses how encouraging a quality focus can also contribute.

Government Contract Quality Assurance (GCQA) determines if contractual requirements have been met prior to acceptance of supplies and services. GCQA is conducted by the program manager and [Defense Contract Management Agency](#) (DCMA) as identified in contract administration delegations to DCMA by the Contracting Officer. [Section 11.3.3.3](#) discusses some best practices for setting quality assessment and oversight requirements for the GCQA function, tailored to the expected risks.

### **11.3.3.1. Differentiating Among Offeror's on the Basis of Quality**

A contractor's quality management system is used to direct and control the organization with regard to quality. Quality management is an enterprise level process, driven by senior leadership involvement, to support the delivery of high quality products and services by ensuring that all aspects of quality are considered and acted upon by every element of the organization. The fundamental goal is to provide objective insight to assure that: customer requirements are thoroughly analyzed and understood; processes are defined and capable; and the resulting product meets the customer's needs. It interacts with systems engineering technical processes and technical management processes by focusing on both the quality of the system and the quality of the processes being used to create the system. Quality management provides objective insight into processes and work products for all stakeholders including program team members, management, suppliers, customer's, and users involved with the development, manufacture, operation, and support of a system.

The quality management process begins early in the life cycle and continues throughout. The principal elements of the quality management process include:

- Objectively evaluating performed processes, work products, product/process design and services against the applicable process descriptions, standards, procedures, policies, and documented expectations;
- Understanding the full scope of customer requirements, assessing risks associated with meeting those requirements, and verifying that they are satisfied;
- Identifying and documenting noncompliance issues, especially those affecting cost, schedule, productivity, and performance;
- Using tools and techniques in a disciplined manner to determine root causes of noncompliance issues;
- Addressing noncompliance issues by initiating and tracking corrective and preventative actions to assure the root cause(s) of the defect/deficiency has been identified and removed; and
- Providing feedback to program managers, their staff, and corporate managers to identify lessons learned, improve process robustness for future projects, and evaluate trends.

While the quality management focus is on the key aspects of the product realization process (e.g., requirements, design, make/buy decisions, supplier management, production), it also encompasses supporting processes such as contracting and training. Both value-added activities and continuous process improvement should be stressed and encouraged.

Further information about quality management may be found in [ISO 10005 Quality Management - Guidelines for Quality Plans](#) (available for purchase), [AQAP-2000 NATO Policy on an Integrated Systems Approach to Quality through the Life Cycle](#), [AQAP-2009 NATO Guidance on the Use of the AQAP 2000 Series](#), and at [Process and Product Quality Assurance](#) in the CMMI for Development (CMMI-DEV) v1. [2](#) or the CMMI for Acquisition (CMMI-ACQ) v1.2.

Program managers should allow contractors to define and use their preferred quality management system as long as it meets the needs of the program. International quality standard ISO 9001-2008, Quality Management Systems - Requirements, AQAP-2110, NATO Quality Assurance Requirements for Design, Development and Production, and AS 9100C:2009, Aviation, Space and Defense Quality Control Management System Standard, define process-based quality management systems and are acceptable for use on contracts per [FAR 46.202-4, Higher-Level Contract Quality Requirements](#). AQAP-2110 and AS 9100 contain additional requirements beyond ISO 9001. AS 9100 is applicable to most complex DoD systems. The AQAP 2000 series should be considered for complex DOD systems, when the supply chain or the end products have NATO or international implications. Program managers should consider the use of additional requirements (such as those contained in the Missile Defense Agency Assurance Provisions) beyond ISO 9001 as appropriate.

Other sector specific quality management systems acceptable under FAR 46.202-4 include:

- TL 9000, Quality System Requirements for the telecommunications industry
- [ISO/IEC 90003:2008](#), Software engineering -- Guidelines for the application of ISO

- 9001:2000 to computer software (available for purchase)
- QS-9000 or [ISO/TS 16949:2009](#) (available for purchase), ISO 9000 harmonized standards for automotive suppliers of production materials and service parts in North America

To improve a contractor's quality management system, standards bodies encourage registration based upon an impartial third party evaluation. The Department of Defense does not require registration of a contractor's quality management system because registration does not guarantee product or service quality. Reasons why the Department of Defense does not require registration include the following:

- Registrars (auditors) do not look at the product;
- There have been instances where a registered contractor delivered a deficient product;
- Many companies pursue registration of their quality management system as a goal in itself or as a marketing tool; and
- Some registrars are less demanding.

Compliance to a standard such as [ISO 9001](#) (available for purchase), [AQAP-2000](#), [AQAP-2009](#), or AS 9100, does not, in itself, guarantee product or service quality. These standards are management system standards that identify requirements for processes within an organization, describe expected tasks and outcomes, and explain how the processes and tasks integrate to produce required inputs and outputs. Standards are meant to enable the organization to develop a set of processes that, if done by qualified persons using appropriate tools and methods with appropriate leadership involvement, will enable a capability for delivering high quality products or services.

Product or service quality is achieved through the implementation of a strategic plan to integrate all business and technical functions that result in the consistent application of proven, capable processes within an organization. Managers must ensure that all management systems are working toward the same goals and are not creating conflicting or dysfunctional behavior. Implementing a standard is of little use if the financial system rewards individuals for delivering non-conforming products/services. Because everything a contractor does should be related to the quality of its products or services, a contractor's quality management system should be the basis for integrating all other management systems within an enterprise. Therefore, include quality management as a selection factor and look for the following elements of a quality management system in proposals:

- Effective policies and procedures that encourage the use of the system;
- Organizations with defined authorities and responsibilities;
- Objectives to drive people, processes, and the system;
- Method to analyze and resolve quality problems;
- Metrics that reflect desired outcomes;
- Interacting processes to transform inputs into outputs; and
- Records as evidence of what happened.

Furthermore, to the extent that they are available, metrics that show the effectiveness of the

contractor's quality management system and processes over time should also be used to differentiate among offeror's.

The following subsections describe several broad areas that have had a significant impact on quality. Topics include [Customer Satisfaction](#), [Supply Chain Quality Management](#), [Top Management Involvement](#), and [Continual Improvement of Performance](#). They provide additional guidance on items the program office and the contracting office should ask for in Requests for Proposals and evaluators should look for in proposals to make a better assessment of a contractor's quality. These items may be used to differentiate among offeror's. Depending on the specific situation, there may also be other areas (e.g., competent personnel for special processes) where information should be sought.

#### **11.3.3.1.1 Customer Satisfaction**

Customer satisfaction, when quantified, is a valuable enterprise-level outcome metric. The Department of Defense has recognized the importance of customer-satisfaction performance measures. Since the passage of the Federal Acquisition Streamlining Act of 1994, all Federal Departments and Agencies have initiated procedures to record contractor performance on in-process contracts and to use past contractor performance information in source selection.

Too often in the past, the Department of Defense relied heavily upon detailed technical and management proposals and contractor experience to compare the relative strengths and weaknesses of offers. This practice often allowed offeror's that could write outstanding proposals, but had less than stellar performance, to "win" contracts even when other competing offeror's had significantly better performance records and, therefore, represented a higher probability of meeting the requirements of the contract. Emphasizing past performance in source selection, can help ensure that the winning teams (prime contractors and major subcontractors) are likely to meet performance expectations. When evaluating past performance data, consideration should be given to the relevancy, complexity and ultimate mission success of the contract.

Beyond the Department's past performance information, a Request for Proposals may ask for further evidence of customer satisfaction such as data tabulated from customer surveys or from complaints and equally important, how changes were made because of the results.

Supplier assessment programs may also be helpful in understanding how well a company is able to satisfy its customer's. Suppliers have demonstrated some degree of customer satisfaction when they are accredited by a group of companies, in a particular sector, that joined together to agree on criteria and a process for assessing, exchanging and publishing supplier data to facilitate business relationships. For example, [Nadcap](#) is a worldwide cooperative program of major companies designed to manage a cost effective consensus approach to special processes and products and provide continual improvement within the aerospace industry; the [Coordinating Agency for Supplier Evaluations \(C.A.S.E.\)](#) exchanges and publishes non-prejudicial supplier data to help make informed supplier selections. Reports from consumer organizations or the media may also be useful.

### **11.3.3.1.2 Supply Chain Quality Management**

Because quality deficiencies for non-commercial-off-the-shelf (COTS) products often occur in the lower tiers, prime contractors should have insight at least two levels down their supply chain. Prime contractors, in addition to having approved vendor (i.e., subcontractor) lists, should ask their subcontractors' about planned suppliers. These subcontractors should also have insight two levels down their supply chain and flow the same requirement down to their suppliers, etc. For COTS products, all contractors should use approved sources.

It is important for DoD program managers to inform their prime contractors of their interest in quality throughout the supply chain. Therefore, through requests for proposals and corresponding proposal evaluation factors, the program office and the contracting office should request and evaluate evidence of effective supply chain management. The evidence should reflect the following characteristics:

- Relationships with suppliers that promote and facilitate communication to improve the effectiveness and efficiency of processes that add value;
- The use of supplier development programs focused on continuous improvement;
- Strategic partnerships with suppliers, over the product life cycle, that are based on a clear understanding of the partners' and customer's' needs and expectations in order to improve the joint value proposition of all stakeholders;
- Processes that effectively and efficiently monitor, evaluate, verify, and improve the suppliers' ability to provide the required products with a focus on defect prevention rather than defect detection;
- Right of access for both the prime contractor and the Government to supplier facilities and documentation where applicable; and
- Requirements for the supplier to flow down analogous quality management system provisions to its subcontractors.

Because quality deficiencies often occur in the lower tiers, prime contractors, in addition to having approved vendor (i.e., subcontractor) lists, should ask their subcontractors' about planned suppliers. These subcontractors should flow the same requirement down to their suppliers, etc. For critical and complex commercial-off-the-shelf (COTS) products, the prime and its subcontractors should use their own internal processes and controls to ensure that the COTS product meets its critical attributes.

### **11.3.3.1.3 Top Management Involvement**

Quality will permeate all levels of a company only if top management provides the leadership necessary to drive and reinforce that behavior. Requests for Proposals should also ask for evidence of top management support for quality. The following list identifies important factors in evaluating the effectiveness of top management support:

- Establishing a corporate strategic vision, objectives, policies and procedures that reflect a commitment to quality both in-house and in suppliers' facilities;
- Communicating, at every opportunity, organizational direction and values regarding

- quality;
- Providing structures and resources to support full implementation of a quality management system;
- Soliciting quantitative and qualitative feedback on the effectiveness and efficiency of quality management and taking actions based on that feedback, even when change may be difficult;
- Establishing a quality policy, at the highest level in the company, that commit's to continuously improving processes and exceeding customer expectations;
- Reviewing the quality management system periodically with particular attention paid to achieving goals and objectives throughout the organization, customer satisfaction, and the exchange of ideas for continuous improvement;
- Setting ambitious quality objectives and promulgating them through quality policy;
- Demonstrating importance put on quality functions by providing for independent reporting channels; and
- Establishing management accountability with emphasis on quality results and customer satisfaction.

#### **11.3.3.1.4 Continual Improvement of Performance**

An offeror with effective quality management will seek continual improvement of its processes, product designs, and thereby products by improving its overall performance, efficiency, and effectiveness. Such behavior increases the likelihood of increasing customer satisfaction and enhancing an organization's competitive posture.

More specifically, all processes have defined inputs and outputs as well as the required activities, actions and resources. Therefore, process improvement encompasses both:

1. Improving conformance to the defined process and
2. Improving the defined process itself to add value and eliminate waste.

Such process improvement invariably leads to (work and end) product improvement and consequently increased customer satisfaction.

When asking for evidence of a strong commitment to continual improvement in a request for proposal, the following list provides considerations for evaluating a response.

- How conditions are created to promote innovation,
- How open two-way communications are encouraged,
- How corrective actions are treated as an improvement tool,
- How change is approached on a systematic, consistent basis, to include follow-through implementation, verification and documentation,
- How people are provided with the authority, technical support and necessary resources for change,
- How continuous improvement process tools are deployed company-wide,
- How self-assessments, benchmarking, competitor analysis, and other metrics are used to evaluate process performance and drive improvement, and

- How capability and maturity models or reviews support an effective continual improvement process and provide both insights to the improvement process itself and objective evidence of success.

### 11.3.3.2 Incentivizing Higher Quality in Contracts

Contract incentives can be structured to ensure quality by contributing to the contractor's value proposition. Factors that are typically important aspects of a contractor's value proposition include:

- Customer satisfaction;
- Planning stability;
- Good financial performance; and
- Improved cash flow.

Listed below are examples of contract incentives that can be made available to the prime contractor and the prime contractor can in turn make available to subcontractors under the appropriate conditions:

- Increased fee;
- Extended contract length;
- Follow-on contracts awarded;
- Accelerated progress payments;
- Shared savings; and
- Opportunities for return on investments (some of which may increase the contractor's competitiveness on other contracts).

The following are some potential ways to use these contract incentives to improve quality, and at the same time, improve other product characteristics that are of value to DoD. Their applicability depends on the specific situation.

- **Warranties.** The program manager could treat the warranty as a fixed price option per item. If there are no failures, the contractor keeps the money that DoD paid for the warranty. To reduce the price of the warranty, the program manager could consider a situation where DoD pays to repair the first failure and the contractor warranties the next "n" failures. Typically the warranty should exclude combat damage, abuse, misuse, and other factors out of the contractors' control.
- **Award Fee for Product Support Contracts.** The program manager could make the fee a function of operational availability.
- **Award Fee for Product Development Contracts.** The program manager could make the fee a function of successful operational test and evaluation.
- **Progress Payments.** The program manager could make payments contingent on successful corrective actions taken to alleviate quality deficiencies. The program manager could also establish an agreement with the contractor to repay the fee with interest if future measurements do not meet the conditions necessary for the entire amount of the fee to be awarded.

- **Share of Savings.** The contract could encourage the contractor to invest in facilities, non-recurring engineering, technology insertion, etc. that will result in improved performance and reduced costs. The program manager could then use the value engineering clause to repay the investment and give the contractor a share in the savings generated.

In building such relationships, the program manager should avoid actions that encourage risky behavior by the contractor. For example, by insisting on reducing cost, accelerating the schedule, improving performance beyond demonstrated technology limit's, etc. the contractor may be forced to forgo quality-related processes. This may not only defeat the purpose of contractual incentives but also negate the other quality activities discussed in this section.

### **11.3.3.3 Encouraging a Quality Focus**

#### **11.3.3.3 Encouraging a Quality Focus**

Applying best practices as described in [sections 11.3.3.1](#) and [11.3.3.2](#) may not be sufficient to manage and mitigate process-based risks that may start a chain of events leading to undesirable outcomes. DoD should also stress the importance of effective quality management to industry. By encouraging a quality focus, DoD can help avoid mismatches among value, beliefs, and behaviors. DoD should therefore encourage and participate with industry to apply effective practices in the following areas.

#### **At Program Startup**

- The process for establishing the product or project quality budget,
- Where quality responsibility is placed in the program,
- How quality skills have been assigned to the project,
- The process for analyzing quality requirements and mitigating associated risks, and
- The quality strategy's consistency with industry best practices.

#### **Throughout the Life Cycle**

- How management uses quality data,
- The contractor's approach for continuous process improvement,
- The contractor's approach for preventive and corrective action, and
- The contractor's approach for achieving customer satisfaction.

Evaluation considerations for each of the above areas are shown below:

- The process for establishing the product or project quality budget,
- Project quality administration, product verification, quality engineering (hardware and software), quality planning, and supplier quality,
- Specific quality deliverables,
- Capital, equipment, and software verification needs,
- How the estimates are modified when there are changes to the strategy and/or scope of the program, and

- Measurement technology needs.

Where quality responsibility is placed in the program:

- Role in the general risk identification, classification, and mitigation process,
- Involvement in the design change control and release process,
- Role in processing waivers, deviations and engineering change proposals,
- Representation on Integrated Process Teams and boards (e.g., change control board, risk) for all product and process development activities,
- Involvement in test plans, material reviews, design reviews, build/buy/support to packages,
- Participation in the integration of inspection points into processing and test documentation, and
- Role in the supplier management, development, incentivization, and control process.

How quality skills have been assigned to the project

- The process to identify the need for quality management, quality engineering (hardware and software), quality planning, supplier quality, and product verification skills across the life cycle,
- The process to identify quality skills and any associated certifications and qualifications, and
- The process for addressing quality staffing ratios and skill shortfalls.

The process for analyzing quality requirements and mitigating associated risks:

- The process for identifying and achieving quality tasks in support of contract deliverables,
- How a post award contract analysis for Quality's tasks was performed / has been updated,
- An evaluation of how the Quality plan matches the program requirements and their integration across program sites, IPTs, partners and suppliers, and
- How quality activities factored into the Integrated Master Plan and Integrated Master Schedule.

The quality strategy's consistency with industry best practices:

- The use of lessons learned,
- How similar programs' quality past performance have been reviewed,
- How the quality plan addresses program unique processes,
- How plans include verification approaches, nonconformance handling, operator verification manufacturing self-examination, nondestructive inspection, manufacturing systems, measurement approach, special measuring and test equipment,
- Adequacy of the quality plan to address all other program plans (manufacturing, systems engineering, subcontract management, delivery, etc.),
- Periodic review and update, and

- Early involvement in the program.

#### How management uses quality data

- Audit needs and addressing audit findings,
- The process for analyzing and performing trend analysis of internal/external audit findings, and
- How quality is defined, measured, analyzed, controlled, and used to drive management decisions and actions on the program
  - The process for developing and identifying requirements for quality metrics and measurement systems
  - The system for monitoring supplier performance, including their product development activities
  - The process for review and update

#### The contractor's approach for continuous process improvement:

- Baldrige business model,
- CMMI,
- Lean,
- Six sigma,
- ISO recertification, and
- Actions taken to address feedback from assessments performed.

#### The contractor's approach for preventive and corrective action:

- The process for addressing test and inspection findings and discrepancies,
- The process for addressing supplier non-conformances,
- Establishment and maintenance of a closed loop corrective action system that includes the reporting, root cause analysis, and implementation of actions necessary to correct and preclude recurrence of problems, failures, quality issues, defects/non-conformances, and
- The process for using lessons learned to drive continuous improvement.

#### The contractor's approach for achieving customer satisfaction:

- The process to collect, monitor, and analyze information for measuring customer satisfaction,
- The process to rapidly mitigate customer concerns,
- The process to communicate with customer's at all levels, and
- The process / organizational structure for reacting to customer inquiries and needs.

The program managers and responsible technical authority will utilize DoD preferred method of acceptance as reflected in [MIL-STD-1916](#), *DoD Preferred Method of Acceptance*, (login, then URL: [https://assist.daps.dla.mil/online/parms/mainframe.cfm?ident\\_number=120287](https://assist.daps.dla.mil/online/parms/mainframe.cfm?ident_number=120287)), to allow contractors the maximum degree of flexibility to meet product or service requirements. The preferred method is acceptance by contractor-proposed provisions based on prevention-based

strategies and process controls. The theme is partnering between Government and contractor to develop an optimal acceptance method for products and services that is consistent with the contract requirements for submission of all conforming products or services.

Prior to achieving effective prevention-based strategies and process controls, MIL-STD-1916 provides standardized acceptance sampling systems which are consistent with the contract requirements for submission of all conforming products or services. These sampling systems allow program managers to influence continuous improvement through corrective action while still allowing maximum degree of flexibility to contractors.

International quality standard [ISO 21247, Combined Accept-Zero Sampling Systems and Process Control Procedures for Product Acceptance](#), (available for purchase) is an acceptable alternative to MIL-STD-1916.

#### **11.3.3.4. Government Contract Quality Assurance (GCQA)**

##### **11.3.3.4.1. Formulating the Government Contract Quality Assurance Approach**

##### **11.3.3.4.2. Government Contract Quality Assurance (GCQA) Inspections**

##### **11.3.3.4.3. Government Contract Quality Assurance (GCQA) for Critical Safety Items (CSIs)**

#### **11.3.3.4. Government Contract Quality Assurance (GCQA)**

GCQA is a joint responsibility between the program office and Defense Contract Management Agency (DCMA). Interdisciplinary skills (such as quality assurance, industrial specialist, engineering, and software) are needed.

The program manager should establish open and effective communication with DCMA. DCMA uses Contract Data Package Recommendation/Deficiency Reports (DD Form 1716) for the following:

- To improve contract data packages;
- When essential information is required as a basis for inspection/acceptance or shipment is incorrect, incomplete, unclear or unavailable; or
- When there is a conflict, ambiguity, noncompliance or other problem area between the contractor and Government concerning contractual requirements.

The DD Form 1716 is an important avenue of communication for DCMA to resolve contractual issues with the Procuring Activity and to understand and meet expectations and needs of their customer's.

For item-managed contracts, Defense Logistics Agency ICPs issue Quality Assurance Letters of Instruction to DCMA to provide additional contractor past performance history and to request

tailored or specialized surveillances during contract performance.

#### **11.3.3.4.1. Formulating the Government Contract Quality Assurance Approach**

For defense acquisition programs, the program manager should conduct a customer outcome strategy meeting (i.e., a post award conference) soon after the Systems Development and Demonstration contract award. At this meeting, the participants should:

- Identify desired customer/user expectations and outcomes,
- Determine the program risks that may negatively impact those outcomes,
- Analyze those risks to assess the potential consequences, and
- Define performance measures associated with the desired outcomes.

The program manager should ensure that some of these performance measures relate to key processes in the acquisition framework. For example, the performance measures should be linked to the entrance and exit criteria of the systems engineering technical reviews and the Milestone programmatic reviews during both the Systems Development and Demonstration Phase and the Production and Deployment Phase of the acquisition management framework.

The program manager should form a GCQA team and allow it the flexibility to formulate a risk-based quality assurance surveillance strategy designed to ensure that customer outcomes are achieved. The surveillance strategy should focus on the effectiveness of the contractor's product realization process which includes:

- Planning of Product Realization;
- Customer-Related Processes;
- Design and Development;
- Purchasing and Supplier Management;
- Production and Service Provision;
- Control of Monitoring and Measuring Devices; and
- Inspection, Test, Verification and Validation.

The surveillance strategy should also cover the contractor's continual improvement process. To be effective, this process should be data driven and the data should (1) be used to address both actual and predicted problems, and (2) should be revised to remain connected to process changes. In addition, include both periodic audits of the contractor's quality management system as well as product examinations in the surveillance strategy. Both independence and the use of criteria in conducting audit's and surveillance are critical to providing objective, meaningful insight.

As performance data are collected, the GCQA team should adapt the surveillance strategy based on risks identified and the need for special surveillance of critical safety items, critical characteristics or processes, mission critical items, key characteristics, etc. When planned results are not achieved, the program manager should ensure that preventive and corrective actions are developed and implemented. The GCQA team should extend the surveillance to verify that such actions accomplished their objectives.

#### 11.3.3.4.2. Government Contract Quality Assurance (GCQA) Inspections

For item-managed contracts, detailed guidance on when to require GCQA at source or destination is contained in the [Federal Acquisition Regulation \(FAR\), Part 46](#).

Per FAR Parts 46.402 and 46.404, the program manager shall use destination inspection for contracts or purchase orders under \$250,000 for the procurement of items with no significant technical requirements, no critical characteristics, no special features, and no specific acquisition concerns, and where there is confidence in the contractor. Such inspections are limited to kind, count and condition. This may involve preservation, packaging, and marking (if applicable). Put [FAR 52.246-1](#) on the contract. Use FAR 52.246-2 without FAR 52.246-11 only in those rare circumstances where there is reason to believe that there may be a problem.

Typically, source inspection is appropriate for complex / critical items where:

- The verification of technical characteristics requires in-process controls;
- Product quality cannot be adequately determined through basic end item product examination; or
- The contractor is experiencing or exhibiting difficulty controlling product characteristics.

The program manager should put both FAR 52.246-2 and FAR 52.246-11 (or FAR 52.246-8 for research and development programs) on the contract. FAR 52.246-2 allows Government access to the facility and requires the contractor to develop and maintain an inspection system. FAR 52.246-11 requires the contractor to implement a higher level quality management system. The responsible technical authority should prepare a Quality Assurance Letter of Instruction through the contracting officer to ensure that appropriate product specifications, drawings, and inspection and test instructions, including critical characteristics, are available and/or identified for use by the Defense Contract Management Agency. GCQA at the source encompasses one or more of the following based on defined risk:

- *Product Examinations*: Examinations of product characteristics to ensure they meet contract requirements. Depending on the identified risks, the Government CQA surveillance strategy might include various product examination techniques, such as inspecting, testing, witnessing, verifying by use of objective evidence, and analyzing Government or contractor performance data.
- *Process Reviews*: Reviews to determine the suitability, adequacy, and effectiveness of the process to achieve product outputs that meet contract requirements.
- *System Assessments/Audit's*: Systematic, independent assessments and audits of the various elements of the contractual quality management system impacting process or product quality.
- *Management and program reviews and meetings*: Maintains open channels of communication.

#### **11.3.3.4.3. Government Contract Quality Assurance (GCQA) for [Critical Safety Items \(CSIs\)](#)**

Special attention must be paid to CSIs regardless of whether they are item-managed or program-managed. Defense Federal Acquisition Regulation Supplement ([DFARS](#)) [246.103](#) states that the activity responsible for technical requirements may prepare instructions covering the type and extent of Government inspections for acquisitions that have critical applications (e.g., safety) or have unusual requirements. [Section 4.3.18.6](#) discusses CSIs as a systems engineering design consideration. It provides a definition and links to some additional reference material.

The contracting officer should clearly mark the front page of the solicitation/contract with the words "Critical Safety Item." This raises the alertness level and makes everyone aware that CSIs are involved in the contract. When CSIs are determined after contract award, the responsible technical authority should use the words "Critical Safety Items" in the subject line of a Quality Assurance Letter of Instruction (QALI). All critical and major characteristics, the extent of inspection required, and the associated acceptance criteria should be described either in the contract or in the QALI. In addition, the technical authority should provide criteria for special inspections, process verification, or similar requirements. Acceptance criteria should also include additional instructions for situations where a CSI is purchased from a distributor, a CSI is purchased on a commercial contract, or CSI critical characteristics cannot be fully examined at a prime contractor's facility. To assure the communications loop is closed with Defense Contract Management Agency (DCMA), the QALI should request acknowledgement and DCMA acceptance of duties included within. The form should be returned to the responsible technical authority that transmitted the QALI.

[Public Law 108-136, "National Defense Authorization Act for FY04,"](#) Section 802, Quality Control in the Procurement of Aviation Critical Safety Items and Related Services, " requires that the head of the design control activity for aviation critical safety items establish processes to identify and manage the procurement, modification, repair, and overhaul of aviation critical safety items." DoD procedures for managing aviation CSIs are contained in Joint Service instruction, "[Management of Aviation Critical Safety Items](#)," and the [Joint Aeronautical Logistics Commanders' Aviation Critical Safety Items \(CSIs\) Handbook](#) . Additionally, per DFARS 246.407, the head of the design control activity is the approval authority for acceptance of any nonconforming aviation critical safety items or nonconforming modification, repair, or overhaul of such items.

DCMA relies on the Procuring Activity's knowledge and involvement to determine whether an item is correctly categorized as a critical item. If DCMA questions the critical categorization of an item, the lack of a critical characterization of an item, or a CSI designation, DCMA will contact the Procuring Office to discuss the reasons behind the decision, gain a better understanding of the situation or customer's needs, and request additional information. The Procuring Office should contact DCMA personnel whenever they have a concern, question, or possess additional information important to achieving customer outcomes.

## 11.4. Knowledge-Based Acquisition

### 11.4. Knowledge-Based Acquisition

Knowledge-based acquisition is a management approach which requires adequate knowledge at critical junctures (i.e., knowledge points) throughout the acquisition process to make informed decisions. [DoD Directive 5000.01](#) calls for sufficient knowledge to reduce the risk associated with program initiation, system demonstration, and full-rate production. DoD Instruction 5000.02 provides a partial listing of the types of knowledge, based on demonstrated accomplishments, which enable accurate [assessments of technology](#), [design maturity](#), and [production readiness](#).

Implicit in this approach is the need to conduct the activities that capture relevant, product development knowledge. And that might mean additional time and dollars. However, knowledge provides the decision maker with higher degrees of certainty, and enables the program manager to deliver timely, affordable, quality products.

The following knowledge points and ensuing considerations coincide with decisions along the acquisition framework:

**Program Initiation** . Knowledge should indicate a match between the needed capability and available resources before a program starts. In this sense, resources is defined broadly, to include technology, time, and funding.

Considering the knowledge associated with technology, the knowledge should be based on demonstrated accomplishments. If a technology is not mature, the DoD Component must use an alternative technology or discuss modifying requirements with the users. By requiring proven technology before a program starts, we reduce uncertainty. Rather than addressing technology development and product development, the program manager and Milestone Decision Authority can focus on product development, because they know the technology is available. DoD Instruction 5000.02 enforces this concept with the following policy:

*Technology developed in S&T or procured from industry or other sources shall be assessed to determine whether they are considered mature enough to use for product development (see the "Technology Readiness Assessment (TRA) Guidance"). . . . If technology is not mature, the PM shall use alternative technology that is mature and that can meet the user's needs or conduct a dialog with the user to modify the requirements. Technology readiness assessments shall be conducted by the PM and used by the MDA to assist in determining whether program technologies have acceptable levels of risk based in part on the degree to which they have been demonstrated, including demonstration in a relevant environment, and to support risk mitigation plans prepared by the PM. They will be focused on the specific planned technical solution.*

**Post-Critical Design Review Assessment** . Knowledge should indicate that the product can be built consistent with cost, schedule, and performance parameters. This means design stability and the expectation of developing one or more workable prototypes or engineering development models. [DoDI 5000.02](#) lists the specific factors that contribute to such knowledge.

**Production Commitment** . Based on the demonstrated performance and reliability of prototypes or engineering development models, knowledge prior to the production commitment should indicate the product is producible and meets performance criteria. [DoD Instruction 5000.02](#) lists some of the specific factors that contribute to such knowledge.

**Full-Rate Production Decision** . Based on the results of testing initial production articles and refining manufacturing processes and support activities, knowledge prior to committing to [full-rate production](#) should indicate the product is operationally capable; lethal and survivable; reliable; supportable; and producible within cost, schedule, and quality targets.

### **11.5. Technical Representatives at Contractor Facilities**

#### **11.5. Technical Representatives at Contractor Facilities**

Program managers should maximize the use of Defense Contract Management Agency (DCMA) personnel at contractor facilities. The program manager should only assign technical representatives to a contractor's facility as necessary. Technical representatives shall not perform contract administration duties as outlined in [Federal Acquisition Regulation \(FAR\) Section 42.302\(a\)](#) .

DCMA was established to perform contract administration for the Department of Defense. DCMA is expected to operate in an independent, consistent, transparent and collaborative manner while performing a wide variety of contract oversight functions. DCMA prioritizes and balances its Contract Management activities to reduce acquisition risk by focusing limited resources on the highest risk processes, products, and programs. DCMA's mission is best achieved when there is open communication and teaming between DCMA and its acquisition partners and when there is a full understanding of all program risks and acquisition objectives.

While DFARS 242.202 allows for limited exceptions to DCMA performing contract administrative functions, it is not a prudent use of limited DoD resources for buying activities to duplicate the contract administration functions assigned to DCMA. Similarly, DCMA's acquisition partners are not authorized to audit DCMA operations. In our constrained fiscal environment, organizations should not be expending precious funds to perform functions budgeted elsewhere by the Department. This duplication may create additional costs for Industry, and ultimately the Department; these are costs that we cannot afford.

Where a Program Manager determines that they require technical representatives at a contractor's facility to perform non-contract administration services, technical duties, and to provide liaison, guidance, and assistance on systems and programs, per DFAR 242.74, the program manager may assign technical representatives following the procedures outlined in [DFARS Procedures](#).

Guidance, and Information (PGI ) 242.7401.

Per DFAR PGI 242.74, when the program, project, or system manager determines that a technical representative is required, the manager shall issue a letter of intent to the contract administration office commander listing the assignment location, starting and ending assignment dates, technical duties assigned, delegated authority, and support required from the contract administration office. Any issues regarding the assignment of a technical representative should be resolved promptly. However, final decision on the assignment remains with the program manager. Issues regarding the assignment of technical duties that cannot be resolved between the program office and the on-site DoD contract administration office will be elevated.

The program, project, or system manager will furnish the designated technical representative a letter of assignment of delegated technical duties, with copies to the contract administration office, the contracting officer, and the contractor, at least 30 days before the assignment date (or termination date). Any changes to the requirements of the assignment letter will be made by a new letter of intent and processed in accordance with paragraph (1) of this section.

The contract administration office normally provides the technical representative with office space, equipment, supplies, and part-time clerical support. The program, project, or system manager provides supervision, technical direction, administrative services (e.g., pay, travel, maintenance of personnel records), and, when required, full-time clerical support.

The program manager or designee and the contract administration office, at the local level, shall negotiate a memorandum of agreement (MOA) delineating their functional administrative interrelationships, with annual updates as necessary. The agreements may be included in an existing MOA, if one exists, or as a separate MOA.

The technical representative shall keep the contract administration office commander fully informed of matters discussed with the contractor. The contract administration office shall also keep the technical representative fully informed of contractor discussions that relate to technical matters within the purview of the technical representative's assigned duties.

## **11.6. Contractor Councils**

### **11.6. Contractor Councils**

The [Defense Contract Management Agency \(DCMA\)](#) supports the formation of management, sector, and/or corporate councils by each prime contractor under DCMA cognizance that provide Acquisition Category (ACAT) I, ACAT IA, or ACAT II program support. These councils provide an interface with the Contract Management Office Commander; the [Defense Contract Audit Agency](#) Resident Auditor; representatives from all affected acquisition management activities (including program managers, Item Managers, and Standard Procurement System Component Team Leaders), or designated representatives for any of the above listed individuals. Acquisition managers or designees should support both council activities and council-sponsored Working-Level Integrated Product Teams. Acquisition managers should assist the councils and keep all the stakeholders informed about issues affecting multiple acquisition programs, work

issues quickly, and elevate unresolved issues to appropriate levels for resolution. These councils may identify and propose acquisition process streamlining improvements. Acquisition managers should assist and encourage councils to coordinate and integrate program audit and review activity, support and promote civil-military integration initiatives, and accept contractor Standard Procurement System proposals and other ideas that reduce total ownership cost while meeting performance-based specifications.

The program office staff should interface with contractors' councils, keeping in mind that such councils are not federal advisory committees under the [Federal Advisory Committee Act](#). The staff may find that these councils strengthen the corporate relationship with the Department of Defense, provide an interface between company representatives and acquisition managers, communicate acquisition reform initiatives, or even resolve issues. In leading corporate endeavors, such as Standard Procurement System proposals, civil-military integration ideas, or other initiatives designed to achieve efficiencies for the company, these councils may ultimately produce savings for the Government.

## **11.7. Property**

### **11.7.1. Government Property in the Possession of Contractors (GPPC)**

### **11.7.2. Contractor Acquired Property**

### **11.7.3. Government Furnished Property**

## **11.7. Property**

### **11.7.1. Government Property in the Possession of Contractors (GPPC)**

All program managers should prevent the unnecessary furnishing of Government Property. The program manager should assign GPPC management authority within the program office, and identify needed actions, reviews, and reports. Decisions about acquisition, retention, disposition, and delivery requirements should be well informed and timely. GPPC no longer needed for current contract performance or future needs should be promptly disposed of or reutilized in accordance with applicable laws and regulations; or stored under a funded storage agreement. The program manager should document decisions regarding GPPC in the contract file.

GPPC includes Government property that is not "owned" by the program manager, but is "used" on the program. Government property may only be furnished to contractors under the criteria, restriction, and documentation requirements addressed in Federal Acquisition Regulation 45.102 and Procedures, Guidance, and Information 245.105.

### **11.7.2. Contractor Acquired Property**

Contractor acquired property is property acquired, fabricated, or otherwise provided by the contractor for performing a contract and to which the Government has title.

DoD policies, processes, and practices are structured on delivery, receipt and acceptance of property. This aligns and is consistent with other DoD processes and practices (e.g., [Wide-Area Work Flow](#) , Unique Item identification). (**Note:** The Wide-Area Flow site access is conditional based on registration and identification of user roles.) Although the DoD may have title to some property, e.g., property acquired, fabricated, or otherwise provided by the contractor for performing a contract, such property has not yet been delivered.

Upon delivery to the Government, contractor acquired property should be recorded in the appropriate property accountability system. If this property is subsequently provided to a contractor for follow-on contracts, it will be managed as government furnished property. Consistent with [DoD Instruction 5000.64](#) , there is no requirement for accountability by DoD Components for such property prior to delivery to the Government. Third parties (to include contractors) have stewardship responsibility, to include creating and maintaining records of all Government property accountable to the contract, consistent with the terms and conditions of the contract or third party agreement, for the Government property in their care.

### **11.7.3. Government Furnished Property**

"Government-furnished property" means property in the possession of, or directly acquired by, the Government and subsequently furnished to the contractor for performance of a contract.

Although the Department of Defense may not have physical custody, to maintain effective property accountability and control and for financial reporting purposes, DoD Components are required to establish records and maintain accountability for property (of any value) furnished to contractors as Government Furnished Property.

## **[11.8. Modeling and Simulation \(M&S\) Support to the Entire Product](#)**

### **11.8. Modeling and Simulation (M&S) Support to the Entire Product**

Modeling and Simulation capabilities can significantly improve the efficiency and effectiveness of conceptualization, development, experimentation, test, and sustainment activities during the life cycle of DoD systems. The program manager should employ M&S resources and products during system design, test and evaluation, modification, upgrade, and operations and sustainment.. The program manager should collaborate with the weapon system operational users, analysis agencies, test and training activities (e.g. government laboratories and facilities), and consider industry inputs during M&S program planning. Planning should include the application, support, documentation, and reuse of M&S resources, including data and analyses generated outside the program of record, as well as from the program of record; and the integration of M&S across functional disciplines.

The following additional considerations are useful during M&S planning activities:

- Plan for M&S and make necessary investments early in the acquisition life cycle.
- Incorporate M&S tools to improve the requirements development process.
- Employ M&S tools to assist in the evaluation of contractor proposals.

- Develop system models in preparation for use across a wide range of disciplines (e.g. use of CAD/Cam for training manuals, etc.).
- Identify or define standards and technical requirements that support re-use or leverage of M&S resources and products throughout the system life cycle to the greatest extent possible. Where it is necessary to invest in M&S development, ensure that licensing is appropriate, and avoid exclusive rights of developer.
- Use and reuse models and simulations, modified as appropriate to the task, in order to provide consistent and efficient test planning, pre-test results prediction, posttest evaluation, and the validation of system interoperability; and to supplement design qualification, actual test and evaluation, manufacturing, and post-production and operational support.
- Employ verified, validated models and simulations, and ensure credible applicability for each proposed use.
- Use data from other activities (e.g. development test) during weapon system development to assist in model, simulation, and data validation.
- Involve the developmental and operational test agencies in M&S planning early in the application of M&S to efficiently support both developmental test and operational test objectives.
- Have the Defense Intelligence Agency review and validate threat-related elements of the models and simulations.