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# JOINT PROGRAM MANAGEMENT HANDBOOK



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# **JOINT PROGRAM MANAGEMENT HANDBOOK**



**JULY 2004  
THIRD EDITION**

**PUBLISHED BY THE  
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FORT BELVOIR, VIRGINIA**



## PREFACE

This 2004 *Joint Program Management Handbook*, Third Edition, updates the 1996 Second Edition.

This Handbook provides a quick guide to assist experienced acquisition professionals assigned to a joint acquisition program. The views of experienced joint program managers are quoted within this guide to give practical advice to the reader. Lessons learned and practical guidelines derived from Joint Program Working Group deliberations (November 2003) are also included. If you are new to the acquisition process, you should first read DAU's *Introduction to Defense Acquisition Management*, 6th Edition (DAU Press, November 2003), to gain a firm grasp of acquisition fundamentals.

Joint program implications of the Joint Capabilities Integration and Development System, outlined in Chairman, Joint Chiefs of Staff Instruction (CJCSI) 3170.01D of 12 March 2004 and selected provisions of the 12 May 2003 Department of Defense 5000 Series Directive and Instruction, are highlighted herein. The joint program implications of CJCSI 6212.01C of 20 November 2003 ("Interoperability and Supportability") are also addressed.

Suggested revisions are encouraged from readers of this publication. For your convenience, a postage-paid customer feedback form is located at the back of this Handbook. If you have suggestions, please take a few minutes to fill it out and help us improve this publication.

C. B. Cochrane  
Director  
Center for Program Management  
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- The Joint Lethal Strike (JLS) Program Office for contributing the Joint Air to Surface Standoff Attack Missile (JASSM) Memorandum of Agreement (MOA) to use as an example in this Handbook.
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# 1

## JOINT PROGRAM MANAGEMENT INTRODUCTION

### Purpose

This Handbook is a guide for the management of joint acquisition programs for current and future joint program personnel. As a complement to the more general *Introduction to Defense Acquisition Management*, Sixth Edition (Defense Acquisition University (DAU) Press, November 2003), this Handbook incorporates the perspectives of current and former joint Program Managers (PMs), including those who were members of the Office of the Secretary of Defense (OSD)-sponsored Joint Program Working Group (JPWG), which met at DAU in November 2003.

### General

The *Interim Defense Acquisition Guidebook*<sup>1</sup> defines a joint PM as:

*Any defense acquisition system, subsystem, component, or technology program that involves formal management or funding by more than one DoD Component during any phase of a system's life cycle.*

Components are defined as the OSD, the military departments, the Chairman of the Joint Chiefs of Staff (Joint Staff), the Combatant Commands,<sup>2</sup> the Office of the Inspector General of the Department of Defense (DoD), the Defense agencies, DoD field activities, and all other organizational entities within the DoD. The military services,

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<sup>1</sup> A replacement for the *Interim Defense Acquisition Guidebook (IDAG)*—called the *Defense Acquisition Guidebook (DAG)*—is expected in late calendar year 2004.

<sup>2</sup> Central Command; European Command; Pacific Command; Joint Forces Command; Southern Command; Special Operations Command; Strategic Command; Northern Command; and Transportation Command.

while they are part of Component military departments, are also considered Components in their own right.

In most joint programs, a “lead” Component is designated to centrally manage the acquisition process and act as an acquisition agent for the “participating” Components. The participating Components—those with a requirement for the program’s products—both support and participate with the lead Component in managing the acquisition process. As outlined in the chapters to follow, joint programs are managed on a day-to-day basis in accordance with provisions in a memorandum of agreement, a program charter, joint operating procedures, and with the lead Component’s procedures and acquisition chain-of-authority. This Handbook provides guidance and suggested procedures that may help ensure a successful joint program.

The operative words in the definition—and root cause of most issues in joint programs—are: “... formal management or funding by more than one DoD Component.” While joint programs have issues related to management and funding across Component boundaries, the opportunities for interoperability among Components and significant cost savings due to scale provide significant advantages.

## **OSD Joint Program Working Group Findings**

In November 2003, an OSD JPWG met at the DAU campus at Fort Belvoir, Virginia. That working group developed many of the concepts for joint program management covered in this Handbook. A summary of the findings of the JPWG is at Appendix A.

## **Rationale for Joint Programs**

Joint programs are established for some of the following reasons:

- Provide a new joint warfighting capability;
- Improve Component interoperability and reduce duplication among the Components;
- Reduce development and production costs;
- Meet similar multi-Service requirements; and
- Reduce logistics requirements through standardization.

DoD Directive 5000.1, *Defense Acquisition*, 12 May 2003, indicates a policy preference for joint development programs over Component-unique development programs.

Chairman of the Joint Chiefs of Staff Instruction 3170.01D, *Joint Capabilities Integration and Development System (JCIDS)*, 12 March 2004, describes how joint warfighting capabilities are determined. During the staffing and review of JCIDS documents, the military departments, Defense agencies, and Combatant Commanders (COCOMs) have an opportunity to review the sponsor's capability needs and determine if they also have a need for the proposed new system; if so, this may result in a joint acquisition program. For summary information on JCIDS, see Chapter 4. For detailed information see CJCSI 3170.01D. When staffing JCIDS documents, the joint PM should consider the following:

- The joint PM should learn the COCOM's rationale for major joint programs that cross Component operating systems and mission areas, e.g., obtain wide-area, shared, battlefield surveillance or attack time-critical targets in adverse weather and at night.
- The joint PM must be sensitive to participating Component concerns, e.g., operation in environments that are damp and salty, maintenance, training, and weight.

Congressional interest in supporting joint requirements and in avoiding duplication among the Components often results in statutory or report language requests for joint programs.

Joint program examples include the Joint Tactical Unmanned Aerial Vehicle (JTUAV), Joint Lethal Strike (JLS), V22 Osprey, Joint Surveillance Target Attack Radar System (JSTARS), Joint Tactical Radio System (JTRS), and the Joint Strike Fighter (JSF).

A successful joint PM must know enough about the requirements and cultures of each supported or participating Component to place a capable and supportable weapon system in the hands of users. He or she needs to have a firm grasp of what each Component and Service "brings to the table" in terms of mission, doctrine, and capability. In Joint

Publication 1, Secretary of State Colin Powell, when he was Chairman of the JCS, indicated, “Joint warfare is team warfare.” By analogy to the acquisition process, the joint PM must build a joint team whose members have detailed knowledge and insight into their own Component’s warfare capabilities and must be able to supervise an effective joint organization.

Some joint program staffs manage large Acquisition Category (ACAT) I or ACAT IA programs. These program offices have more senior-level oversight. Other smaller Joint Program Offices (JPOs) operate within the lead Service’s acquisition chain with less senior personnel. All joint programs have unique program challenges; some will be described later in this Handbook.

In all cases, the joint PM must understand the needs of the COCOMs and Component customers, as outlined in the capability documents from the JCIDS process, and establish a joint program structure that will develop and field a system to accommodate customer needs. This Handbook describes lessons learned regarding legal and regulatory requirements of joint programs and provides management advice designed to assist in the efficient management of joint programs.

## **Life Cycle Management**

Joint programs are managed within the defense acquisition management life cycle framework described in DoD Instruction 5000.2, *Operation of the Defense Acquisition System*. This framework contains decision points and phases of the life cycle to assist in the management of all acquisition programs. Joint PMs structure their program to best accomplish the objectives of the defense acquisition system: to acquire quality products that satisfy the warfighter’s needs with measurable improvements to mission capability and operational support, in a timely manner, and at a fair and reasonable price.

The details of the defense acquisition process will not be discussed in this publication. Readers should go to the Acquisition, Technology, and Logistics (AT&L) Knowledge Sharing System (AKSS) Web site at <http://akss.dau.mil> and refer to the many documents that describe

the acquisition process in detail. All of the documents referenced in this Handbook are posted to AKSS.

*Views of former joint PMs:*

- *Jointness may be defined as a single system that satisfies the needs of more than one Component.*
- *Never lose sight of who the customer is and what exactly is required to support the mission objective and requirements.*
- *Each military service has different terminology or “language.” The joint PM is required to comprehend what the military service “actually meant to say” vs. what the military service “actually said.”*

## **Variations of Joint Programs**

Joint program management may vary from a joint major defense acquisition program to simply one Component serving as a procuring agent for others.

A variety of joint program categories has evolved over the years to accommodate the needs of the Secretary of Defense, Chairman of the Joint Chiefs of Staff, and/or participating Components. For reference purposes, the different approaches are categorized and presented in Table 1-1 (on the following page). The categories range from a program that is basically a single-Component (or Service) program, with other Components indicating interest in using the end product (see S-1 in Table 1-1), to the multi-Service involvement of a fully integrated JPO (see S-5 in Table 1-1). Categories also include other varieties of management structures such as those coded M-1 through M-4.

The selected management approach should be based on considerations of how best to achieve the program’s goals. Approaches are not restricted to those cited in Table 1-1.

This Handbook will primarily address the issues involved in a fully integrated JPO, i.e., S-5. This category is considered the “model” JPO. Programs such as JSTARS, JTRS, and the JSF are in this category.

Nevertheless, the principles discussed herein also apply to other types and categories of joint programs as well.

**Table 1-1. Joint Program Categories and Characteristics**

<b>PROGRAM CATEGORY</b>	<b>Characteristics</b>
<b>S-1</b> Single-Component Manager (Executive Agent)	Single-Component program; interest from other Component(s) manifested by their consumption or use of end product; all program direction and funding has single source
<b>S-2</b> Single-Component Program Management Office (PMO) with POC	Single-Component program; interest from other Component(s) manifested by their designation of a Component Point of Contact (POC) for maintaining liaison
<b>S-3</b> Single-Component PMO with On-site Liaison	Single-Component program; interest from other Component(s) manifested by their assignment of a full-time liaison officer
<b>S-4</b> Single-Component PMO with Senior Representative	Single-Component program; representative(s) from other Component(s) assigned to PMO; all authority and responsibility to program manager stems from parent Component; no formal coordination of requirements, charter, etc.
<b>S-5</b> Fully Integrated Joint Program Office (JPO)	Multi-Component participation, integrated JPO, staffed by all participating Components, directed by program manager assigned by lead Component; participating Components may perform some program functions but on behalf of JPO—not for separate Component program. MODEL JPO
<b>M-1</b> Lead-Component-Coordinated Programs	Programs exist in more than one Component; one Component PMO provides coordination among all programs; executive authority does not reside with coordinating PMO
<b>M-2</b> Office of the Secretary of Defense (OSD)-Directed Program	More than one Component has requirement for the technology; a lead Component is not assigned; the objectives of the Components may not be the same; direction, coordination, and/or standardization are executed by the OSD, either directly or through a PMO established by and reporting directly to OSD
<b>M-3</b> Confederated Programs	More than one Component has at least one program in the generic technical area, the end products of which are used in allied but separate warfare areas; the PMOs characteristically share technical information and development data
<b>M-4</b> Single-Component Requirement—Other Component Tasking	Single-Component has specific requirement but acknowledges that another Component has preeminent capability or interest in execution of a part of the program objective; arranges for that segment to be executed by the other Component



# 2

## MANAGEMENT ARRANGEMENTS FOR JOINT PROGRAMS

This chapter provides guidance for implementing joint acquisition program management arrangements. It provides a framework within which joint programs can operate and serves as a guide to developing a Memorandum of Agreement (MOA) among Components upon initiating a joint program. Much of this guidance is derived from a previous Joint Logistics Commanders' policy document that is no longer in effect.

### **Joint Program Executive Office**

In the late 1980s, the function of the Program Executive Officer (PEO) was established to manage groups of related programs and to oversee Program Managers (PMs), who manage assigned programs. PEOs are usually general/flag officers or senior executive service civilians. Over the past 10 to 15 years, complex and costly joint programs generated a need for the formation of joint program executive offices from which both the functions of joint PM and PEO are managed. These joint programs usually have a variety of major participants in different military departments and/or international partners, e.g., the Joint Strike Fighter (JSF); the Chem-Bio Defense Program; and the Army's Command, Control, Communications—Tactical (C3T). The duties of the PEO in these cases would be similar to the joint PM, i.e., S-5 Category described in Chapter 1; however, the responsibilities would be much greater than those of the joint PM due to the complexity of the program.

### **Charters and Memorandums of Agreement**

Department of Defense Instruction (DoDI) 5000.2, *Operation of the Defense Acquisition System*, requires that each PM be provided a written charter of his or her authority, responsibility, and accountability

for accomplishing program objectives. This type of charter may be a one- or two-page certificate appointing the PM by name, and suitable for framing. It is not a detailed “program charter” or, in the case of a joint acquisition program, an MOA among DoD Components. A suggested format for an abbreviated “appointing-type” charter for the PM of a joint acquisition program is at Appendix B. Some DoD Components may prefer a detailed charter instead of an MOA—an example of that type of program charter is at Appendix D.

The guidance in this Handbook is based on a preference for both an “appointing-type” charter for the PM and for a detailed MOA. However, it would be simple enough to combine the two documents. If the MOA is signed at a high enough executive level and has detailed information on the PM’s authority, responsibility, and accountability, a separate “appointing-type” charter for the PM may not be necessary.

MOAs are the basis of a well-organized joint program. The MOA—and Joint Operating Procedures (JOPs) that accompany an MOA—define the ground rules among Components for management of a joint program. Early identification of joint Service opportunities ensures all players are brought in prior to the start of development. The MOA is the vehicle for accomplishing this coordination and provides the details necessary to carry out the decision to initiate a joint program. Some of the basic elements that are normally included in an MOA are: Purpose; Scope; Program/System Description; Organization; Roles, Responsibilities, and Authority; Coordination/Communications; Funding Authority; Arbitration of Disputes; Documentation; Public Affairs; Component Manning; and Review Procedures.

An example of an MOA for the Joint Air-To-Surface Standoff Missile (JASSM), a program assigned to the Air Force’s Joint Lethal Strike (JLS) program office, is shown in Appendix C.

## **Content of the Memorandum of Agreement**

The following paragraphs provide guidance on the content of key elements of an MOA. The reader should tailor/supplement this guidance as necessary.

## **Purpose**

Rationale for the MOA is described here. For example, "...this MOA will provide guidance, establish management functions, define authority and assign responsibility to participating Components."

## **Scope**

The MOA boundaries are identified in the Scope, i.e., application to a specific program and /or directly related projects. Lead and participating Components should also be described here.

## **Program Description**

The program description should be derived from the description provided in the Capabilities Development Document (CDD) described in Chapter 5. The Joint Capabilities Integration and Development System (JCIDS) process, mentioned earlier, is designed to provide the necessary oversight to ensure a balanced approach to systems development based on the needs of the joint warfighter. The CDD is a product of JCIDS.

## **Organization**

The Component designated as the lead will have the authority to manage the program under the policies, procedures, and organizational structures used by that Component. The joint PM, the joint Program Management Office (PMO), and, in turn, the functional elements of each participating Component will operate under the policies, procedures, data, standards, specifications, criteria, and financial accounting of the lead Component. Exceptions, as a general rule, will be limited to those where a prior mutual, documented agreement exists. This may require the participating Components to accept certain deviations from their policies and procedures so as to accommodate the assumption of full program/project responsibility by the lead Component. Demands for formal reporting as well as nonrecurring needs for information should be kept to a minimum.

## **Roles/Responsibilities/Authority**

### **The Lead Component:**

- Assign the joint PM.
- Establish an official manning document for the joint PMO that will incorporate the positions to be occupied by representatives of the participating Components, e.g., Department of the Army Table of Distribution and Allowances (TDA)/Department of the Navy Manpower Listing/ Department of the Air Force Unit Detail Listing (UDL). The manning document developed from a JOP on staffing may designate key positions (e.g., deputy PM(s) and chief engineer) for occupancy by a senior representative from each of the participating Components. The staffing of the PMO may also include liaison officers from each participating Component to handle the day-to-day interaction with each Component Acquisition Executive's (CAE) office, and the various commands to which the system will be fielded.
- Staff the PMO (with the exception of the positions identified on the manning document for occupancy by personnel to be provided by the participating Component) and integrate the participating Component personnel into the joint PMO.
- Be responsible for the administrative support of the joint PMO.
- Delineate functional tasks to be accomplished by all participants.

### **The Participating Component(s):**

- Assign personnel to the PMO to fill identified positions on the manning document and to assist the joint PM in satisfying the requirements of all participants. Numbers, qualifications, and specific duty assignments of personnel to be provided by each participating Component should be reflected in a staffing JOP.
- Provide travel funds and support necessary for the accomplishment of the responsibilities of their representatives in the management of the program, unless other agreements on funding these areas have been made with the joint PM.

- Accomplish program functional tasks as specifically assigned in the charter, in the Acquisition Strategy, and in JOPs, or as requested and accepted during the course of the program.

### **The Joint PM:**

- Satisfy the specific operational, support, and status reporting requirements of all participating Components.
- Be responsible for planning, controlling, coordinating, organizing, and directing the development, production, procurement, and financial management of the program.
- Establish control and responsibility for all program funding (exceptions should be outlined in a funding JOP), and review, on a continuing basis, the adequacy of resources assigned.
- Assure that planning is accomplished by the organizations responsible for the complementary functions of logistics support, personnel, training, operational testing, military construction and other facilities activation, or deployment.
- Refer to the appropriate authority those matters that require decisions by higher echelons. The following are examples of such items:
  - Deviations from the established lead Component policy except as specifically authorized by JOPs, or the MOA/charter.
  - Increases in funding of the program.
  - Changes to approved Acquisition Program Baseline threshold and objectives.
- Provide performance evaluations for deputy PMs and other subordinate managers (except in those cases where CAEs have agreed on an alternate evaluation process).

### **Participating Component Senior Representative(s):**

- Speak for their Component in all matters subject to the limitations prescribed by their CAE.
- Refer to their parent Component those matters the PM needs resolved that require decisions by the affected Component(s).

## **Coordination/Communications**

Where participating Components are affected, significant program action, contractual or otherwise, should not be taken by the PM without full consultation and coordination with the participating Components. All formal communications from the joint PMO to higher authority in either the lead or participating Components should be signed by the joint PM or a representative designated by the PM, such as a deputy. Substantive changes to an MOA, a charter, JOPs, or important program documentation, such as the acquisition strategy or the contract, should be negotiated with participating Components prior to making changes. No restrictions should be placed on direct two-way communications required for the prosecution of the program work effort, other than that required for security purposes.

## **Funding Authority/Responsibilities**

The lead Component should have responsibility and authority for overall budgeting, obligation, and expenditure of Research, Development, Test, and Evaluation (RDT&E) funding appropriated for program development. Participating Components should fund for unique requirements, including the development of kits to install a system in a Component's system. The participating Components should also fund for production of systems to meet their requirements. Detailed funding arrangements should be agreed to in a JOP.

## **Arbitration of Disputes**

Disagreements among Components that cannot be resolved at the PM level should be elevated to the PEO or CAE as appropriate. JOPs should provide guidance on dealing with areas that are most likely to result in disagreements: PMO staffing, program funding, key performance parameters and other major performance characteristics of the system under development, and others.

## **Documentation**

**Management for Joint Programs should be documented by:**

- An MOA signed by the appropriate senior acquisition leadership of each Component, normally the CAEs. The format for the MOA should generally follow the guidance in this chapter,

supplemented by other programmatic requirements as necessary. In the event that a detailed charter for the joint program is agreed to and signed by the senior acquisition leadership of the Components, an MOA may not be required

- The PM's charter may be nothing more than an appointing certificate signed by the lead and participating CAEs. Absent an MOA, or if the MOA lacks sufficient detail, the charter may expand on areas deemed necessary by the CAEs. An example of a "detailed" program charter is at Appendix D.
- Joint Operating Procedures (JOPs). These documents identify and describe detailed procedures and interaction necessary to carry out significant aspects of the program. Subjects for JOPs may include Systems Engineering, Personnel Staffing, Management Controls and Reporting, Financial Control, Test and Evaluation, Training, Logistics Support, Procurement, and Deployment. JOPs are developed and negotiated by the PM and the senior representative from each participating Component. A JOP format is suggested below. To ensure smooth internal operation of the joint PMO, JOPs should be initiated as soon as possible after promulgation of the MOA and/or charter.

**Note:** There are other administrative and programmatic documents that are required by DoDI 5000.2 for all programs. Additional information on some of these documents that have joint program implications is found in Chapter 3.

## **Public Affairs**

Guidance on coordination and dissemination of program information within DoD and to legislative bodies, industry, and the general public is presented here.

## **Component Manning**

Staffing by lead and participating Components is described in this part, including provisions for performance evaluation.

## **Review Procedures**

The period of time between reviews and the authority of MOA signatories to revise the document are prescribed.

## **Suggested Joint Operating Procedure (JOP) Format**

*Introduction:* Describe and briefly review the functional area of interest, including why the JOP is necessary. Briefly outline the overall requirement that needs fulfillment.

*Scope:* Outline the various phases of the program and tie down the overall limits of the functional area of interest in terms of time and any special provisions or limitations.

*References:* Include all applicable regulations, directives, etc., that are pertinent to the functional area of interest.

*Responsibilities:* Identify the relationships and responsible entities such as who has the overall management responsibility and who has the support responsibility. In addition, this paragraph should describe what the “product” or the effort should be.

*Procedures:* Define the work to be accomplished and indicate the main steps of action, including coordination, which are required to conduct the tasks involved properly in developing the functional area of interest.

*Approval:* Each JOP should be approved and signed by the PM and by the senior PMO representative from each participating Component.



# 3

## PROGRAM MANAGEMENT ISSUES IN A JOINT ENVIRONMENT

*View of a former joint PM:*

*Joint programs require more resources, people, and funding, to execute than a single-Service program. Joint PMs need to plan accordingly.*

### General

This chapter discusses some of the most important administrative, business, financial, and technical aspects of joint program management.

- Program Office Administration and Personnel
- Analysis of Alternatives (AoA)
- Cost Analysis Requirements Description (CARD)
- Program Funding
- Planning, Programming, Budgeting, and Execution (PPBE) Process
- Acquisition Program Baseline (APB)
- Program Protection and System Security
- Acquisition Plan (AP)
- Contracting
- Request for Proposal (RFP) Preparation
- Systems Engineering (SE)
- Threat Assessment

- Risk Management
- Logistics Support
- Integrated Process and Product Development (IPPD)
- Configuration Management (CM)
- Test and Evaluation (T&E)
- Political Dynamics

## **Program Office Administration and Personnel**

Administrative and personnel planning are important for joint programs. Joint Program Offices (JPOs) adhere to the lead Component's acquisition regulations and should use the lead Component's administrative procedures. The joint Program Manager (PM) must recognize that some key administrative matters, e.g., funding and personnel evaluations, must be prepared in accordance with participating Component standards. A deputy joint PM is normally selected from the most important participating Component(s). The deputy is crucial to building and sustaining relationships with the sister Component and in serving as an alter ego of the joint PM, especially when the PM is traveling. It should be noted that when more than one participating Component is involved, the program office may have a deputy PM from each. It must be clear which deputy is the second in command. The selection of key personnel, such as the logistics manager and key system deputy managers (e.g., Deputy PM for Avionics), requires a sensitivity toward other Components' career paths and rating procedures. It is important to review the personnel briefs of key personnel who are nominated for program roles.

Matrix management is often an effective way to manage joint programs. The lead Component usually provides the greatest amount of engineering staff, with participating Components performing discrete tasks or providing integrated personnel.

The larger the JPO staff, the more difficult and complex it is to provide administrative support and services to that staff, and the more difficult it is to sustain communications among staff members. In general, if there are "n" people in a program, the potential number of pair-wise

channels is  $n(n-1)/2$ . The point is that larger teams and program offices have a greater chance of communications breakdown, so lean staffing should be sought as a means of enhancing communications across the project. This is especially important for joint government program offices, which are in the business of managing commercial (mainly defense) firms and contracts in developing and acquiring products and systems for the warfighter. A “rule of thumb” for the size of an efficient government program office managing a joint Major Defense Acquisition Program (MDAP) (Acquisition Category (ACAT) I) is about 30 to 50 people. The size of the program office staff is proportionately smaller as the ACAT level of a program goes from ACAT I to III.

#### *Views of former joint PMs:*

- *Always split work with the deputy PM. The requirement may be based on expertise, but cross talk is important for program performance.*
- *Joint programs should have a short but concise training program for personnel newly assigned to the program.*

### **Analysis of Alternatives (AoA)**

The lead Component head, or designated representative, is responsible for the AoA. The responsibility for the AoA cannot be assigned to the joint PM. The AoA (mandatory for ACAT I and IA programs) is prepared by the lead Component during concept refinement and considered at decision reviews beginning at Milestone A. If the AoA is supplemented by other participants, the lead Component must ensure that assumptions and methodologies are consistent. Joint systems are likely to be used in different warfighting environments, and the AoA must consider all of the most likely scenarios. Large joint programs will likely have modeling support to perform this analysis. Former joint PMs recommend several different models to improve and verify analysis.

### **Cost Analysis Requirements Description (CARD)**

The CARD is prepared by the lead Component with inputs from participants. The CARD establishes a system description for cost estimating purposes. For joint programs, the CARD must include common salient system features as agreed to by the participants and

Component-unique requirements. The CARD is provided to the OSD Cost Analysis Improvement Group (CAIG).

## Program Funding

The lead Component funds Research, Development, Test, and Evaluation (RDT&E) for all program aspects that satisfy common requirements. This includes management and control of common RDT&E funds for the assigned joint program. Procurement is funded by the lead and participating Components in proportion to the number of items being bought by each Component. The lead Component must have total Research and Development (R&D) program funding authority. Joint PMs need to ensure that:

- Participating Components fund Component-unique improvements, integration, and the resulting procurements.
- MOAs and/or charters cover funding responsibilities and authority.

DoDI 5000.2 provides mandatory policy for withdrawing from joint programs:

*The DoD Components shall not terminate or substantially reduce participation in joint ACAT ID programs without Requirements Authority review and USD(AT&L) approval; or in joint ACAT IA programs without Requirements Authority review and ASD(C3I) [Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)] approval. The USD(AT&L) or the ASD(C3I) may require a DoD Component to continue some or all funding, as necessary, to sustain the joint program in an efficient manner, despite approving their request to terminate or reduce participation. Substantial reduction is defined as a funding or quantity decrease of 50 percent or more in the total funding or quantities in the latest President's Budget for that portion of the joint program funded by the DoD Component seeking the termination or reduced participation. [NOTE: ASD(C3I) is now ASD (Networks and Information Integration), ASD(NII).]*

The lead Component assesses the impact of the participating Component withdrawing or substantially reducing participation. The Joint Requirements Oversight Council (JROC) and Defense Acquisition Board (DAB) or the Overarching Integrated Product Team (OIPT) review this analysis and make recommendations. The USD(AT&L) makes the final determination on whether the withdrawing Component may drop the program or substantially reduce participation and whether the withdrawing Component will be liable for any continuing funding costs. The withdrawing Component may not reduce or eliminate funding prior to the USD(AT&L)'s final decision. Similar procedures are used for ACAT II and III programs, with the lead Component making an initial determination of whether the withdrawing Component will have continuing financial obligations for the program. For ACAT II and III programs, withdrawal decisions by the head of the lead Component or CAE may be appealed to the USD(AT&L).

Any defaults or withdrawals from a program may have to be paid for by the Component that bows out. A withdrawing Component would continue to pay for the program through the next milestone or PPBE Process cycle.

## **Planning, Programming, Budgeting, and Execution (PPBE) Process**

In 2003, the DoD switched from an annual Planning, Programming, and Budgeting System (PPBS) to a biannual process with emphasis on a tighter link to resource-constrained planning and on execution reviews of ongoing programs. PPBE does not provide any relief from congressional annual funding requirements and color of money constraints. Additional information on PPBE can be found at <http://dod5000.dau.mil>.

*Views of former joint PMs:*

- *Understanding the “color” of money is a necessity. The PM needs to understand where, when, and how the money comes. Knowing the (color) differences of RDT&E, procurement, and O&M [Operations and Maintenance] dollars is an absolute.*

- *Joint training saves dollars and adds to trade-offs and assistance for operational users. Joint logistics (one depot) helps monies pass through various checkpoints in the planning, programming, budgeting, and execution process. Any “jointness” that works needs to be emphasized and reemphasized to Congressional staffers and DoD agencies—saves the program, sometimes.*

## Acquisition Program Baseline (APB)

The APB is initially developed by the PM for the Milestone B decision and is managed through the Consolidated Acquisition Reporting System (CARS). The baseline is updated before each Milestone. APB formats—and other DoD report formats—are described at: <http://www.acq.osd.mil/cars>. The joint PM submits the baseline through the decision chain to the Milestone Decision Authority (MDA).

The APB contains key cost, schedule, and performance parameters for the program. ACAT I programs have the most formal deviation reporting requirements, but all programs will require program baseline deviation reporting. Joint program baseline issues have involved a lack of understanding of Key Performance Parameters (KPPs) and their significance.

KPPs are copied verbatim to the APB from the Capabilities Development Document (CDD) and the Capabilities Production Document (CPD). These documents reflect agreements on the KPPs from all Components participating in the joint program. Unfortunately, the “user(s)” are not required to sign the baseline, so “requirements creep” tends to be even more prevalent in a joint program. At least one joint program has established a flag/general officer panel within the lead Component’s headquarters operations element to scrub every change (not just the KPPs) to a CDD/CPD to control requirements creep—frequently an affordability issue.

*View of a former joint PM:*

*Every event in a joint program takes longer by at least one third, and that extra time needs to be included in the program schedule. Extra time for coordination is necessary to keep everyone in line, informed, and in agreement.*

## Program Protection and System Security

Joint programs must have an effective security plan. The plan should protect key sensitive aspects of the program from espionage threats and include government and industry program participants. The plan should discuss Operational Security (OPSEC) issues, especially if the program is sensitive. Security is important to program execution because delays in security clearances and plant accreditations can adversely affect scheduling, especially in special access programs. Information security is becoming more of an issue. Communications and computer systems must be accredited for various levels of classification, including special access levels. Delays in accreditation can adversely affect the program if the joint PM does not plan for system certifications. Additionally, Communications Security (COMSEC) equipment is increasingly embedded in equipment at the design stage, requiring early planning for COMSEC.

### *Views of former joint PMs:*

- *Security issues and special access requirements need to be addressed in Memorandums of Agreement (MOAs). Identify constraints and responsibilities of Components/Services and contractors. Sometimes lead Component regulations are followed; if this is the case, ensure all Components/Services associated with the program understand primary guidance.*
- *Special access security is a major issue that needs to be addressed.*

## Acquisition Plan (AP)

Joint programs require special attention to multi-Service funding requirements and to acquiring the right mix of joint expertise for the source selection process. The AP must specify appropriate joint funding commitments, including the type of monies required. Joint users and Component logisticians for systems should be represented on the Source Selection Advisory Council (SSAC), the Source Selection Evaluation Board (SSEB), and in Statements of Work (SOW) reviews and Contract Data Requirements List (CDRL) calls.

## Contracting—Planning and Management

Contracting is controlled by the law and the Federal Acquisition Regulation (FAR). Accordingly, the bulk of contracting is standard across the Components in its broad framework, but there are differences in Component proposal evaluation procedures and other operating procedures. Since joint programs may have more requirements changes than other programs, a good relationship with contracting is important to translate objectives into contract terms and conditions. A typical activity of contracting is the Acquisition Plan, which contains a description of the contracting strategy for the program with emphasis on the types and numbers of contracts to be awarded in an upcoming phase.

### *Views of former joint PMs:*

- *Contracting personnel must be brought in early to help with joint program efforts. Contracting officials must be aware of operational requirements. They cannot write contracts on “floating” requirements. Contracting personnel must be visionaries and have perspectives on creative contracting.*
- *Contracting is an area that is of great importance to the joint PM. Contracting may provide a view on acquisition and business strategies, associations with contractors (what you can say and do), and applications to the Contracting Officers Representative. A problem for the joint PM is the lack of multi-Service contracting procedures.*

## Request for Proposal (RFP) Preparation

Preparing an RFP for joint programs is similar to single-Service RFP development. However, joint program RFPs require more careful coordination of evaluation criteria and other key factors. Joint programs should be structured to maintain competition throughout development and production. Joint PMs must also understand the significance of RFP language relating technical and cost evaluations. The more the draft RFP language emphasizes technical merit over cost, the greater the chances of the RFP driving the program to the



most costly solution in a technical area. Nevertheless, identified high-risk areas may still warrant greater emphasis on technical merit over cost.

*Views of former joint PMs:*

- *Successful programs have a common purpose from the beginning. This saves time, money, and precludes “gold plating.” Program requirements should be thoroughly addressed with respect to objectives and technical feasibility.*
- *Bring users and contracting personnel in early to review concept formulation.*

## **Systems Engineering (SE)**

All programs responding to a capabilities or requirements document, regardless of acquisition category, must apply a robust SE approach that balances total system performance and total ownership costs. Programs are required to develop an SE Plan (SEP) for MDA approval at each milestone review. The SEP needs to be integrated with the acquisition strategy; this means that the SEP and the acquisition strategy should be consistent, executable and in sync. The SEP should describe the program’s overall technical approach, including processes, resources, metrics, and applicable performance incentives. The plan should also detail the timing, conduct, and success criteria of technical reviews.

As part of the SE process, interrelationships, e.g., sensor-to-ground station and munitions-to-multiple Component platforms, can be analyzed by operational research techniques to develop optimum solutions. When combined with analysis of KPPs and operational testing, SE is critical for a joint PM to effectively limit risk in a very complex technical undertaking.

*View of a former joint PM:*

*Military services have to establish requirements, priorities, and technical parameters at program implementation. Before each acquisition phase, define requirements and redefine thresholds and objectives.*

## **Threat Assessment**

The Component intelligence command or agency produces the system threat assessment. The system threat assessment contains a system-specific threat, e.g., hostile air defenses, an analysis of technically feasible weapons that could affect the proposed system, and critical intelligence parameters that, if changed, could affect the weapon system. The Director, Defense Intelligence Agency (DIA) advises the DAB and JROC and validates threats developed by the Components for DAB review. Joint PMs must be particularly sensitive to the warfighting environments within which their system will operate. Weapons systems fielded to different Components could be subjected to significantly different threats.

## **Risk Management**

In many ways, program management is risk management, and joint programs add to the number of risks facing the program. By definition, the joint PM has multiple users, requirements, and funding sources. These customers can adversely affect the health of the program by requirements and funding variations and by raising political issues. A common issue is the degree and effectiveness of interoperability of the new system with participating Component systems. Accordingly, the joint PM should be careful to monitor technical risks in order to help maintain program consensus and to ensure proper interoperability.

Risk control is an active way to handle program risk. Multiple development efforts and early prototyping are methods of minimizing risk in programs. Another way is to include a low-risk design backup in case the higher risk primary approach is not feasible. Evolutionary acquisition and other incremental development techniques can split development problems into small increments and defer large risks. The use of standard software and software reuse can also minimize software and program development risks. Finally, when a parameter such as weight or range is vital to system performance, it may be appropriate to use a board or team that has representatives from all affected technical functions to closely monitor its progress. This may be chaired by the joint PM. It provides management focus by staffing all changes that affect that parameter. The board/team can also relate

logistics and other functions to the KPPs to improve life cycle system performance.

## Logistics Support

Logistics capabilities must support future joint operations that are continuous and distributed across the full spectrum of military operations. When planned properly, joint systems inherently help deliver joint and integrated logistics capabilities.

Logistics transformation principles expect the joint PM to focus a system's support requirements on the precise application of logistics—reduced footprint, faster responsiveness, and improved asset visibility. The joint PM should rely on government-industry partnerships that provide rapid distribution of tailored support packages and less forward support. Further, the joint PM must understand the lead Component and participating Components' logistics procedures to field a sustainable system. Developing performance-based logistics agreements with Component logistics chiefs and industrial partners can effectively direct a joint program's logistics objectives and strategies.

Within 90 days of awarding the System Development and Demonstration (SDD) contract, the joint PM must ensure that the lead Component reports to its senior logistics authority<sup>3</sup> and initiates work on an inter-service logistics support agreement. This agreement is completed prior to Milestone C. If a program fails to meet this 90-day milestone, a program review will be chaired by the logistics head of the lead Service. This review focuses on removing impediments to inter-Service logistics support through a time-phased action plan.

### *Views of former joint PMs:*

- *Vulnerability lies in the equipment chain, from manufacturing to deployment, and other similarly interdependent systems, such as fuel and pilot training...logistics might well be considered the real center of gravity.*

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<sup>3</sup> For example, the joint program manager would report to his/her senior logistics authority, e.g., Commander, Air Force Materiel Command.

- *Joint logistics (one depot) helps monies pass through various checkpoints in the PPBE Process.*

## **Integrated Product and Process Development (IPPD)**

The joint PM should employ the concept of IPPD throughout the program design, development, production and fielding processes. The use of Integrated Product Teams (IPTs) is key to the successful employment of IPPD. The IPPD management process integrates all activities from product concept through production and fielding. Multidisciplinary IPTs are used to simultaneously optimize the product and its manufacturing and supportability components to meet cost and performance objectives.

*View of a former joint PM:*

*Integrated Product Teams (with contractor and government personnel) were useful and necessary in keeping the program together and on track. Teams are identified to handle issues, i.e., security and maintenance. The contractor identifies teams and the executive board monitors overall management and timeliness.*

## **Configuration Management (CM)**

Always challenging, CM can be more difficult in a joint program. The objective is to control changes to a configuration item (e.g., aircraft system, armored vehicle system, etc.) and to record and report change processing and implementation status of the change. The sense of former joint PMs was that a good handle on CM indicates effective program control.

*View of a former joint PM:*

*When you have good CM, you have firm control of the program. To get a background on joint program management (issues), review reports from the Department of Defense Inspector General and Government Accounting Office representatives.*

## Test and Evaluation

The OSD Director, Operational Test and Evaluation (DOT&E) and the Deputy Director, Development Test and Evaluation, in the Defense Systems Office of USD(AT&L), must provide written approval for the testing and evaluation adequacy of most joint programs.<sup>4</sup> A combined Developmental Test/Operational Test (DT/OT) approach is encouraged to achieve time and cost savings. The combined approach must not compromise either DT or OT. Joint users must be involved in OTs to further military knowledge and tactics in areas like Short Takeoff or Landing (STOL) techniques, low-observable systems, and other new warfighting technologies. Separate testing provisions may be allowed for Component-unique systems or modifications. Such separate testing must be paid for by the Component with the unique requirement.

A final independent phase of OT and evaluation is required for ACAT I and II programs (and other programs on the OSD T&E Oversight List) prior to the Full-Rate Production Decision Review (FRPDR). A lead organization must be designated to coordinate all joint testing involving more than one military department or Defense Agency. Test and Evaluation (T&E) programs must be structured by the joint program office to integrate all Developmental Test and Evaluation (DT&E), Operational Test and Evaluation (OT&E), Live-Fire Test and Evaluation (LFT&E), and Modeling and Simulation (M&S) activities conducted by different agencies. T&E objectives for each phase of development must be designed to allow assessment of system performance appropriate to each phase and milestone.

## Test and Evaluation Master Plan (TEMP)

DoDI 5000.2 and the *Interim Defense Acquisition Guidebook (IDAG)* describe TEMPs. Joint programs require a single TEMP. Therefore, the joint PM must broker a coordinated TEMP with the participants for DT and OT&E. The DOT&E and the USD(AT&L) are the approval authorities for TEMPs of programs listed on the OSD T&E Oversight List.

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<sup>4</sup> DOT&E and the Deputy Director, Development Test and Evaluation, issue an annual OSD T&E Oversight List of programs subject to OSD T&E oversight and review. Typically, all ACAT I, IA, and II programs, as well as many ACAT III programs, are on this List.

## **Political Dynamics**

As explained in Chapter 1, the definition of a joint program includes multiple users. These users and their constituencies will exert pressure on the joint PM through changes to capability documents and fiscal decisions. The joint PM needs to understand the concerns of users and Component proponents, accommodate their needs in the program to the extent that he or she can, or clearly explain real technical and fiscal limitations. This process is complicated by cultural differences in Component doctrine, jargon, and planning. Furthermore, the joint PM must always be aware that senior Defense officials and the Congress may become involved in very large or well-publicized joint programs.

# 4

## POLICY AND OVERSIGHT IMPLICATIONS FOR JOINT PROGRAMS

### General

The Department of Defense Directive (DoDD) 5000.1 and Department of Defense Instruction (DoDI) 5000.2 describe broad management principles that are applicable to **all** DoD acquisition programs, including joint acquisitions. The *Interim Defense Acquisition Guidebook (IDAG)* describes operating procedures that are discretionary (for guidance only) for all acquisition programs. This chapter highlights some policy areas with joint emphasis and the management oversight and review structure for joint programs.

The following laws and regulations are emphasized for joint programs:

- **The Law:**

- The DoD Reorganization Act of 1986 (Goldwater-Nichols), increased emphasis on jointness and expanded the authority of the combatant commanders.
- Section 2308, Title 10, United States Code, describes terms and conditions for Component withdrawal from joint programs.

- **Regulations:**

- DoDD 5000.1, *The Defense Acquisition System*, 12 May 2003, the broad policy directive for defense acquisition.
- DoDI 5000.2, *Operation of the Defense Acquisition System*, 12 May 2003, which implements the DoDD 5000.1 policy with processes and procedures.

- CJCSI 3170.01D, 12 March 2004, *Joint Capabilities Integration and Development System*, provides policy for developing warfighting capability needs.
- CJCSI 6212.01C, 20 November 2003, *Interoperability and Supportability of Information Technology and National Security Systems*, contains policies and procedures for interoperability requirements and supportability certification and validation.

## Oversight and Review

### Acquisition Categories (ACATs)

DoDI 5000.2 establishes ACATs to designate the level of program oversight and review. See DoDI 5000.2 for dollar thresholds for ACAT I, IA, and II programs.

- ACAT I programs are categorized as either ACAT ID (Defense Acquisition Board (DAB) oversight) or ACAT IC (Component oversight).
- ACAT IA programs are Major Automated Information System (MAIS) acquisitions. ACAT IA programs are categorized as either ACAT IAM (Information Technology Acquisition Board oversight) or ACAT IC (Component oversight).
- ACAT II<sup>5</sup> programs are defined as those acquisition programs that do not meet the criteria for an ACAT I program but do meet the criteria for a major system. Due to relatively low dollar threshold values, there are no ACAT II automated information systems programs.
- ACAT III programs are managed at the Component level and defined as those acquisition programs that do not meet the criteria for ACAT I, IA, or II.
- The Navy and Marine Corps also have ACAT IV programs (see Secretary of the Navy Instruction (SECNAVINST) 5000.2\_, *Implementation of Mandatory Procedures for Major*

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<sup>5</sup>ACAT II does not apply to automated information system acquisition programs.



*and Non-Major Defense Acquisition Programs and Major and Non-Major Information Technology Acquisition Programs).*

### **Joint Program Oversight Organizations**

Joint PMs supervising an ACAT ID or IAM program are concerned with the following personnel and organizations:

- **Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L))** serves as the Defense Acquisition Executive and has overall responsibility for DoD acquisition policy, chairs the DAB, and makes milestone decisions on ACAT ID programs.
- **The Assistant Secretary of Defense for Networks and Information Integration (ASD(NII))** serves as the Chief Information Officer (CIO) for DoD, chairs the Information Technology Acquisition Board (ITAB), and makes milestone decisions on ACAT IAM programs.
- **The Under Secretary of the Air Force** is the DoD Space Acquisition Executive, has overall responsibility for space systems acquisition policy, chairs the Defense Space Acquisition Board (DSAB), and makes milestone decisions on ACAT I space programs.
- **The Component Acquisition Executives (CAEs)** include the Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)); the Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN(RDA)) (supports Navy Department—Navy and Marine Corps); and the Assistant Secretary of the Air Force for Acquisition (ASAF(AQ)). The Director of the Missile Defense Agency (MDA) is also an Acquisition Executive (AE); however, all MDA programs are reviewed by the DAB and the USD(AT&L) is the MDA. The Special Operations Command (SOCOM) also has an AE; that AE manages ACAT II and III programs with coordination interface with the Office

of the Secretary of Defense (OSD) or Component-level staffs.

- **The Joint Requirements Oversight Council (JROC)** reviews ACAT ID and IAM programs before each milestone DAB review with emphasis on requirements and performance baseline issues. The JROC is chaired by the Vice Chairman of the Joint Chiefs of Staff (VCJCS) and includes the Vice Chief of Staff of the Army; Vice Chief of Naval Operations (VCNO); Assistant Commandant, U.S. Marine Corps; and Vice Chief of Staff of the Air Force.
- **DAB/ITAB Overarching Integrated Product Teams (OIPTs):** After Component review and JROC validation, ACAT ID and IAM programs are forwarded to an OIPT. Figure 4-1 illustrates the OIPT's responsibility for making a recommendation to the DAB or to the ITAB about a program's readiness to proceed to the next phase of the acquisition life cycle. Typical issues include operational effectiveness; program cost growth and delays; failure to meet technical thresholds; logistics or other supportability problems; threat assessment changes; test and evaluation issues; cooperative development or joint Component concerns; and manpower availability. If there are no issues, the program may not be required to go before a formal DAB. The USD(AT&L) has the option of signing the Acquisition Decision Memorandum (ADM) without going to a full DAB.
  - **DAB:** After the OIPT, the DAB reviews the program. The DAB is chaired by the USD(AT&L) and includes senior OSD and Component representatives. The VCJCS is the Vice Chair of the DAB. The USD(AT&L) will issue a go or no-go decision, documented in an ADM.
  - **ITAB:** The ITAB is the senior DoD Automated Information System (AIS) acquisition review board for ACAT IAM programs, chaired by the ASD(NII). The ITAB advises the ASD(NII) on major decisions on individual MAIS acquisition programs, specifically, and AIS acquisition policies

and procedures, generally. The ASD(NII) signs the ADM for ACAT IAM programs.

- **OIPTs** are formed to provide assistance to the DAB and ITAB as a program proceeds through its acquisition life cycle. The OIPT for ACAT ID weapon system programs is led by the Director of Defense Systems—within the Office of the USD(AT&L). The ASD(NII) designates the OIPT leader for each ACAT IAM program. The OIPTs are composed of the PM, Program Executive Officer (PEO), Component staff, joint staff, USD(AT&L) staff, and the OSD staff principals or their representatives involved in oversight and review of a particular ACAT ID or IAM program.
- **Defense Space Acquisition Board (DSAB):** The Under Secretary of the Air Force convenes a DSAB at each space program key decision point to decide whether or not to proceed into the next acquisition phase. The VCJCS is the cochair of the DSAB.
- **Cost Analysis Improvement Group (CAIG):** This OSD-level group, within the Office of the Director, Program Analysis and Evaluation, is responsible for independent cost reviews. ACAT I program office and Component cost analysis and life cycle cost estimates must be provided to the CAIG no later than 21 days in advance of OIPT reviews.
- **PEO:** Joint PMs are generally supervised by a PEO within the lead Component. The PEO has responsibilities for oversight of programs with a common nature (e.g., aircraft programs and tactical missile programs) and may exercise oversight of more than one joint program. The PEO can support the joint PM by interceding to resolve issues within lead and participant budget staffs, procurement commands, and senior Washington-area personnel such as those in the intelligence community or OSD.

A primary concern of an ACAT ID and IAM joint PM is the time management of interfacing with oversight organizations in preparing for milestone decision reviews. Prior to reviews, PMs brief the using commands; affected Component logistics organizations; key Component acquisition officials, such as the Component PEO and CAE; and other affected organizations.

The oversight and review structure for ACAT ID weapons systems and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems (also called National Security Information Technology (IT) systems) and for ACAT IAM AISs is shown in Figure 4.1.

*Views of former joint PMs:*

- *The joint PM must learn perseverance.*
- *When communicating with DoD agencies and the OSD, the PM must rely on continuous dialogue to keep them up to speed on program status and associated problem areas. In the long run, OSD may prove to be of assistance in keeping the program funded or to help resolve problem areas.*

### **Information Requirements for Decision Reviews**

Throughout the acquisition life cycle, the joint PM must comply with a number of requirements to provide program information to the MDA. Information/documentation for decision reviews is outlined in DoDI 5000.2. Because of the need to coordinate with multiple Components, it often takes much longer for a joint program than for a single Component program to generate program information. Consequently, the joint PM needs to assess the program office's information requirements at an early stage and allow sufficient time not only for developing the information but also for coordinating with participating Components.

The joint PM must also be aware of any unique information requirements of participating Components. For example, the Army Capability Development Documents (CDD) also contain the following

appendices: System Training Plan, Operational Mode Summary/Mission Profile, and Basis of Issue Guidance. Information provided in these appendices must be made available to joint PMs for programs in which the Army is the lead or a participating Component.

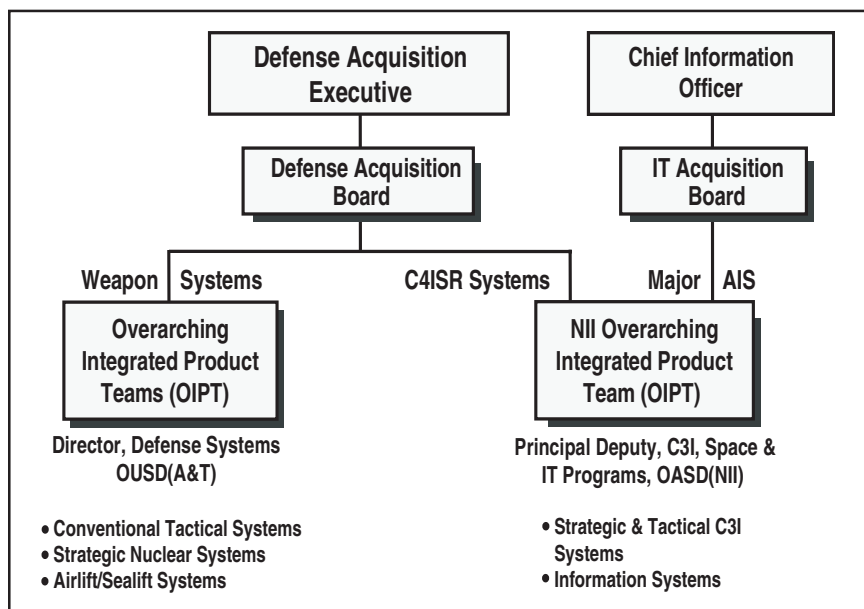


Figure 4-1. Oversight and Review

### Single Document for Milestone Decision Reviews

PMs may submit mandatory information as stand-alone documents or combined into a single document. If stand-alone documents are used, they must not contain redundant information in each document. The Air Force uses a single document called a Single Acquisition Management Plan (SAMP). The Army has a similar plan called a Modified Integrated Program Summary (MIPS), and the Navy and Marine Corps have a Navy Master Acquisition Program Plan (MAPP).

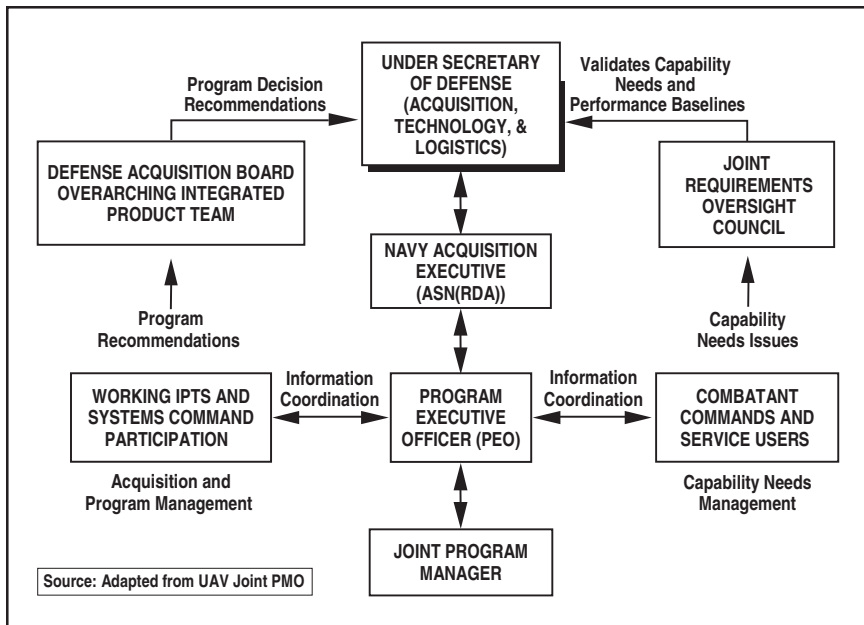


Figure 4-2. Acquisition Management Reporting Chain

## Management/Reporting Chains

The programmatic chain-of-authority for joint programs runs from the USD(AT&L) (the Defense Acquisition Executive) through the lead CAE and full-time PEOs to the individual joint program managers. Figure 4-2 presents a sample streamlined reporting structure.

Some joint programs may be structured with the joint PM reporting directly to a CAE.

The important point here is that the joint PM **must be the central manager for all of the participating Components**. Since the joint PM is responsible for the entire program across all Components, a joint program Memorandum of Agreement (MOA) needs to be established describing the PM's responsibility and authority and the relationship among lead and participating Components. Clear lines of authority and communication, along with a single acquisition executive at any one time in the program, are some of the key aspects of this relationship.

## Component and Service Relationships

*View of a former joint PM:*

*Joint PMs should recognize that their program is a “shotgun marriage” and that there will be activities in the non-lead Service to offer alternatives to the joint program*

Joint PMs must coordinate fiscal, logistics, and other matters across one or more Component staffs and with joint users. To coordinate effectively, the joint PM must understand the nature of the joint requirement. Furthermore, the joint PM faces a variety of users requiring special attention. For example, an Army user may be more concerned about target vehicle identification and issues within a sensor system (e.g., armored personnel carrier, tank, or type of tank) than an Air Force surveillance system PM who focuses on airframe and sensor requirements. The Navy and Marines often have special environmental protection requirements for equipment used or stored aboard ships. Even equipment rack size can be a factor for supportability. Service and Component-specific use of technical jargon; informal Component networks; and unique requirements, such as in the special operations area, require a coordinated effort by joint PMs.

One Major Defense Acquisition Program (MDAP), the Joint Strike Fighter (JSF), was directed to use a special reporting relationship to help ensure balanced recognition of the unique requirements for warfighting capability of the major participants in the program. The JSF Program Director (called a PEO because of the general/flag rank of the position) rotates between the Air Force and the Navy. When the PEO comes from the Navy, the reporting chain is to the Air Force Acquisition Executive; when the PEO comes from the Air Force, the reporting line is to the Navy Acquisition Executive.

To summarize, the joint PM:

- Maintains current program documentation,
- Manages the flow of milestone review and periodic reporting through the lead DoD Service acquisition chain,
- Manages the common Research, Development, Test, and Evaluation (RDT&E) funds for assigned joint programs, and

- Coordinates across Component acquisition commands and processes.

*Views of former joint PMs:*

- *Develop quarterly briefings for participants' staffs to keep them informed on program status and to eliminate surprises.*
- *Ensure that the lead Component develops the basic "system." Any modifications added should be tested by the lead Service for program compliance before implementing them into the mainstream.*



# 5

## DETERMINING JOINT MILITARY CAPABILITY NEEDS

### General

This chapter will provide a very brief overview of the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01D, *Joint Capabilities Integration and Development System (JCIDS)*; its companion manual, Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3170.01A, *Operation of the Joint Capabilities Integration and Development System (JCIDS)*; and the interoperability requirements of CJCSI 6212.01C, *Interoperability of Information Technology (IT) and National Security Systems (NSS)*. For details on the policies and procedures for identifying, assessing, and prioritizing joint military capability needs and ensuring interoperability, refer to these three documents. Joint programs must also be aware of the capabilities determination processes used by the lead Component and participating Components. Figure 5-1 shows the JCIDS document approval process.

#### *Views of former joint PMs:*

- *A major cost driver is the inability to make decisions on joint requirements.*
- *Contract problems can be traced back to technical issues and related to the ability to meet the requirements levied upon the system. The joint PM must validate the requirements on merit, with a value-added perspective.*
- *In development of the Capability Development Document, 50 percent of the time is spent with users discussing trade-offs.*

## The Sponsor

In the JCIDS, the sponsor is the DoD Component responsible for all common documentation, periodic reporting, and funding actions required to support the capabilities development and acquisition process for a specific capability proposal. The Training and Doctrine Command in the Army, the Center for Naval Analysis (CNA) and/or the Office of the Chief of Naval Operations (CNO) staff in the Navy, the Marine Corps Combat Developments Command (CDC), and the operational commands (e.g., Air Combat Command or Air Mobility Command), supported by the Office of Aerospace Studies in the Air

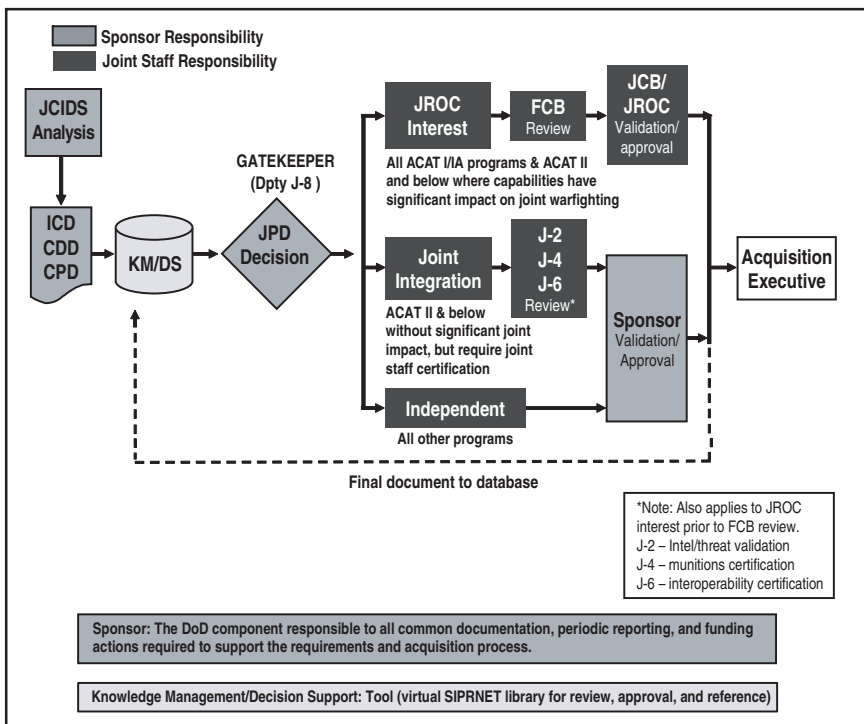


Figure 5-1. JCIDS Document Flow

Force, are typical sponsor/Component representatives of JCIDS analysis. The joint PM must maintain a close and continuous relationship with the command/agency responsible for the capability needs documentation for the program.

The development of the JCIDS documents shown in Figure 5-1 are the result of detailed analysis of operational tasks required to accomplish military objectives, the ability of the current and programmed joint capabilities to accomplish the required tasks, and an assessment of Doctrine, Training, Materiel, Leadership, Personnel and Facilities (DOTMLPF) to determine the right approach to solve warfighting capability gaps. This process is explained in detail in CJCSI 3170.01D and CJCSM 3170.01A. The sponsor conducts the JCIDS analysis. If the analysis indicates a materiel solution is required, an Initial Capabilities Document (ICD) is written. The ICD is the first of three capability documents that will drive the joint program:

- Initial Capabilities Document (ICD). The ICD replaced the Mission Need Statement (MNS). The ICD documents the need for a materiel approach to a specific capability gap derived from an initial analysis of materiel approaches executed by the operational user and, as required, an independent analysis of materiel alternatives. The ICD is due at the Concept Decision and at Milestone A.
- Capability Development Document (CDD). The CDD replaced the Operational Requirements Document. It is the document that captures the information necessary to develop a proposed program(s), normally using an evolutionary acquisition strategy. The CDD outlines an affordable increment of militarily useful, logistically supportable, and technically mature capability.
- Capability Production Document (CPD). The CPD is developed during the System Development and Demonstration (SDD) Phase. It is a follow-on to the CDD and may contain refined performance thresholds for the CDD based on lessons learned during the SDD Phase.

## Interoperability of IT and NSS<sup>6</sup>

Department of Defense Directive (DoDD) 5000.1 states that, “Systems, units, and forces shall be able to provide and accept data, information,

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<sup>6</sup> For more information on interoperability, see DoD Global Information Grid (GIG) Architectures Web site at URL <https://disain.disa.mil/ncow.html>. This Web site hosts the GIG Architectures and the Net-Centric Operations and Warfare Reference Model (NCOW RM) as well as supporting documentation.

materiel, and services to and from other systems, units, and forces and shall effectively interoperate with other U.S. Forces and coalition partners. Joint concepts and integrated architectures shall be used to characterize these interrelationships.” The major focus on interoperability in CJCSI 3170.01D and CJCSI 6212.01C is for the interoperability and supportability of IT and NSS. The following summarize key aspects of this interoperability policy:

## **Global Information Grid (GIG)**

The GIG is a globally interconnected, end-to-end set of information capabilities associated processes and personnel for collecting, processing, storing, disseminating, and managing information on demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services and other associated services necessary to achieve information superiority. The GIG supports all DoD, NSS, and related Intelligence Community missions and functions.

## **Information Exchange Requirements (IERs)**

IERs characterize the information exchanges to be performed by the proposed system(s). For CDDs, top-level IERs are defined as those information exchanges that are among systems of combatant command/Service/agency, allied, and coalition partners. For CPDs, top-level IERS are defined as those information exchanges that are external to the system (i.e., with other combatant commands/Services/ agencies, allied and coalition systems). IERs identify who exchanges what information with whom, why the information is necessary, and how the information exchange must occur. Top-level IERs identify warfighter information used in support of a particular mission-related task and exchanged among at least two operational systems supporting a joint or combined mission.

## **Integrated Architecture**

An integrated architecture is an architecture consisting of multiple views or perspectives (Operational View (OV), Systems View (SV), and Technical Standards View (TV)) that facilitate integration and promote interoperability across family of systems and system of systems and compatibility among related architectures. The DoD Architecture

Framework (DoDAF) Version 1.0 provides guidance for developing integrated architectures. The linkages among the views of an integrated architecture are illustrated in Figure 5-2.

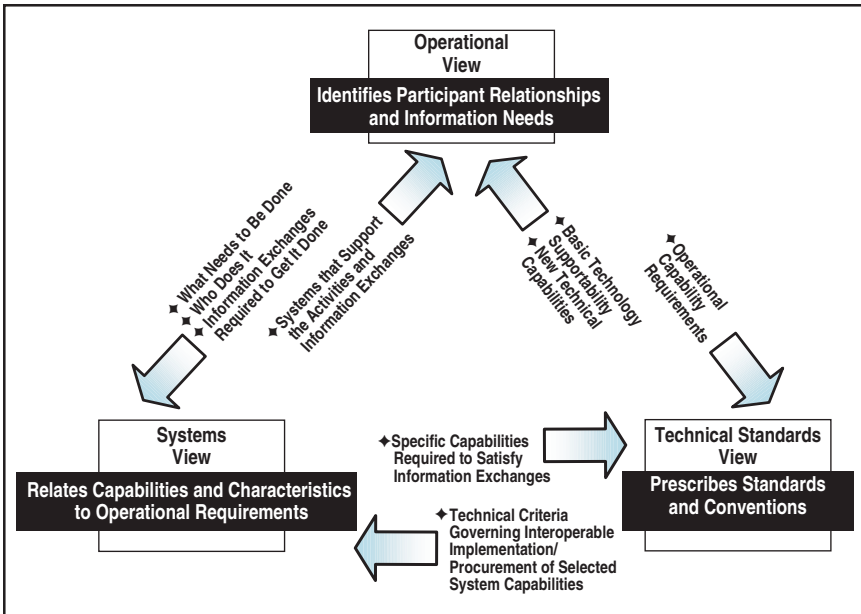


Figure 5-2. Linkages Among Architectural Views

- The operational architecture view is a description of the tasks and activities, operational elements, and information flows required to accomplish or support a warfighting function.
- The systems architecture view is a description, including graphics, of systems and interconnections providing for, or supporting, warfighting functions.
- The technical standards architecture view is the minimal set of rules governing the arrangement, interaction, and interdependence of system parts or elements, whose purpose is to ensure that a conformant system satisfies a specified set of requirements.

### Joint Staff, J-6 Interoperability and Supportability Certification (Figure 5-3)

Prior to selected milestone decisions (normally B and C), the J-6 certifies to the Office of the Assistant Secretary of Defense for Networks and Information Integration (OASD(NII)), CDDs, CPDs, and ISPs

regardless of ACAT level, for conformance with joint IT and NSS policy and doctrine and interoperability standards.

## J-6 Interoperability System Validation

Prior to the full-rate production decision, the J-6 validates the Joint Interoperability Test Command's (JITC) interoperability system test certification, which is based upon a joint-certified Net-Ready Key

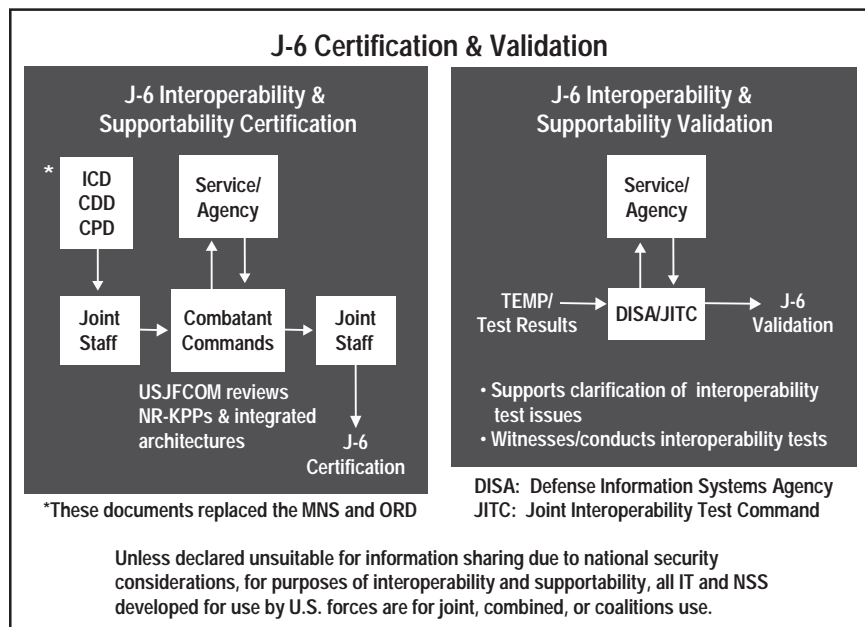


Figure 5-3. Interoperability Certification Process

Performance Parameter (NR-KPP), approved in the CDD, CPD, and Information Support Plan (ISP). The validation will occur after receipt and analysis of the JITC interoperability system test results.

## Levels of Information System Interoperability (LISI)

LISI is a model that is applied to information systems to gain a figure of interoperability among systems. Within the LISI model, systems are evaluated by their use, application, sharing, and/or exchange of common procedures (including technical standards), software applications, infrastructure, and data. The resultant value, from 0 to 4, indicates the interoperable maturity levels of Isolated (0), Connected (1), Functional (2), Domain (3), and Enterprise (4).

## **Net-Ready Key Performance Parameter (NR-KPP)**

The NR-KPP assesses information needs, information timeliness, information assurance, and net-ready attributes required for both the technical exchange of information and the end-to-end operational effectiveness of that exchange. The NR-KPP consists of verifiable performance measures and associated metrics required to evaluate the timely, accurate, and complete exchange and use of information to satisfy information needs for a given capability.

The NR-KPP is comprised of the following elements: (a.) Compliance with the Net-Centric Operations and Warfare (NCOW) Reference Model (RM), (b.) Compliance with applicable Global Information Grid (GIG) Key Interface Profiles (KIPs), (c.) Verification of compliance with DoD information assurance requirements; and (d.) Alignment with supporting integrated architecture products required to assess information exchange and use for a given capability. See CJCSI 6212.01C for more information on determining NR-KPPs. The following briefly describes each of these four elements:

- **NCOW RM:** This Model describes the activities required to establish, use, operate, and manage the net-centric enterprise information environment to include: the generic user-interface, the intelligent-assistant capabilities, the net-centric service capabilities core services, Community of Interest (COI) services, environment control services, and the enterprise management Components. It also describes a selected set of key standards that will be needed as the NCOW capabilities of the GIG become realized.
- **GIG KIPs:** These KIPs are offered as a mechanism for improving interoperability at seams among GIG Components, such as the boundaries among organizations, technologies, networks, and architecture layers. In the absence of formally designated and managed interface points, organizations and system builders who share a seam must resort to multilateral negotiations on the specifications for that interface. Interoperability is very difficult to achieve under these circumstances. KIPs provide organizations and system builders a relatively small number of carefully managed interfaces on which to converge.

This not only brings order, visibility, and stability to these important interfaces but also frees the parties involved to innovate on either side of the interface (unlike a purely standards-based approach, which unnecessarily constrains the parties within their domains without guaranteeing interoperability at the seams). The DoD has identified 17 key interfaces for development and management—see the GIG Architecture Version 2.0 of August 2003 for more details.

- **Information Assurance (IA):** Interoperability and integration of IA solutions within or supporting the DoD are achieved through adherence to an architecture that enables evolution to NCOW by remaining consistent with the DoDAF, Version 1.0. IA requirements are identified and included in the design, acquisition, installation, operation, upgrade, or replacement of all DoD IT and NSS systems in accordance with CJCSI 6212.01C.
- **Supporting Integrated Architecture Products:** Integrated architecture products described in CJCSI 6212.01C should be incorporated in the NR-KPP and used to assess information exchange and use for a given capability. These products include OV, SV, and TV under the three types of architectures depicted previously in Figure 5-2.

*Views of former joint PMs:*

- *Interoperability is the number one concern among all military Components/Services. Commonality (standard maintenance and repair) is also important. Interoperability includes the joint interface/integration of documents and integration with users to determine what it is you want to interface.*
- *Office of the Secretary of Defense (OSD) policies, which attempt to drive a “common” platform or system, have an impact on addressing all the military Components’/Services’ requirements and may need to be reviewed for overall program effectiveness.*



# 6

## OVERVIEW OF INTERAGENCY PROGRAM MANAGEMENT

A number of trends and recent events are providing the motivation behind consideration of interagency programs among agencies of different Federal departments of the U.S. Government. To clearly differentiate between “joint programs” and “interagency programs,” the following convention is used in this Handbook: “Interagency program” means programs between a DoD Component (e.g., Service, agency, etc.) and an agency within another department of the Federal Government; “joint programs” means programs among “Components” of DoD. Up to this point, the Handbook has considered “joint programs” only. This section of the Handbook will discuss some of the similarities (and differences) that exist between “joint” and “interagency” program management.

Examples of interagency programs include the National Polar-orbiting Environmental Satellite System (NPOESS) (between the DoD (Air Force) and the Department of Commerce (DoC)) and the International Space Station Program (ISSP) (between the DoD (Air Force) and the National Aeronautics and Space Administration (NASA)).

Joint programs, on the other hand, would include programs between the Air Force and the National Reconnaissance Office (NRO), the Army and the Defense Advanced Research Projects Agency (DARPA), or the Army and Navy, i.e., between Components of DoD. For example, joint programs between the U.S. Air Force and the NRO have been ongoing since 1996. The overall goal of these programs has been the efficient and effective operational delivery of aerospace capability to the user, whether a warfighter or a national decision maker.

The trend in more interagency programs is based on the increasing number of contingencies that U.S. Military Forces and the intelligence community are supporting, overall change in focus and increase in long-term intelligence requirements worldwide, the growth in commercial space activities, and increased congressional and Administration scrutiny of space and intelligence programs. The Air Force, because of its aerospace missions, is more likely than other Services to participate in interagency programs.

## **Interagency Program Office (IPO)**

The strengths, weaknesses, opportunities, and risks of interagency program management approaches were captured in a RAND Study in 2001.<sup>7</sup> The research for the Study was performed for the Deputy Director, Air Force-NRO Integration Planning Group. The IPO concepts in this chapter are drawn from that Study.

Opportunities for conducting coordinated or integrated activities, such as determining required capabilities or developing integrated acquisition programs, arise continually. To accommodate these emerging needs, an IPO is often formed to execute cooperative activities among organizations sharing common interests and goals. IPOs may be governed by Federal laws and by policies and regulations of certain government organizations like the DoD, which possesses a structured, rigorous process for joint program management; these processes can be applied to interagency program management as well. The complexity for IPOs—as in the case of joint program offices—arises when conducting cooperative or collaborative activities among agencies with very different acquisition and budgetary processes, organizational structures and cultures, and stakeholder/user bases.

## **Interagency Acquisition Considerations/Factors**

The RAND Study described eight considerations or factors that impact on interagency (interdepartmental) program management. These

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<sup>7</sup> Dana J. Johnson, Gregory H. Hilgenberg, Liam P. Sarsfield, *Policy Issues and Challenges for Interagency Space Systems Acquisition*, RAND National Security Research Division Contract NRO-000-98-D-2628 (Santa Monica, California; 2001); this Study is available on RAND's Web site at [www.rand.org/publications/MR/MR1732](http://www.rand.org/publications/MR/MR1732).

factors (listed below) are similar to, and closely aligned with, the joint program issues previously addressed in this Handbook. The RAND Study factors are:

**Acquisition Complexity.** This element denotes the degree of difficulty involved in acquiring a particular program or capability. It includes efforts to ensure that the program satisfies existing policy and objectives guidance when participating organizations intersect and differ in their vision, goals, and incentives to form the IPO. Complexity primarily relates to “oversight processes and procedures” and “integrated product teams” issues described earlier for joint programs.

**Program Management.** This element refers to the organization, structure, and approach taken within a program to accomplish objectives. It is primarily aligned with the “management/scope of authority” issue in a joint program.

**Program Control.** Program control is the ability to monitor and influence the operations of a program by the responsible individual, i.e., a Program Manager (PM); this is also called “span of control.” Decisions are made based on integrated rather than piecemeal information. Again, this factor is closely aligned with the joint program issues of “management/scope of authority” and “integrated product teams.”

**Requirements Management.** Requirements management involves understanding each agency’s approach to the requirements process and coordinating and implementing a common requirements process. This involves identifying and resolving procedural differences, and developing mechanisms to deter or minimize “requirements creep.” This relates to the “capability needs” issue for joint programs in Chapter 5.

**Funding Stability.** Funding mechanisms must be established in the early program planning stage to determine participating agency goals and interests, funding processes and schedules, and cost sharing arrangements before the program becomes a formal reality. This factor

is important to maintaining funding support among the partners over the lifetime of the program. This factor relates to the “funding authority” issue with joint programs.

**Customer Responsiveness.** This factor primarily relates to obtaining and holding “stakeholder” support. It identifies the need for a PM to understand the complicated chains of command, authority, and responsibility of numerous stakeholders in interagency programs. This factor relates primarily to issues raised in Chapters 2, 3, and 4.

**Cultural Alignment.** Cultural alignment is the interaction of, and implications for, the program of the diverse organizational cultures inherited from parent or partner organizations. This factor relates to most of the joint program issues described in Chapter 3.

**Staffing.** Staffing includes both the staffing process for the program and the ability to attract qualified personnel to work in the program. This factor relates to the program office staffing issues raised in Chapters 2 and 3.

## **RAND Study Organizational Approaches for Interagency Programs**

In an interagency (interdepartmental) joint program, high-level decisions need to be made “up-front,” which will drive organizational structures and, in turn, lead to decisions about the program management process guiding the IPO, the staff management process, and approaches to satisfying and maintaining external stakeholder support for the program. As in DoD joint programs, documentation of these decisions should be made in an interagency Memorandum of Agreement (MOA).

A key decision involves the determination of an approach to an IPO concept. In the RAND study, five approaches were examined in detail, with each approach compared and contrasted against seven factors or elements. They include Executing Agent, System Integrator, Independent Agent, Confederation, and Joint Program Office (JPO). A sixth approach, Commercial Prime, was not analyzed in depth by the study. This latter approach involves a government partner using a commercial company or vehicle to develop a system and run a program.

A description of the organizational approaches, as described in the RAND Study, is shown below along with comments rationalizing the description with the joint program descriptions discussed earlier in Chapter 1, Table 1-1:

**Lead Agent.** The lead agent is the agency that is designated for technology demonstration, development, acquisition, and/or operation of a program for common or multi-user needs. This type of management structure is similar to the Fully Integrated JPO in Table 1-1 of Chapter 1. Instead of the term “executing agent” or “executive Component,” this Handbook uses the term “lead Component.”

**System Integrator.** Joint venture partners build system elements with lead organization operating as integrator. This type of management structure is similar to the Lead-Component Coordinated Program Category in Table 1-1.

**Independent Agent.** The independent agent was created as a new, independent, functionally focused entity to acquire, execute, and operate a program. The independent agent is most closely associated with the Office of the Secretary of Defense (OSD)-directed program shown in Table 1-1—where no lead Component is assigned and direction is provided by a Program Management Office (PMO) reporting directly to OSD.

**Confederation.** A confederation consists of multiple entities that form an acquisition “alliance” to accomplish limited, albeit challenging, objectives. This arrangement closely aligns with the Confederated Program Category in Table 1-1.

**Joint Program Office (RAND Definition).** RAND describes the JPO as a single integrated program that is independent of, but responsive to, parent organizations. This is similar to a DoD Lead-Component Coordinated Program in Table 1-1 in that a lead Component, agency, or department PMO coordinates for all Components but does not have executive authority. The example described in the RAND Study as a JPO approach—the NPOESS—is a joint DoD, NASA, and DoC

project. In the NPOESS Program, the PM is responsible for the program to a DoD/DoC/NASA Executive Committee but also reports through the National Oceanic and Atmospheric Administrator (part of DoC) for program management administration. This RAND Study variant is not the same as a DoD Fully Integrated JPO described in Table 1-1.

## Approaches Versus Evaluation Factors (see Table 6-1)

Comparing the various interagency approaches against the evaluation factors—as depicted in the RAND Study—we see that the “Lead Agent” approach (equivalent to DoD JPO (S-5)) is the most effective organizational concept for interagency programs.

**Table 6-1. IPO Organizational Approaches Versus Evaluation Factors**

	LEAD AGENT	SYSTEMS INTEGRATOR	INDEPENDENT AGENT	CONFEDERATION	COMMERCIAL PRIME	JOINT PROGRAM OFFICE
ACQUISITION COMPLEXITY	G	Y	G/Y	R	G/Y	G
PROGRAM MANAGEMENT	G	Y	Y	Y/R	Y	G/Y
PROGRAM CONTROL	G	Y	Y	Y/R	Y	G
REQUIREMENTS MANAGEMENT	G	G	Y	Y	Y	Y
FUNDING STABILITY	G/Y	Y/R	G/Y	Y/R	Y/R	Y/R
CUSTOMER RESPONSIVENESS	G	Y	G/Y	G	G	G
CULTURAL ALIGNMENT	Y	Y	R	R	G	G
STAFFING	G	G	Y	G	G	G

G Favorable, handled well
 G/Y Favorable to moderately difficult

Y Moderate to difficult
 Y/R Moderately difficult to very difficult

R Very difficult or uncertain; time consuming

# APPENDIX A

## SUMMARY FINDINGS/BEST PRACTICES OF THE OFFICE OF THE SECRETARY OF DEFENSE (OSD) JOINT PROGRAM WORKING GROUP (18-19 NOV 2003)

### OSD Joint Program Working Group (JPWG) Findings<sup>8</sup>

The Department of Defense (DoD) JPWG determined the following actions that need to be considered in a program charter or Memorandum of Agreement (MOA) for each of the issues.

#### Oversight Processes and Procedures

- Lay out a tailored management and execution strategy that identifies lead Service and sponsor with decision authority vis-à-vis the capability need.
- Ensure clarity in that the sponsor has the lead in determining capability needs.
- Establish acquisition executive roles vis-à-vis Milestone Decision Authority (MDA) in the acquisition process.
- Identify Joint Forces Command (JFCOM)—a combatant commander—as the recognized voice of warfighters and as an experimenter; however, JFCOM is not the Program Manager (PM) of joint programs.

#### Management/Scope of Authority

- Assign a single PM covering management issues for all participating Components.
- Match joint PM's scope of authority with his or her responsibility.
- Establish joint PM selection criteria.

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<sup>8</sup> These findings represent generally unfiltered views expressed by participants in the JPWG. Although not formally endorsed by DoD, they represent useful lessons learned.

- Provide a program MOA/charter defining boundaries of power and authority.
- Define the relationship between participants:
  - full partners (lead and participating Components) and
  - associates (other stakeholders).
- Define organization/decision relationships, e.g., clear lines of authority, a single acquisition executive, and possible rotation of Service lead (acquisition executives and PMs) between Services.
- Lay out a well-understood issue/conflict resolution process.
- Make joint PM the rater for deputy PMs and/or participating Component PMs.

## **Requirements/Capability Needs**

- Establish process to determine joint program capability needs, e.g., multi-Service capability board, joint requirements working group, etc., to adjudicate between Components.
- Ensure equity for both lead and participating Components; no single Service should control process.
- Eliminate Service/Component requirements oversight councils; entering the joint process with firm Service requirements can create gridlock.
- Task lead Component (Joint PM) to develop an Acquisition Program Baseline (APB) of cost schedule and performance (capability) parameters.
- Establish process for validating changes to capability needs.
- Define who can create changes.

## **Funding**

- Streamline funding processes; consider establishing joint Program Executive Offices (PEOs) that report directly to OSD.
- Agree to funds control measures, i.e., centralized funds (Research, Development, Test and Evaluation (RDT&E)) control by Joint PM.



- Allocate centrally controlled funds to Components only for Component-unique needs that were budgeted for the unique needs.
- Insure funding authority matches program responsibility.

## **Testing Arrangements**

- Designate the lead Component/Service responsible for management of multi-Component Test and Evaluation (T&E).
- Ensure all participating Components' operational test agencies participate in jointly planning, conducting, reporting, and evaluating the multi-Component tests.
- Task lead Service with preparing and coordinating a single report that reflects system's operational effectiveness and suitability for each Component.

## **Security**

- Assign lead Component—in coordination with participating Components—to determine degree of program security risk.
- Direct that a Program Protection Plan be developed by the lead and identify mutually agreeable control processes.

## **Contracting**

- Clearly identify that the contracting rules and processes of the lead will be followed, unless agreed otherwise by all participating Components.

## **Personnel/Training/Administration**

- Establish a manning document, which incorporates trained personnel from both lead and participating Components/Services.
- Staff the joint PMO with trained personnel; participating Components are responsible for training these personnel.
- Assign responsibility for administrative support of the joint PMO to the lead Component/Service

- Participating Components will fund travel for the accomplishment of their representatives' responsibilities.

### **Integrated Product Teams (IPTs)**

- Require multi-Service IPTs within the joint program office that equitably include personnel from both lead and participating Components.
- As minimum, require program IPTs organized around the work breakdown structure; and oversight working IPTs for cost/performance, logistics, and T&E.

# APPENDIX B

## SUGGESTED FORMAT FOR JOINT PROGRAM MANAGER'S CHARTER

### PROGRAM MANAGER'S CHARTER

#### *Name and Rank of the PM*

1. **Program Identification.** *State the title of the program.*
2. **Purpose.** This serves as a written understanding between the Program Manager (PM) (enter program name) and the Acquisition Executives (enter titles of the acquisition executive of the lead and participating Components). It describes the program's objectives, scope, organizational relationships, and initial resources; and it sets forth the PM's responsibilities and accountabilities against which he or she will be measured.
3. **Program Objectives and Scope.** *Concisely describe the program's objectives and scope.*
4. **Program Manager Responsibilities and Authorities.** *Identify the specific responsibilities granted the PM and for which the PM will be held accountable. These responsibilities should include program planning, personnel management, funds allocation and control, schedule assurance, acquisition, configuration management, quality management, and management reporting. State that the PM shall follow all applicable DoD [Department of Defense] policy, particularly DoDD [Department of Defense Directive] 5000.1 and DoDI [Department of Defense Instruction] 5000.2, or indicate what specific policy documents are waived.*
5. **Lines of Authority.** *Identify the key organizational elements of the lead and participating Components and any supporting organizations, and show their relationship to the program.*

*Describe role in the execution of the program and the PM's line of authority to them. Include as applicable:*

- *Chartering authorities*
  - *Milestone Decision Authority (MDA)*
  - *Program Executive Officer (if applicable)*
  - *User/User representative(s)/Combatant Commands*
  - *Program MDA*
  - *Head of Contracting Activity*
  - *Contracting Officer*
  - *Test & Evaluation Agencies*
  - *Defense Contract Management Agency*
  - *Others as appropriate*
6. **Accountability.** *Identify how the PM will be measured—thresholds for success (e.g., the Acquisition Program Baseline) and in the Army—probability of program success metrics.*
7. **Resources.** *Describe the top-level funding and staff planned for the Systems Development and Demonstration Phase. Update as the PM changes and the program progresses.*
8. **Updating the Program Charter.** *State the responsibility and procedures for updating or modifying the PM charter.*

## **Coordination/Approval**

**Approved by:** *(signed and dated by the acquisition executive of the lead and participating Components)*

**Concurred by:** *(signed by those organizations other than the lead and participating Components that have a large supporting role to the program, e.g., DISA [Defense Information Systems Agency] in the case of some IT [Information Technology] systems)*

**Reviewed by:** *(as necessary; signature not required)*

# APPENDIX C

## AIR FORCE-NAVY MEMORANDUM OF AGREEMENT FOR THE JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM) PROGRAM

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Program Director  
JASSM Program

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Program Manager (USN)  
JASSM Program

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Principal Deputy Assistant Secretary  
of the Air Force  
(Acquisition & Management)

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Navy Program Executive Officer  
Tactical Aircraft Programs,  
NPEO(T)

15 June 1998

# **AIR FORCE-NAVY MEMORANDUM OF AGREEMENT FOR THE JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)**

Editor's Note: The JASSM Program is part of the Joint Lethal Strike (JLS) Program. Some acquisition framework terms in this Memorandum of Agreement (MOA)—such as Engineering and Manufacturing Development (EMD) and Program Definition and Risk Reduction (PDRR)—have been supplanted by newer terms in subsequent versions of Department of Defense Instruction (DoDI) 5000.2. The format is similar to that described in Chapter 2, but each MOA should be tailored for a specific program.

## **I. PURPOSE**

This MOA designates authority and responsibility between the Navy and the Air Force for the development and acquisition of the Joint-Air-to-Surface Standoff Missile (JASSM). Specifically, this MOA will provide guidance, establish management functions, define authority, and assign responsibility to both participating Services.

## **II. SCOPE**

This MOA applies specifically to the JASSM Program and directly related projects. The Air Force is designated the lead Service and the Navy the participating Service.

## **III. PROGRAM DESCRIPTION**

JASSM is an Acquisition Category (ACAT) ID program to develop and field the next generation air launched cruise missile. JASSM is to provide the Air Force and Navy with an affordable, conventional, long-range, precision guided weapon system. Due to its significant standoff capability, JASSM may be launched to destroy enemy targets well outside the range of their area defenses.

#### IV. ORGANIZATION FOR PROGRAM MANAGEMENT

The JASSM Program will be managed in a cooperative, streamlined manner with the Air Force as the Executive Service through the Air Force Acquisition Executive and Air Force Program Executive Officer (AFPEO) for Weapons Programs (WP) command structure. Program Management of the program has been assigned to the JASSM Program Director (ASC/YV), Eglin Air Force Base, FL. The Program Director reports directly to AFPEO(WP).

The Navy JASSM Program Manager (PM) is the Navy PM for Conventional Weapons (PMA-201) located at Naval Air Systems Command Headquarters, Patuxent River, MD. A Navy JASSM Deputy PM is assigned to, and collocated with, the JASSM Program Office at Eglin Air Force Base, FL. The Navy JASSM Deputy PM supports the Air Force JASSM Program Director but reports to the Navy JASSM PM (PMA-201).

#### V. RESPONSIBILITIES AND AUTHORITY

- A. The Air Force Program Director's primary mission is to provide fully developed, reliable, and supportable JASSM weapons to the Operating Forces of the Air Force and Navy and satisfy the requirements of the Joint Operational Requirement Document (JORD) for JASSM. The JASSM Program Director remains the single executive responsible for the successful management of the program and accomplishment of overall objectives. The program director has the responsibility within the scope of the program resources to meet Air Force and Navy requirements and has authority over program efforts of in-house and government support contractor organizations, including delegation of authority. In cases where action on joint Service acquisition issues are outside the director's authority, he or she shall refer action to AFPEO(WP).

B The Air Force Program Director shall:

1. Plan, prepare, coordinate, and issue required acquisition documents, including Defense Acquisition Board documentation.
2. Ensure adequate communication and coordination among all participating organizations. The Program Director is authorized direct contact with all organizations concerned with the program.
3. Ensure aircraft interface requirements for both Air Force and Navy aircraft identified in the JORD are considered in all development efforts.
4. Minimize impact to aircraft and store certification requirements.
5. Establish Joint Working Groups that are required to coordinate risk reduction and other technical issues.
6. Integrate the Navy representatives into the JASSM Program Office and provide workspace and appropriate administrative support.

C. The Navy JASSM Deputy PM shall:

1. Actively participate in the execution of the primary mission of the JASSM Program.
2. Implement the Program Director's decision by coordinating with and directing Navy organizations involved with the JASSM Program.
3. Ensure that Navy requirements are brought to the attention of, and receive proper consideration by, the Air Force Program Director.



4. Review and provide recommendations on program issues, policies, and decisions as they impact Navy interests.
  5. Manage tasks unique to Navy program requirements, keeping the Air Force Program Director informed.
  6. Participate in Joint Working Groups as required
- D. Joint Operating Procedures (JOPs) will be executed between Air Force and Navy program office integrated product team members and are required. Primary areas to be considered for JOPs are Program Control, Finance, and Contracts.

## VI. FUNDING RESPONSIBILITIES

The Air Force, as the lead Service, will budget and be responsible for overall obligation and expenditure of all funding appropriated for JASSM development, except as noted herein. The Air Force Program Director and Navy Deputy PM, in conjunction with the users, are responsible for the allocation of each Service's funding to meet the total requirements of the JORD. The respective Services agree to support programmed and/or planned funding, and they commit that Service-related PPBS budget decisions that could adversely impact program execution will be coordinated prior to implementation.

- A. Research, Development, Test and Evaluation/3600 (RDT&E/3600) Funding
1. Program Definition and Risk Reduction Phase (see editor's note at the beginning of this MOA)
    - a. Air Force will fund the PDRR contracts in support of Air Force/Navy requirements with Lockheed Martin.
    - b. Air Force will fund Air Force-unique requirements, including aircraft integration, test and evaluation, mission planning development, and sustained contractor support to the Joint Program Office (JPO).

- c. Navy will fund Navy-unique requirements, including aircraft integration, test and evaluation, mission planning development, and sustaining field/contractor support to support Navy participation in the JASSM JPO.
2. EMD (see editor's note at the beginning of this MOA)
  - a. Air Force will fund prime development contract for EMD for JASSM. Interoperability between the Air Force and the Navy with a single system configuration is a program requirement. Interoperability is defined as "can be used safely by either Service." This does not imply an optimal configuration for one or both Services. Further, interoperability may require waivers, deviations, carriage/launch/jettison envelope restrictions, etc. Under the Cost as an Independent Variable (CAIV) concept, the Requirements Change Process (RCP) will be used to evaluate requirements that drive procurement costs.
  - b. Air Force will fund Air Force-unique requirements, including integration, aircraft modifications, testing, mission planning development, training, and sustaining Air Force engineering/contractor support to the Program Office.
  - c. Navy will fund Navy-unique requirements, including integration, aircraft modifications, testing, mission planning development, training, and sustaining Navy field engineering/contractor support to the Program Office.

## B. Production

1. The Air Force and Navy agree to support Service procurement funding necessary to meet each Service's annual recurring weapon system procurement objectives.
2. All Service-unique budget actions that could affect execution of the joint procurement program shall be coordinated, to the maximum extent possible, prior to final implementation by the Service.

## VII. ARBITRATION OF DISPUTE

Disagreements between the Air Force and the Navy that cannot be resolved at the Program Director's level will be addressed to AFPEO(WP) and NPEO(T), who will jointly resolve the issue. If agreement cannot be achieved at this level, the issue will be elevated to the Service Acquisition Executives for resolution.

## VIII. CONGRESSIONAL AND PUBLIC INTEREST

AFPEO(WP) is responsible for coordinating and disseminating all public information relative to the program within DoD, to legislative bodies, industry, and the general public. The point of contact is the Secretary of the Air Force Special Assistant for Public Affairs (SAF/AQ-PA).

## IX. NAVY MANNING

### A. Navy manning requirements:

1. Navy manning will be as follows: Navy Deputy PM (GM-14/O-5), Navy Senior Engineer (Class Desk, O-4 through O-5), Logistics Manager (APML, GS-13) Business Financial Manager (GS-13). The Navy JASSM Program Office staff will be augmented by on-site and external support from Naval Air Warfare Center Weapons Division/Aircraft Division (NAWC WD/AD) and engineering support contractors.
2. Air Force Program Director is requested to provide input in the form of a yearly written performance evaluation on Navy personnel permanently assigned to the JASSM Program Office and collocated at Eglin Air Force Base, FL. PMA-201 will provide written performance evaluations on PMA-201 personnel and provide an evaluation input as appropriate for all other Navy personnel resident to the JPO.

### B. Air Force manning is provided separately.

## X. REVIEW PROCEDURES

This charter will be reviewed on an annual basis and will remain in effect until superseded by subsequent revisions or the program is completed or terminated. Revision authority is vested in signatories or their designated representatives. Addenda to this charter, approved by both AFPEO(WP) and NPEO(T), may be used as a mechanism to document additional inter-Service agreements or commitments.

# **APPENDIX D**

## **CHARTER FOR THE XYZ PROGRAM**

### **EXAMPLE JOINT PROGRAM OFFICE CHARTER**

Editor's Note: This example "detailed" charter is for a fictional program. It generally tracks with the elements of a Memorandum of Agreement (MOA) but does not include the name of the Program Manager (PM) that would appear in an abbreviated "appointing-type" charter, described in Appendix B.

## CHARTER FOR THE XYZ PROGRAM

\_\_\_\_\_  
Assistant Secretary of the Army for  
Acquisition, Logistics, and Technology

Date: \_\_\_\_\_

\_\_\_\_\_  
Assistant Secretary of the Navy for  
Research, Development, and Acquisition

Date: \_\_\_\_\_

\_\_\_\_\_  
Assistant Secretary of the Air Force  
for Acquisition

Date: \_\_\_\_\_

\_\_\_\_\_  
Vice Chairman, Joint Chiefs of Staff

Date: \_\_\_\_\_

Coordination:  
USD(Comptroller) \_\_\_\_\_

ASD(NII) \_\_\_\_\_

## **Background and Purpose**

In the Fiscal Year (FY) 2004 Defense Authorization Act, Congress mandated that a Joint Program Office (JPO) be organized with the Department of the Army as the lead Service to “provide strong and effective joint management.” This charter establishes the policy for management and administration of the resources and subsystems that constitute the XYZ Program as directed by Congress. The charter addresses the roles and responsibilities of the Services (lead and participating) in the areas of resource support (including staffing), planning, management, administration of funds, testing, and acquisition and development of the program and its associated documentation. It identifies the joint PM’s authority and delineates the relationships, responsibilities, and functions of the Departments of Army, Navy (including Marine Corps), and Air Force and other Components participating in the JPO. It also establishes administrative and executive policies and practices by which the JPO will function.

## **System and Program Description**

At a Milestone B decision review in December 2003, the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) designated the XYZ Program as an Acquisition Category (ACAT) ID program with a JPO to develop a family of deployable weapon systems. The goal of the program is to research, develop, test, produce, field, and support a family of modular, software-programmable weapons.

## **Roles, Responsibilities and Authority**

### **Office of the Secretary of Defense (OSD):**

- **Under Secretary of Defense (Acquisition, Technology, & Logistics) (USD(AT&L)) will:**
  - Be the Milestone Decision Authority (MDA).
  - As the Defense Acquisition Executive (DAE), chair program and decision reviews for the XYZ Program.

- Approve recommended Program Objective Memorandum (POM) requirements from the lead and participating organizations that have responsibility for supporting the XYZ program.
- **Director, Defense Systems, DUSD Acquisition and Technology**
  - Serves as leader for the XYZ Overarching Integrated Product Team (OIPT) and develops recommendations to the Defense Acquisition Board on program issues.
- **Assistant Secretary of Defense (Networks and Information Integration) (ASD(NII))**
  - Supports the PM and the participating Components in those parts of the XYZ Program that are Network-Centric.
- **Under Secretary of Defense (Comptroller) (USD(C))**
  - Publish specific methodology to consolidate reporting and/or oversight of all XYZ funding to be implemented by the XYZ JPO.
  - Address all XYZ program/budget issues through the Army as lead Service to the XYZ PM.

#### **Joint Staff:**

- **J-1:** Coordinates multi-Service and joint support for XYZ manning requirements.
- **J-6:** Serves as the principal Joint Staff representative for XYZ Concept of Operations (CONOPS) development and CONOPS coordination with the Services. Commander, Joint Forces Command (JFCOM), will be the lead agency for this coordination.
- **J-8:** Serves as the principal Joint Staff representative for XYZ capability needs issues and as the focal point for capability coordination with the Components.



## **Army as Lead Component/Service:**

The 16 December 2003 Decision Memorandum from the Under Secretary of Defense, Acquisition, Technology, and Logistics (USD(AT&L)) designated the Army as the “permanent Component Acquisition Executive and Lead Service, with support provided by the other Components.” As the lead Service, the Army will designate a direct reporting PM as an extension of the Army Acquisition Executive’s management oversight. Responsibilities include:

- Appoint a PM (Colonel (O-6) or GS-15 civilian).
- Support the XYZ JPO as a direct reporting entity to the Army Acquisition Executive.
- Support Program, Analysis, and Integration functions of the XYZ JPO.
- Develop, in conjunction with the other Component Services, the manning authorization documents for the XYZ JPO.
- Maintain the XYZ Capability Development Document (CDD) in conjunction with the JFCOM-chaired Joint Services Requirements Working Group (JSRWG) (see below).

## **JPO Organization and Staffing**

- The PM will be an acquisition-certified (PM Level III) Colonel (O-6) or GS-15 civilian, appointed by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)).
- Deputy PMs will be acquisition-certified (Level III) (O-5 and GS-13 through 14), one each from the Departments of the Air Force and Navy. They will assist in managing the program as directed by the PM and ensure that Service concerns are adequately addressed.
- A Service integration liaison officer will be provided and will report to the appropriate deputy PM on Service-unique matters.
- The PM may appoint Product Managers to function as subordinate managers for major subsystems of the XYZ program,

as required and as agreed to in the Joint Operating Procedure (JOP) for staffing the JPO.

- The PM will develop, coordinate, and provide a JOP for staffing the JPO NLT 60 days after this charter is approved.

### **Joint Integrated Product Teams (IPTs)**

The Integrated Product and Process Development (IPPD) process, using joint program IPTs, will be employed by the XYZ Program to the maximum extent for subsystem development, production, and fielding and for source selections, Test and Evaluation (T&E) management, and other functional program needs. Working IPTs (WIPTs) will be organized to ensure communications between OSD, the Army Acquisition Executive (AAE), and the Joint PMO.

### **Performance Evaluations of Personnel**

The Joint PM will provide performance evaluations for deputy PMs and product managers. The senior rater for these positions will be designated by each Service. Performance evaluations for members of the JPO will follow the internal organizational relationships of authority as determined by the PM.

## **Relationship To Other Programs, Organizations, and Stakeholders**

### **Military Departments**

The Departments of the Army, Navy (Marine Corps), and Air Force will support the XYZ JPO in the following areas:

- Staffing
  - Coordinate with the Army (as the designated Lead Service) to establish the staffing requirements necessary to accomplish the XYZ mission.
  - Each Component will assign personnel in appropriate grades and disciplines to the XYZ organization as agreed to in the staffing JOP. Positions will be kept at 100 percent fill.

- Funding

Follow guidance published by USD(C) so that the XYZ JPO can manage all XYZ Research, Development, Test and Evaluation (RDT&E) funding, except that a funding JOP will be developed to stipulate how funding for platform integration and for other unique Component development will be accomplished. Each Component will fund for procurement of end items and kits for XYZ integration into their fleets of ground vehicles and aircraft.

- Coordination

- Develop and validate Component/Service operational concepts.
- Provide appropriate Component representatives to all OIPT's, WIPTs, JPO/XYZ staff, and special working groups supporting the XYZ system development.
- Coordinate platform and system integration functions with the XYZ JPO to ensure that XYZ products are fully integrated into appropriate joint DoD systems.
- Perform coordinated logistics planning and execution with the XYZ JPO.

### **Defense Information Systems Agency (DISA)/Joint Interoperability Test Command (JITC)**

JITC will participate as an integral part of the XYZ T&E program for interoperability certification and validation of Information Technology (IT) subsystems by providing the following Services for XYZ:

- Write test plans where and when needed.
- Perform conformance testing and certification on XYZ systems regarding interoperability.
- Perform interoperability certification during multi-Service operational test and evaluation.

### **Joint Spectrum Center (JSC)**

The JSC has agreed to provide a government liaison officer to the XYZ JPO to support the development and integration of effective DoD spectrum management and use as an integral part of the XYZ system capabilities.

### **Defense Advanced Research Projects Agency (DARPA)**

DARPA has agreed to provide a government liaison officer to assist the XYZ JPO in managing Science and Technology efforts and in determining technology maturity prior to each milestone review.

### **Joint Forces Command (JFCOM)**

JFCOM is responsible for collecting and verifying XYZ-related requirements from the Services and Combatant Commands (COCOMs) by acting as chair of the XYZ JSRWG (see below).

### **National Security Agency (NSA)**

NSA will support the XYZ in the development and certification of software cryptographic elements. NSA will conduct the required testing of XYZ subsystems for security certification.

### **Network Stewardship Coordination**

The XYZ program—although primarily a weapon system—has a significant IT element. The Joint PM has been charged with specific IT network responsibilities pertaining to Joint Network Centric Operations and IT equipment procurement. To do this, an XYZ Joint Networking Integrated Process Team (JNIPT) has been established. The JNIPT defines an overall strategy for evolving the set of networking capabilities within the XYZ program. In carrying out this mission, the JPO works closely with other joint and DoD-related programs concerned with defining and implementing DoD's End-to-End (E2E) IT system. In particular, the JNIPT will maintain formal relationships with the following:

- The ASD(NII) E2E System Engineering Working Group.
- The DoD Global Information Grid (GIG) Quality of Service (QoS)/Class of Service (CoS) Working Group.
- The Transformational Communications (TC) program.

## **Standards and Interoperability**

To achieve interoperability and promote international IT standards, the JPO will maintain strong working relationships with the organizations below:

### **Software Defined Radio Forum (SDRF)**

The SDRF is an international, nonprofit organization dedicated to promoting the development, deployment, and use of SDR technologies for advanced wireless systems. The SDRF mission is to accelerate the proliferation of IT technologies to meet the needs of civil, commercial, and military market sectors. XYZ will work with the SDRF to promote development of technologies to further XYZ system capabilities.

### **Object Management Group (OMG)**

The OMG, a not-for-profit consortium that produces and maintains computer industry specifications for interoperable enterprise applications, has established a Domain Special Interest Group for software IT systems. This group, with XYZ sponsorship, is building an international commercial standard based on the XYZ capabilities. Once this international standard is defined and adopted, future programmable IT development (including XYZ within the DoD and U.S. Government) would align with this standard as it evolves.

## **International**

The XYZ international strategy will focus on promoting allied weapon system and IT capability through multi-national agreements. The JPO will establish relationships with international government and private sector organizations in accordance with the XYZ International Strategy. This will include bilateral and multilateral agreements with interested nations to develop and demonstrate the interoperability across national military boundaries. This will require developing a unified approach to XYZ technology transfer, export control, and eventual Foreign Military Sales (FMS) activities.

### **XYZ Joint Acquisition Executive Council (JAEC)**

The Acquisition Executives for the three Components (Army, Navy, and Air Force) will meet on a quarterly basis with the PM to:

- Review XYZ program metrics.
- Coordinate XYZ program management.
- Resolve any XYZ program-related disputes that require their involvement.

### **Joint Requirements Oversight**

XYZ requirements will be established using the Joint Capabilities Integration and Development System (JCIDS) (see CJCSI 3170.01D).

### **XYZ Joint Services Requirements Working Group (JSRWG)**

This working group will provide review of XYZ capabilities and is responsible for sponsoring capabilities discussions and resolving disputes. The JSRWG will provide periodic reports on the joint warfighting capabilities of the XYZ program to the appropriate Functional Boards and to the Joint Capabilities Board. The output of this group will be used in CDD/CPD (Capabilities Production Document) development and as input to the evolution of the XYZ CONOPS.

### **Reporting and Information Requirements**

Reports to higher headquarters will be in accordance with the Consolidated Acquisition Reporting System (CARS). CARS reports will include the Acquisition Program Baseline, the Defense Acquisition Executive Summary (DAES), and the Selected Acquisition Report (SAR).

### **Joint Operating Procedures (JOPs)**

JOPs will be by the PM to describe detailed procedures and interaction necessary to carry out significant aspects of the Program/Project. Subjects for JOPs may include Systems Engineering, Personnel Staffing, Reliability, Survivability, Vulnerability, Maintainability, Production, Management Controls and Reporting, (including DAES and SAR), Financial Control, Test and Evaluation,

Training, Logistics Support, and Procurement and Deployment. The JOPs will be developed and negotiated by the PM and agreed to by each Service Acquisition Executive, and other affected organizations. This action should be initiated as soon as possible after approval of this charter. Unresolved JOP issues will be reported to the JAEC for resolution.

### **Methods for Arbitrating/Resolving Disputes**

Disagreements that cannot be resolved at the PM/JPO level will be elevated as follows:

1. Appropriate WIPT
2. OIPT
3. USD(AT&L) (if necessary)

### **XYZ Program Charter Review and Updates**

The XYZ Charter will be reviewed 60 days prior to the scheduled rotation of each XYZ PM.





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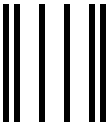
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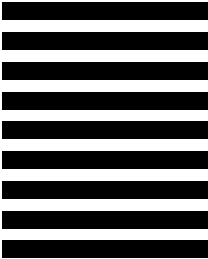
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