



Department of Defense  
**INSTRUCTION**

*Cancelled 23 February 1991*

September 1, 1987  
 NUMBER 5000.2

USD(A)

**SUBJECT: Defense Acquisition Program Procedures**

- References:**
- (a) DoD Instruction 5000.2, "Major System Acquisition Procedures," March 12, 1986 (hereby canceled)
  - (b) DoD Directive 5000.1, "Major and Non-Major Defense Acquisition Programs," September 1, 1987
  - (c) DoD Directive 5000.49, "Defense Acquisition Board," September 1, 1987
  - (d) DoD Directive 5000.43, "Acquisition Streamlining," January 15, 1986
  - (e) through (r), see enclosure 1

**A. REISSUANCE AND PURPOSE**

1. This Instruction reissues and updates reference (a) to revise procedures for DoD implementation of reference (b).

2. This Instruction sets forth uniform procedures governing major defense acquisition programs and establishes specific requirements and responsibilities for acquiring major defense acquisition programs requiring decision authority by the Secretary of Defense (defined in reference (b) as Defense Acquisition Board (DAB) programs). These procedures should be generally employed for the management of acquisition programs not requiring decision authority by the Secretary of Defense (i.e., Component and non-major defense acquisition programs), as determined by the DoD Component Head, unless a statute prescribes specific compliance as noted in section F. below.

3. DoD Directive 5000.1 (reference (b)) and this Instruction are first and second in order of precedence for providing policies and procedures and managing defense acquisitions, except when statutory requirements override. Any DoD issuance in conflict with reference (b) or this Instruction shall be changed or canceled within 120 days from issuance of this Instruction. Thereafter, conflicts shall be brought to the attention of the originating office and the Defense Acquisition Executive (DAE).

**B. APPLICABILITY**

This Instruction applies to the Office of the Secretary of Defense (OSD); the Military Departments; the Organization of the Joint Chiefs of Staff (OJCS); the Unified and Specified Commands; the Defense Agencies, including the Strategic Defense Initiative Organization (SDIO); and DoD Field Activities (hereafter referred to collectively as "DoD Components").

**C. DEFINITIONS**

1. Defense Acquisition Board (DAB). The DAB is the senior DoD acquisition review board chaired by the DAE. The Vice Chairman, Joint Chiefs of Staff

(VCJCS) serves as the Vice Chair. The DAB assists the DAE with milestone and program reviews, policy formulation, and acquisition resource recommendations. The DAB is the primary forum for DoD Components to provide advice and assistance concerning acquisition matters through the DAE to the Secretary of Defense. Permanent members of the DAB are identified in DoD Directive 5000.49 (reference (c)).

2. DAB Acquisition Committees. The DAB is supported by 10 acquisition committees that provide assistance in program review and policy formulation. These committees hold pre-DAB meetings to provide advice, assistance, and recommendations to the DAB and to reach consensus on acquisition issues. The missions, responsibilities, and membership of each of these committees are expressed in their respective charters. Enclosure 5 highlights the oversight areas of each committee. The 10 acquisition committees are as follows: Science and Technology; Nuclear Weapons; Strategic Systems; Conventional Systems; Command, Control, Communications, and Intelligence; Test and Evaluation; Production and Logistics; Installation Support and Military Construction; International Programs; and Policy and Initiatives.

3. Operational Effectiveness. The overall degree of mission accomplishment of a system when used by representative personnel in the environment planned or expected for operational employment of the system considering organization, doctrine, tactics, survivability, vulnerability, and threat (including counter-measures, nuclear, and chemical and/or biological threats).

4. Operational Suitability. The degree to which a system can be placed satisfactorily in field use with consideration given to availability, compatibility, transportability, interoperability, reliability, wartime usage rates, maintainability, safety, human factors, manpower supportability, logistics supportability, documentation, and training requirements.

#### D. MILESTONE DESCRIPTIONS

##### 1. Milestone 0 - Program Initiation/Mission-Need Decision.

a. The Milestone 0 decision determines mission-need and approves program initiation and authority to budget for a new major program. Normally, a concept exploration/definition phase follows this approval.

b. Primary considerations during this milestone include: 1) mission area analysis; 2) affordability and life-cycle costs; 3) the ability of a modification to an existing U.S. or Allied system to provide needed capability; and 4) operational utility assessment.

##### 2. Milestone I - Concept Demonstration/Validation Decision.

a. The Milestone I decision approves proceeding with the concept demonstration/validation phase.

b. Primary considerations during this decision include: 1) program alternative trade-offs; 2) performance/cost and schedule trade-offs, including the need for a new development program versus buying or adapting existing U.S. or Allied military or commercial systems; 3) appropriateness of the

acquisition strategy; 4) prototyping of the system or selected system components; 5) affordability and life-cycle costs; 6) potential common-use solutions; and 7) cooperative development opportunities.

c. The Milestone I decision establishes broad program cost, schedule, and operational effectiveness and suitability goals and thresholds, allowing the program manager maximum flexibility to develop innovative and cost effective solutions. The principles of acquisition streamlining (DoD Directive 5000.43, reference (d)) and design-to-cost (DoD Directive 4245.3 (reference (e))) should be emphasized during this phase.

### 3. Milestone II - Full-Scale Development Decision.

a. The Milestone II decision approves proceeding with the full-scale development (FSD) phase. As appropriate, low-rate initial production (LRIP) of selected components and quantities may be approved to verify production capability and to provide test resources needed to conduct interoperability, live fire, or operational testing. The Milestone II Committee review shall occur before the release of the final Request for Proposals (RFP) for the FSD contract. The DAB review shall occur before the award of the FSD contract.

b. Primary considerations in the DAB's deliberations are: 1) affordability in terms of program cost versus the military value of the new or improved system and its operational suitability and effectiveness; 2) program risk versus benefit of added military capability; 3) planning for the transition from development to production, which will include independent producibility assessments (hardware/software/data bases); 4) realistic industry surge and mobilization capacity; 5) factors that impact program stability; 6) potential common-use solutions; 7) results from prototyping and demonstration/validation; 8) milestone authorization; 9) manpower, personnel, training and safety assessments; 10) procurement strategy appropriate to program cost and risk assessments; 11) plans for integrated logistics support (DoD Directive 5000.39 (reference (f))); and 12) affordability and life-cycle costs; and 13) associated command, control, communications, and intelligence requirements, including communications security.

c. The Milestone II decision establishes more specific cost, schedule, and operational effectiveness and suitability goals and thresholds, including approval of the program baseline agreement between the DAE, the Service Acquisition Executive (SAE), the Program Executive Officer (PEO), and the Program Manager (PM). The principles of acquisition streamlining and design-to-cost will continue to be emphasized during this phase. Particular emphasis will be placed on the requirements for transitioning from development to production (DoD Directive 4245.7 (reference (g))).

### 4. Milestone III - Full Rate Production Decision.

a. The Milestone III decision approves proceeding with the full-rate production/deployment phase or construction. If the magnitude of the program is sufficiently large and/or the time between the beginning of low-rate initial production and full rate production is significantly long, there may be a need for a Program Review or a Milestone IIIA before the Milestone III decision point.

b. Primary considerations in the DAB's deliberations are: 1) results of completed operational test and evaluation; 2) threat validation; 3) production or construction cost verification; 4) affordability and life-cycle costs; 5) the production and deployment schedule; 6) reliability, maintainability and plans for integrated logistics support (DoD Directive 5000.39 (reference (f))); 7) producibility as verified by an independent assessment (DoD Directive 5000.38 (reference (h))); 8) realistic industry surge and mobilization capacity; 9) multiyear procurement or milestone authorization; 10) manpower, personnel, training and safety requirements; 11) cost-effectiveness or plans for competition or dual sourcing; and 12) associated command, control, communications, and intelligence requirements, including communications security.

#### 5. Milestone IV - Logistics Readiness and Support Review.

a. The Milestone IV decision identifies actions and resources needed to ensure that operational readiness and support objectives are achieved and maintained for the first several years of the operational support phase. The Milestone IV review will normally occur 1 to 2 years after initial deployment.

b. Primary considerations in the DAB's deliberations are: 1) logistics readiness and sustainability (peacetime and wartime); 2) weapon support objectives; 3) the implementation of integrated logistics support plans, per (DoD Directive 5000.39 (reference (f))); 4) the capability of logistics activities (i.e. supply, transportation, etc.), facilities, and training and manpower to provide support efficiently and cost-effectively; 5) disposition of displaced equipment; and 6) affordability and life-cycle costs.

#### 6. Milestone V - Major Upgrade or System Replacement Decision.

a. The Milestone V decision encompasses a review of a system's or facility's current state or operational effectiveness, suitability, and readiness to determine whether major upgrades are necessary or deficiencies warrant consideration of replacement. This milestone decision normally will occur 5 to 10 years after initial deployment.

b. Primary considerations in the DAB's deliberations are: 1) capability of the system or facility to continue to meet its original or evolved mission requirements; 2) the potential necessity of modifications and upgrades to ensure that mission requirements are met and that the useful life is extended; 3) changes in threat that require increased capability or utility; and 4) changes in technology that present the opportunity for a significant breakthrough in system worth; and 5) disposition of displaced equipment. A significant question to be decided at this point is whether deficiencies are critical enough to warrant major modification, retirement, and/or new start considerations.

### E. PROCEDURES

1. Major Defense Acquisition Program Designation. The criteria for designation of certain acquisition programs as either DAB or Component programs are set forth in DoD Directive 5000.1 (reference (b)). The Defense Acquisition Board (DAB) Executive Secretary, with the advice of the cognizant Committee chair, may recommend candidate programs to the DAE at any point in the acquisition process.

2. Major Defense Acquisition Program Listings. The DAB Executive Secretary shall prepare, maintain, and distribute for the DAE a list of currently designated DAB and Component major defense acquisition programs at least quarterly. This list shall also identify the cognizant DAB acquisition committee for each DAB program.

3. DAB Milestone and Program Reviews. The DAB chair will normally convene formal reviews at Milestones 0 through V. If the program baseline is breached, the DAE shall decide whether or not a program review will be required. The DAE may recommend that the Secretary of Defense make a decision without a formal DAB review when the members of the DAB agree that there are no significant issues. A written justification statement shall be submitted by the DoD Component to the DAB Executive Secretary in the event that a scheduled DAB Milestone review is delayed by more than 90 days.

4. Pre-DAB Activity.

a. Milestone Planning Meeting. An informal milestone planning meeting to identify program issues shall normally be held by the cognizant committee chair, or his or her designee, before Component submission of draft documentation. The chair should ensure the participation of members of other acquisition committees having an interest in the program.

b. Draft Program Documentation. Required draft documentation shall be submitted by the DoD Component to the DAB chair and cognizant Committee chair 3 months before a DAB Committee review. The OSD action officer shall ensure that copies are made available to DAB members and appropriate DAB Committee members. The DAB chair shall transmit formal comments to the DoD Component 2 months before the scheduled DAB meeting. Every effort shall be made through the committee process to reach consensus on issues before the DAB meeting. Committee reviews shall be scheduled a reasonable time in advance of the DAB meeting so that any necessary actions can be completed before DAB deliberations.

c. Final Documentation Update. A final update shall be submitted by the DoD Component to the DAB chair and cognizant committee chair 3 weeks before a scheduled DAB meeting.

d. Component Staff Briefings. The chair of the cognizant DAB acquisition committee is responsible for identifying and reaching consensus on issues, developing recommendations, and highlighting significant program issues to be addressed during DAB deliberations. In support of this, Component staff briefings shall be provided not later than 3 weeks before a DAB Committee meeting, as follows: 1) on the overall program status to the cognizant DAB Committee action officer; 2) on the program baseline and independent cost estimate to the OSD Cost Analysis Improvement Group (CAIG); 3) on test activity results and plans to the Director, Operational Test and Evaluation (DOT&E) and the Deputy Under Secretary of Defense (Test and Evaluation) (DUSD(TSE)); 4) on acquisition strategy and transition from development to production or construction planning to the Assistant Secretary of Defense (Production and Logistics) (ASD(PSL)); 5) on readiness and support planning to include reliability and maintainability progress to the Director, Weapons Support Improvement Group (DWSIG); 6) on manpower to ASD(FM&P) and 7) on the intelligence estimate used by the Military Services to define the threat to

the Director, Defense Intelligence Agency (DIA) for DIA use in validating the threat (see DIA Regulation 55-3 for procedures (reference (i))). If requested by the cognizant Committee chair, additional briefings shall be conducted on specified subjects, such as chemical or nuclear survivability and endurance. The Components shall cooperate and work closely with their OSD staff counterparts to ensure an effective flow of information.

5. DAB Meetings. The DAB Executive Secretary, in concert with the cognizant committee chair, shall present the committee's report and discuss the unresolved issues. DAB members are responsible for participating in these issue discussions and providing any additional information relevant to the matter being discussed. Following these presentations, the DAB members will develop and present recommended findings to the DAE. The DAE shall present the recommendations of the DAB to the Secretary of Defense for decision approval before the formal issuance of the Acquisition Decision Memorandum (ADM).

6. Post-DAB Activity-Acquisition Decision Memorandum (ADM). The ADM shall be issued promptly to the Head of the DoD Component following the DAB meeting. The ADM documents the Secretary of Defense milestone decision, including approval of: 1) goals and thresholds for cost, schedule, performance, and readiness and supportability; 2) exceptions to the normal acquisition process; and 3) other appropriate direction. The ADM may also be used to document a Secretary of Defense decision on a joint service or OSD and OJCS Mission-Need Statement.

a. The DAE shall issue the ADM and execute the decision through the Head of the appropriate DoD Component. The DAB Executive Secretary will prepare and coordinate the ADM to reflect approved goals and thresholds. Updated program direction resulting from program baseline breaches shall be provided by an amended ADM, if the DAE decides that a DAB review is warranted.

b. Programming and budgeting decisions that may invalidate a Milestone decision or other ADM direction, or breach an approved Milestone II or III program baseline shall be immediately highlighted by DoD Component Heads to the DAE for explicit consideration of the impact on military capability and total acquisition resource requirements. In addition, the DoD Component Heads shall explain and justify to the DAE differences in quantity and funding between the program baselines and the program or budget under review (see section F. below, for further discussion of baseline procedures).

#### F. PROGRAM DOCUMENTATION

Program documentation for DAB programs shall be in accordance with the procedures below and in the format prescribed in the enclosures to this Instruction. Data elements shall be standardized in accordance with DoD Directive 5000.11 (reference (j)) and DoD 5000.12-M (reference (k)).

##### 1. Milestone 0 - Mission-Need Statement (MNS).

New major acquisitions are considered concurrent with the OSD Program Objective Memorandum (POM) review on the basis of justifications provided by DoD Components. A MNS document is required when the new major defense

acquisition program is expected to meet the dollar threshold criteria in DoD Directive 5000.1 (reference (b)). The MNS shall be submitted to the DAE with or before the POM submission in which funds are requested for a new major defense acquisition program. The results of the Mission Area Analysis required by DoD Directive 5000.1 (reference (b)) shall provide the basis for documenting the mission need. The DAE will approve the issuance of a program element number for the new major defense acquisition program in coordination with the Assistant Secretary of Defense (Comptroller) (ASD(C)). See enclosure 2 for the MNS format.

2. Milestones 0 Through V - Cooperative Opportunities Document.

At each milestone decision point, a cooperative opportunities document will be prepared for submission with the Mission-Need Statement, System Concept Paper, or Decision Coordinating Paper (see enclosure 4). This document will examine the possibilities for cooperation with Allied nations regarding the acquisition of the defense program and assess the advantages and disadvantages of a cooperative approach under 10 U.S.C. 2407 (reference (1)).

3. Milestone I - System Concept Paper (SCP)/Test and Evaluation Master Plan (TEMP).

The SCP is used to summarize the results of the concept exploration/definition phase; to describe the DoD Component's acquisition strategy, including identification of the best concepts to be carried into the concept demonstration/validation phase for further development, and reasons for elimination of alternative concepts; and to establish broad program cost, schedule, and operational effectiveness and suitability goals and thresholds to be met and reviewed at the next milestone (see enclosure 4 for SCP format). The purpose and content of the TEMP is described in DoD Directive 5000.3 (reference (a)).

4. Milestone I - Competitive Prototyping Strategy (CPS).

During the development of all major defense acquisition programs, CPS should be used, if practicable. A CPS is defined as a strategy that requires that contracts be entered into with not less than two contractors, using the same combat performance requirements, for the competitive design and manufacture of a prototype system or subsystem for developmental test and evaluation. In addition, a CPS requires that all systems so developed be tested in a comparative side-by-side test. No document is required if a CPS is planned. If a CPS is not planned, the Secretary of Defense must submit written notification and a report to the Congress detailing why a CPS would not be practicable (10 U.S.C. 2365 (reference (a))). This notification shall be prepared by the Component and submitted to the Secretary of Defense through the DAB.

5. Milestones I and II - Cost and Operational Effectiveness Analysis (COEA) Report.

A Cost and Operational Effectiveness Analysis report for all DAB programs shall be provided to the DAB, along with SCP or DCP, to support Milestone I and Milestone II. The COEA report shall assess the operational effectiveness and suitability of proposed concepts in the context of the specific tasks addressed in the DoD Component's mission area analysis.

Alternative approaches, and the cost-effectiveness of the recommended approach; should be specifically considered. In the case of cooperative projects, the full costs of the proposed Memoranda of Understanding (MOUs) shall be included in the COEA report.

6. Milestone I and II - Common-Use Alternatives Statement.

During DAB review of Service-unique programs, the SAE must provide to the DAE a statement and supporting analysis regarding the feasibility of common-use alternative systems. This information, along with an independent assessment of the SAE's statement and supporting analysis by the OJCS, shall be considered by the DAE when making a recommendation to the Secretary of Defense.

Milestones I Through IV - Program Baseline.

The program baseline (further described in DoD Directives 5000.1 (reference (b)) and 5000.45 (reference (c))) is a formal agreement between the DAE, the SAE, the PEO, and the PM that briefly summarizes the program's functional specifications, cost, schedule, and operational effectiveness and suitability requirements, and other factors critical to the program's success. Except for changes made in the course of the Planning, Programming and Budgeting System, changes to this agreement require the approval of the DAE. A development baseline is established at Milestone II and a production baseline is established at Milestone III. The Production Baseline is updated at Milestone IV. Within the scope of the program baseline, the PM is given full authority to manage the program.

When a baseline breach (as defined in reference (c)) is anticipated for a development or production baseline, the PM shall submit a deviation report through the SAE to the Head of Component. The Head of Component shall then establish a review panel to review the deviation and shall submit a report to the DAE within 45 days.

The MNS shall serve as the program baseline at Milestone 0 for the concept exploration/definition phase. Annex B or the SCP shall be attached to the ADM and becomes the program baseline at Milestone I for the concept demonstration/validation phase. The production baseline established at Milestone III shall be updated to serve as the baseline for Milestones IV and V.

8. Milestones 0 Through V - Independent Cost Estimates (Component and OSD Cost Analysis Improvement Group).

For all major defense acquisition programs, the OSD CAIG will review the program office life-cycle cost estimate (Milestones I through V) and the Component independent life-cycle cost estimate (Milestones 0 through V). In addition, the CAIG will prepare its own independent cost estimate (ICE). The results of the CAIG review, as considered in the DAB process, will be used to satisfy the requirements of 10 U.S.C. 2434 (reference (p)).



9. Milestone II - Decision Coordinating Paper (DCP)/Updated TEMP.

The DCP is used to summarize the results of the concept demonstration/validation phase; to identify program alternatives; and to establish explicit program cost, schedule, operational effectiveness and suitability goals and thresholds. (See enclosure 4 for DCP format) The TEMP is updated in preparation for Milestone II.

10. Milestones II and III - Manpower Estimate Report.

The Manpower Estimate Report is an estimate of the total number of personnel (military, civilian, and contractor) required to operate, maintain, support, and train for the program upon full operational deployment. The report must also address any increases in personnel end strengths required for full operational deployment and deployment options in the event such increases are not authorized. This report must be provided by the Component and reviewed by the Assistant Secretary of Defense (Force Management & Personnel) (ASD(FM&P)), as part of the DAB process, before submittal by the Secretary of Defense to the Senate and House of Representatives Armed Services Committees at least 90 days in advance of Secretary of Defense approval at Milestones II and III for all major defense acquisition programs under 10 U.S.C. 2434 (reference (p)).

11. Milestones II and III - Acquisition Strategy Report (Competitive Alternative Sources).

The Acquisition Strategy Report describes the major defense acquisition program strategy that provides for the availability of competitive alternative sources throughout the period from the beginning of full-scale development through the end of production. For all major defense acquisition programs, this report must be provided by the Component and reviewed by the DAB prior to submittal to the Secretary of Defense by the DAE. Submittal must occur not later than the date of submission of the President's budget for the fiscal year in which the initial request is made for appropriations for FSD or production, whichever is the earlier. The Secretary of Defense must be notified of revisions to the report and the revision cannot be implemented until 60 days after the Secretary has received the revision (10 U.S.C. 2438 (reference (p))).

12. Milestone III - Beyond-Low Rate Initial Production (LRIP) Report.

The Beyond-LRIP Report is an assessment of the adequacy of operational test and evaluation and the operational effectiveness and suitability of the weapon system, subsystem, or component for combat prepared by the DOT&E. This report must be provided by the DOT&E to the Secretary of Defense, Under Secretary of Defense for Acquisition, and the Senate and House of Representatives Committees on Armed Services and Appropriations before the ADM may be signed documenting approval to proceed beyond LRIP for all major defense acquisition programs (DoD Directive 5000.3 (reference (a))).

13. Milestone III - Updated Decision Coordinating Paper (DCP)/Updated TEMP.

In preparation for Milestone III, the DCP is updated to describe program changes since Milestone II and to propose goal and threshold

revisions, if appropriate. The TEMP is also updated in preparation for a Milestone III.

14. Milestones IV and V - Updated Decision Coordinating Paper (DCP)/Updated TEMP/Updated Production Baseline.

In preparation for Milestones IV and V, the DCP, the TEMP, and the production baseline are updated to describe program status, changes, and issues.

G. RESPONSIBILITIES

1. DAB Executive Secretary. Designated by the DAB chair, the DAB Executive Secretary shall:

- a. Identify, for DAE approval, programs to be designated as DAB and Component programs; schedule reviews; and maintain and distribute, at least quarterly, status reports concerning DAB actions;
- b. Make administrative arrangements for meetings and control attendance in DAB reviews;
- c. Staff and coordinate the MNS;
- d. Assure final list of DAB issues is forwarded to the appropriate SAEs following the Acquisition Committee pre-DAB review session;
- e. Present the Acquisition Committees' reports to the DAB, in concert with the cognizant committee chairs, and discuss any unresolved issues;
- f. Prepare and coordinate the ADM with DAB principals;
- g. Document DAB recommendations to the Secretary of Defense and prepare final ADM to the Services for DAE signature; and
- h. Maintain a central reference file for current program documentation.

2. OSD Action Officers. The DAB Committee chairs shall appoint action officers to be the lead staff officials in the DAB process for each Category A major defense acquisition program. The Component's acquisition staff shall support the OSD action officer in the performance of the following duties outlined below. The OSD Action Officer shall:

- a. Coordinate DAB issues and DoD Component positions;
- b. Conduct planning meetings, when designated by the committee chair;
- c. Process, as appropriate, the SCP and DCP;
- d. Process the program baseline agreement;
- e. Ensure that all staff reports are compiled and distributed in preparation for DAB Acquisition Committee reviews;

f. Ensure that comments and recommendations from all OSD offices on DAB and program review-related documents are integrated into one coherent set of views and issues; and

g. Develop the Committee findings for presentation to the DAB.

H. EFFECTIVE DATE AND IMPLEMENTATION

This Instruction is effective immediately. DoD Components shall forward one copy of implementing documents to the Under Secretary of Defense for Acquisition within 120 days.



WILLIAM H. TAFT, IV  
Deputy Secretary of Defense

Enclosures - 5

1. References
2. Additional References (Not Cited in Document)
3. Mission-Need Statement (MNS) Format
4. System Concept Paper (SCP) and Decision Coordinating Paper (DCP) Formats
5. DAB Acquisition Committee Chart

REFERENCES (continued)

- (e) DoD Directive 4245.3, "Design to Cost," April 6, 1983
- (f) DoD Directive 5000.39, "Acquisition and Management of Integrated Logistic Support for Systems and Equipment," November 17, 1983
- (g) DoD Directive 4245.7, "Transition from Development to Production," January 19, 1984
- (h) DoD Directive 5000.38, "Production Readiness Reviews," January 24, 1979
- (i) Defense Intelligence Agency (DIA) Regulation 55-3, "Threat Support for Major System Acquisition," December 6, 1983
- (j) DoD Directive 5000.11, "Data Elements and Data Codes Standardization Program," December 7, 1964
- (k) DoD 5000.12-M, "DoD Manual for Standard Data Elements," October 1986, authorized by DoD Directive 5000.12, April 27, 1965
- (l) Title 10, United States Code, Section 2407, "Acquisition of Defense Equipment Under Cooperative Projects"
- (m) DoD Directive 5000.3 "Test and Evaluation," March 12, 1986
- (n) Title 10, United States Code, Section 2365, "Competitive Prototype Strategy Requirements"
- (o) DoD Directive 5000.45, "Baselining of Selected Major Systems," August 25, 1986.
- (p) Title 10, United States Code, Chapter 144, "Major Defense Acquisition Programs," Sections 2430-38
- (q) DoD Directive 5000.4, "OSD Cost Analysis Improvement Group," October 30, 1980
- (r) DoD Directive 4120.18, "Metric System of Measurement," January 28, 1980

### ADDITIONAL REFERENCES

The following references, while not specifically referred to in this Instruction, represent DoD policy on many facets of the acquisition system and are included here for the sake of completeness.

- (s) DoD Directive 4245.1, "Military Department Acquisition Management Officials," July 8, 1986
- (t) DoD Directive 5000.35, "Defense Acquisition Regulatory System," March 8, 1978
- (u) DoD Directive 4245.6, "Defense Production Management," January 19, 1984
- (v) DoD Directive 4005.1, "Industrial Preparedness Program," November 26, 1985
- (w) DoD Directive 2010.6, "Standardization and Interoperability of Weapons Systems and Equipment within the North Atlantic Treaty Organization," March 5, 1980
- (x) DoD Directive 5000.37, "Acquisition and Distribution of Commercial Products (ADCP)," September 29, 1978
- (y) DoD Directive 4120.3, "Defense Standardization and Specification Program," February 10, 1979
- (z) DoD Directive 4120.19, "DoD Parts Control Program," October 30, 1985
- (aa) DoD Directive 4155.1, "Quality Program," August 10, 1978
- (bb) DoD Directive 5000.40, "Reliability and Maintainability," July 8, 1980
- (cc) DoD Directive 3224.1, "Engineering for Transportability," November 29, 1977
- (dd) DoD Instruction 5000.36, "System Safety Engineering and Management," April 14, 1986
- (ee) DoD Directive 3224.3, "Physical Security Equipment: Assignment of Responsibility for Research, Engineering, Procurement, Installation, and Maintenance," December 1, 1976
- (ff) DoD Instruction 4245.4, "Acquisition of Nuclear-Survivable Systems," September 2, 1983
- (gg) DoD Directive 5160.65, "Single Manager for Conventional Ammunition," November 17, 1981
- (hh) DoD Instruction 4200.15, "Manufacturing Technology Program," May 24, 1985
- (ii) DoD Directive 5000.29, "Management of Computer Resources in Major Defense Systems," April 26, 1976
- (jj) DoD Directive 7750.5, "Management and Control of Information Requirements," August 7, 1986
- (kk) DoD Instruction 5010.12, "Management of Technical Data," December 5, 1968
- (ll) DoD 5000.19-L, VOL II, "Acquisition Management Systems and Data Requirements Control List," October 1985, authorized by DoD Directive 5000.19, March 12, 1976
- (mm) DoD 4140.43, "Department of Defense Liquid Hydrocarbon Fuel Policy for Equipment Design, Operation and Logistics Support," December 5, 1975
- (nn) DoD Directive 6050.1, "Environmental Effects in the United States of DoD Actions," July 30, 1979
- (oo) DoD 7920.1, "Life Cycle Management of Automated Information Systems (AIS)," October 17, 1978
- (pp) DoD Instruction 7000.3, "Selected Acquisition Reports," June 22, 1987
- (qq) DoD Directive 7000.2, "Performance Measurement for Selected Acquisitions," June 10, 1977

- (rr) DoD Instruction 5000.33, "Uniform Budget/Cost Terms and Definitions," August 15, 1977
- (ss) DoD Directive 5010.19, "Configuration Management," May 1, 1979
- (tt) DoD Instruction 7220.32, "Defense Acquisition Executive Summary," March 28, 1984
- (uu) DoD Directive 5105.40, "Defense Mapping Agency (DMA)," April 23, 1986
- (vv) DoD Directive 4650.1, "Management and Use of the Radio Frequency Spectrum," June 24, 1987
- (ww) DoD Instruction 5000.23, "System Acquisition Management Careers," December 9, 1986
- (xx) DoD Directive 5025.1, "Department of Defense Directives System," October 16, 1980
- (yy) DoD Instruction 7220.31, "Unit Cost Reports," January 17, 1986
- (zz) Defense Acquisition Circular 76-43 to the 1976 edition of the Defense Acquisition Regulation (Armed Services Procurement Regulation)

MISSION-NEED STATEMENT (MNS) FORMAT

Prepare MNS in format shown below. Do not exceed three pages. Identify any supporting documentation.

1. Defense Guidance Element. Identify the element of Defense Guidance to which the acquisition responds.
2. Mission and Threat. Identify the OUSD(A) mission area (numbers and title) and describe the mission area need. Also identify the related Defense Guidance mission area (numbers and title). Discuss the DIA-validated projected threat and the shortfalls of existing systems or facilities in meeting the threat. Comment on the timing of the need and the general priority of this acquisition relative to others in this mission area.
3. Alternative Concepts. Describe known alternatives that will be considered during the concept exploration/definition phase (including use of an existing U.S. or allied military or commercial system or product improvements of an existing system).
4. Cooperative Opportunities Document. Indicate whether or not a program addressing a similar need is in development or production by one of the Allied nations. If so, indicate whether that program could satisfy the military requirements of the United States. Assess the advantages and disadvantages of seeking to structure a cooperative development program with one of the Allied nations. Include a recommendation as to whether the Department of Defense should explore the feasibility and desirability of a cooperative development program with one of the other Allied nations.
5. Technology Involved. For known alternatives, discuss maturity of the technology planned for the selected acquisition design and manufacturing processes, with particular emphasis on remaining areas of risk. Discuss projected sustained industrial support for the planned baseline technology and the projected need for off-shore production and technology support. Discuss system and subsystem prototyping considerations.
6. Funding Implications. Discuss affordability, including the level or funding the Component is willing to commit to satisfy the need and whether this level will fully fund the program over the approved Defense Five-Year Defense Program (FYDP).
7. Constraints. Describe, as applicable, key boundary conditions for satisfying the need, such as reliability, maintainability, and survivability; logistics support, mapping, charting and geodesy support, manpower, personnel, training, and safety constraints; computer resources; standardization or interoperability within NATO or other DoD Components; and critical materials and industrial base considerations. Provide justification for any proposed nonuse of the metric measurement system (DoD Directive 4120.18 (reference (r))).
8. Acquisition Strategy. Provide a summary of salient elements of proposed acquisition strategy, such as program structure, competition, contracting approach, and acquisition streamlining.

SYSTEM CONCEPT PAPER (SCP) AND DECISION COORDINATING PAPER (DCP)  
FORMATS

Prepare SCP (for Milestone 1) and DCP (for Milestones II, III, IV and V) in format shown below. Do not exceed 12 pages for SCP and 18 pages for DCP, excluding the annexes. Use the additional length of the DCP primarily for expanded sections 7 through 9. Identify any supporting documentation.

1. Brief Description of the Acquisition. One short paragraph.
2. History. Summarize any previous guidance, decisions, and congressional actions.
3. Mission Area and Role. Describe how the program supports the identified OUSD(A) mission area in both broad and specific terms. Refer to Defense Guidance, if appropriate.
4. Threat Assessment. Describe DIA-validated threat, emphasizing interactive effects of the acquisition and the threat.
5. Shortfalls of Existing Systems. Describe inadequacies of existing systems or facilities.
6. Alternatives Considered. Identify all alternatives considered, including joint-Service common-use alternatives and the potential for single Service funding for joint efforts. Discuss rejected alternatives and reasons for their nonselection. If a new acquisition is proposed, discuss why use of an existing U.S. or allied military or commercial system or product improvement of an existing system was not selected.
7. Cooperative Opportunities Document. Indicate whether or not a program addressing a similar need is in development or production by one of the Allied nations. If so, indicate whether that program could satisfy the military requirements of the United States. Assess the advantages and disadvantages of seeking to structure a cooperative development program with one of the nations. Include a recommendation as to whether the Department of Defense should explore the feasibility and desirability of a cooperative development program with one or the Allied nations.
8. Description of Selected Alternative. Describe the acquisition in more detail than in subsection 6, above. Define the operational concept. Discuss commonality and how the preferred alternative avoids duplication with other systems. Discuss survivability (including nuclear) and standardization. Verify that the acquisition is justified in terms of program cost versus military worth of new or improved capability. Discuss readiness; sustainability; completeness or mapping, charting, and geodetic data bases and unique impacts and/or transformation requirements, manpower economy; manpower, personnel, training, and safety planning; and how they are to be achieved. If applicable, discuss electro-magnetic spectrum availability, and for Milestones II and III, host-nation spectrum availability and coordination. Do not duplicate from annexes.



9. Technological Risks of Selected Alternative. For Milestone I (SCP), identify key areas of technological and manufacturing producibility risk that must be reduced by R&D and validated by test and evaluation before Milestone II. Discuss system and subsystem prototyping considerations. For Milestone II (DCP), discuss test and evaluation results that show all significant risk areas have been resolved. Also for Milestone II, discuss the extent to which technology is in-hand and only engineering (rather than experimental) efforts remain. Discuss which components and quantities might be considered for low rate initial production (LRIP). For Milestone III (DCP), discuss operational test and evaluation results that demonstrate that the system is ready to proceed to full rate production.

10. Acquisition Strategy. Discuss general strategy for the entire program, and detailed strategy for proceeding to the next milestone. Emphasize program structure. Address specifically competition, contracting, and acquisition streamlining for all phases. Discuss planning for LRIP. Outline production planning to ensure an industrial base response that will support efficient manufacture and provide surge capacity, when appropriate. At Milestone II, verify that future cost and schedule are defined in detail and credible. At Milestone III, verify the credibility of production cost and appropriateness of the production/deployment schedule. Discuss program cost control measures. Discuss the appropriateness of multi-year procurement funding. At Milestones I-III, discuss whether the program should be a Defense Enterprise Program and a milestone authorization program. Do not duplicate from annexes. Indicate those DoD Directives, DoD Instructions, and management principles in enclosure 1 that will not be applied to the proposed system.

11. Known Issues. Discuss issues identified by the Military Services and by the DAB chair.

12. Decisions Needed. Summarize necessary decisions.

ANNEXES TO SCP AND DCP

Attachments - 5

1. Annex A: Program Structure Example
2. Annex B: Program Goals and Thresholds
3. Annex C: Program Resources - Cost Track Summary
4. Annex D: Program Resources - Funding Profile
5. Annex E: Summary of Life-Cycle Cost of Program Alternatives

**ANNEX A: PROGRAM STRUCTURE EXAMPLE**

**Note:** The schematic below is an example only and should not be construed as the only acceptable program structure to be followed rigidly. See DoD Directive 5000.1 (reference (b)) policy concerning tailoring of acquisition phases/milestones and acquisition strategy for major defense acquisition programs.

<b>FISCAL YEARS:</b>												
<b>MILESTONES:</b>	0	I	II	IIIA	III	IV	V					

**DEVELOPMENT:** RDT&E  
 PROTOTYPE DELIVERY EDM DELIVERY

**TEST & EVAL:** DT-I&OT-I DT-II&OT-II FOT&E

**PRODUCTION & DEPLOYMENT:**

LONG LEAD ITEMS  
 LRIP  
 TOOLING  
 FULL-RATE PRODUCTION ITEM DELIVERY  
 INITIAL DEPLOYMENT

- EDM: Engineering Development Model
- DT: Developmental Testing
- OT: Operational Testing
- IOC: Initial Operational Capability
- FOT&E: Follow-On Operational Testing & Evaluation



**ANNEX C: PROGRAM RESOURCES - COST TRACK SUMMARY**  
(Dollars in Millions)

	Constant FYXX Base Year 0			Escalated <sup>4</sup> \$
	(Date and Basis) <sup>2</sup> Initial Planning Estimate <sup>2</sup>	(Date) <sup>3</sup> ADM Estimate <sup>3</sup>	Current Estimate <sup>4</sup>	
<b>DEVELOPMENT PHASE</b>				
RDIAE (By Program Element)	( )6	( )6	( )6	( )6
Concept Exploration/Definition Phase				
Concept Demo/Validation Phase				
Full-Scale Development Phase				
Test Vehicle Development				
Test Vehicle Production				
Systems Test & Evaluation				
Other Development Costs				
Contingency/Risk Factor				
Total RDIAE				
MILCOM				
O&M <sup>5</sup>				
MILPERS <sup>5</sup>				
Total Development Phase				
<b>PRODUCTION PHASE</b>				
PROCUREMENT				
System Cost <sup>7</sup>				
Flyaway Cost				
(Provide one level of MBS Indenture based on program requirements)				
Other System Costs				
Initial Spares				
Other line item procurement <sup>8</sup>				
Total Procurement				
MILCOM				
O&M <sup>5</sup>				
MILPERS <sup>5</sup>				
Total Production Phase				

5000.2 (Attachment 3 to Encl 4)  
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**ANNEX C: PROGRAM RESOURCES - COST TRACK SUMMARY (Continued)**  
(Dollars in Millions)

Constant FYXX Base Year \$		Escalated <sup>4</sup> \$
(Date and Basis) <sup>2</sup> Initial Planning Estimate <sup>2</sup>	(Date) <sup>3</sup> ADM Estimate <sup>3</sup>	Current Estimate <sup>4</sup>

**TOTAL OPERATIONS & SUPPORT PHASE**

**TOTAL XX-YR LIFE-CYCLE ESTIMATE**

**AVERAGE ANNUAL SYSTEM OAS COSTS**

No. of Systems:                      No. of Years:

**MANPOWER**

**MILITARY MANPOWER**

Unit Manning

Program Totals (Active/Reserve)

**CIVILIAN MANPOWER**

- 1 Apply footnotes as required to explain the summary. Adjustments to format are authorized to accommodate program. Any adjustments will be decided on at the initial milestone planning meeting. Terms and definitions will be in accordance with DoD Instruction 5000.33 (reference (rr)).
- 2 Identify date and basis (MNS or otherwise) for initial planning estimate.
- 3 Identify date of previous Acquisition Decision Memorandum (ADM). Add columns as necessary for each successive ADM.
- 4 Show the preferred alternative current estimate in both constant (base year) and escalated (then year) dollar columns. Use current FYDP rates and ground rules for the escalated estimate.
- 5 Include other life-cycle related costs (such as installation, project manager office, and civilian salaries) funded by OAM and MILPERS appropriations during development or production phases.
- 6 Enter development and production quantity, as appropriate.
- 7 System cost is equal to weapon system cost as defined in reference (rr).
- 8 Enter industrial preparedness program (industrial facilities, manufacturing technology, and technology modernization) cost directly related to the system at hand and other system peculiar costs identified as a separate line item, or as a portion of a separate line item, in another part of the procurement budget. Identify each by the line item number and name (or program element and name) under which funding is required and the amount in each.

**NOTE:** Use footnotes to explain reasons for significant variations in estimate (such as, schedule slippage, congressional funding changes, OSD-directed program change, etc).

**ANNEX D: PROGRAM RESOURCES - FUNDING PROFILE 1, 2**  
 (Dollars in Millions)

As Of Date: \_\_\_\_\_ Initial? \_\_\_\_\_  
 FY \_\_\_\_\_ FY \_\_\_\_\_ FY \_\_\_\_\_ FY \_\_\_\_\_ FY \_\_\_\_\_ FY...2 \_\_\_\_\_ TOTAL PROGRAM

**ACQUISITION QUANTITIES<sup>3</sup>**

Development Qty: Funded Delivered  
 Production Qty: Funded Delivered

**DEVELOPMENT PHASE RECMTS**

RDTEAE (By Program Element)  
 Exploration/Definition Phase  
 Demonstration/Validation Phase  
 Full-Scale Development Phase  
 Test Vehicle Development  
 Test Vehicle Production  
 Systems Test & Evaluation  
 Other Development Costs  
 Contingency/Risk Factor  
 Total RDTEAE  
 (Total RDTEAE Approved FYDP) (Show as Non-add entries in parenthesis)

MILCOM  
 OAH<sup>4</sup>  
 MILPERS<sup>4</sup>

**Total Development Phase**

**PRODUCTION PHASE RECMTS**

PROCUREMENT<sup>5</sup>  
 System Cost<sup>6</sup>  
 Flyaway, Rollaway, Sallaway (provide one level of WBS Indenture based on program requirements)  
 Other System Costs  
 Advance Proc Prior Yr (Show as minus entries)  
 Advance Proc Current Yr (Show as plus entries)  
 Initial Spares  
 Other line item Procurement<sup>7</sup>  
 Total Procurement  
 (Total Procurement Approved FYDP) (Show as Non-add entries in parenthesis)

MILCOM  
 OAH<sup>4</sup>  
 MILPERS<sup>4</sup>

**Total Production Phase**

**ANNEX D: PROGRAM RESOURCES - FUNDING PROFILE 1.2 (Continued)**

(Dollars in Millions)

	Initial?		FY		FY		FY		TOTAL PROGRAM
	FY		FY		FY		FY		

**OPERATIONS & SUPPORT PHASE REQTS**

MILPERS

O&M

PROCUREMENTS

RD7&E

Total Ops & Support Phase

**OTHER REQUIREMENTS**

During Development

During Production

During Ops & Support

Industrial Capacity Investment

Total Other Requirements

**TOTAL N-YR LIFE-CYCLE REQMS**

- 1 Provide profile for each alternative in constant (base year) and in escalated (then year) dollars using current FYDP rates/ground rules for the program baseline quantity stream. For the preferred alternative, provide two additional funding profiles for accelerated quantity streams. The first will be based on optimum peacetime surge production rates/rate acceleration attainable from baseline material & facility resources (including reasonable line-of-balance enhancements to that baseline). The second will be based on mobilization production rates/rate acceleration required to meet warfighting demand including any necessary enhancements to baseline material & facility resources. 2 Apply footnotes as required to explain each profile. Adjustments to format are authorized to accommodate program. Any adjustments will be decided on at the initial milestone planning meeting. Terms and definitions will be used per DoD Instruction 5000.33 (reference (rr)). Use as many columns as necessary to show every FY of acquisition funding from initial to last FY, and operations and production incremental units to be funded and delivered during each FY. 3 Identify other life-cycle related costs (such as installation, project manager office, and civilian salaries) funded by other appropriations; for example, O&M and MILPERS during development or production phases or later. 4 Enter the costs by appropriation, such as, Aircraft Procurement, Missile Procurement, Shipbuilding & Conversion, or Other Procurement. If more than one applies, identify each separately. 5 System cost is equal to weapon system cost as defined in reference (rr). 6 Identify industrial preparedness program (Industrial facilities, manufacturing technology, and technology modernization) cost directly related to the system at hand and other system peculiar costs identified as a separate line item, or as a portion of a separate line item, in another part of the procurement budget. Identify each by the line item number and name, or program element (PE) and name, under which funding is required and the amount in each. 7 Enter Procurement costs associated with operation/owning a weapon system, such as modifications, replenishment spares, and support equipment, and RD7&E costs in operational PEs (other than in Program 6) such as for mods. 8 Enter system-peculiar costs carried elsewhere in the budget such as, installation, project manager's office, civilian salaries, shore-based training facilities, etc.



**ANNEX E: SUMMARY OF LIFE-CYCLE COST OF PROGRAM ALTERNATIVES**

As of Date: \_\_\_\_\_

ALTERNATIVE	CONSTANT DOLLARS (in Millions)			TOTAL XX-YEAR LIFE CYCLE
	DEVELOPMENT	PRODUCTION	OPERATIONS AND SUPPORT	
A 1				
A 2				
A 3				
0				
0				
0				

4 2

ALTERNATIVE	CURRENT DOLLARS (in Millions)			TOTAL XX-YEAR LIFE CYCLE
	DEVELOPMENT	PRODUCTION	OPERATIONS AND SUPPORT	
A 1				
A 2				
A 3				
0				
0				
0				

# DEFENSE ACQUISITION BOARD ACQUISITION COMMITTEES

DODI 5000.2 (End 5)

## DEFENSE ACQUISITION BOARD

CS 1

