PRINCIPAL DEPUTY UNDER SECRETARY OF DEFENSE
3015 DEFENSE PENTAGON
WASHINGTON, DC 20301-3015

ACQUISITION,
TECHNOLOGY
AND LOGISTICS

APR 2 0 2011

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Document Streamlining- Program Strategies and Systems Engineering Plan

The September 14th Better Buying Power memorandum directed a review of the documentation required by DoDI 5000.02 in support of the acquisition process. My principal concern with our documentation was that page count had substantially increased, but necessary and important content was still not included. The task force formed to address that issue initiated a comprehensive review. As a result of their initial recommendations, I have directed the following actions:

Document Streamlining

The Technology Development Strategy/Acquisition Strategy (TDS/AS) and the Systems Engineering Plan (SEP) will be streamlined consistent with the attached annotated outlines. These outlines will guide document preparation. Each outline has been completely re-written and re-focused on information central to the purpose of the document. Descriptions have been minimized and data emphasized wherever feasible. The revised documents are intended to be shorter while providing the information necessary to support effective program planning and management decisions.

The Life Cycle Sustainment Plan has been separated from the AS and will be revised to improve our focus on sustainment. The outline for that document will be provided as soon as available.

Delegated Approval Authority

Approval authority for the Corrosion Prevention Control Plan (formerly a part of the AS), Programmatic ESOH Evaluation (PESHE), and Item Unique Identification (IUID) Implementation Plan, currently at OSD level for ACAT I programs, is delegated to the Component Acquisition Executive. Consequently, while these documents are still required, they will no longer be submitted for OSD staff approval. Design considerations related to each will be captured in the SEP. Program Managers will provide "hotlinks" in the SEP that will permit responsible staff the opportunity to monitor system compliance.

These actions constitute expected business practice and are effective immediately. Additional document outlines will be distributed as they are completed. The revised outlines will be documented in the Defense Acquisition Guidebook and referenced in the next update to DoDI 5000.02.

Frank Kendall

cc:
All CAEs
DCMA
DCAA
DCMO
DASD(PSA)
ARA
DPAP

TECHNOLOGY DEVELOPMENT STRATEGY

[or]

ACQUISITION STRATEGY

FOR

[PROGRAM NAME]

[Sample Outline]

20 April 2011

Version 1.0, 04/20/2011

PROGRAM NAME

SUBMITTED BY:

_____ _____
Date

wwwwwwwwwwwwwwwwwww

Program Manager, *program name*

CONCURRENCE:

_____ _____
Date

xxxxxxxxxxxxxxxxxxx

Program Executive Officer (PEO)

_____ _____
Date

yyyyyyyyyyyyyyyyyyyy

DoD Component Acquisition Executive (CAE)

APPROVAL:

_____ _____
Date

zzzzzzzzzzzzzzzzzzzzzz

Under Secretary of Defense (Acquisition, Technology and Logistics) (or as applicable)

[Note: Include a Table of Contents]

1. Purpose. State the reason the program strategy (i.e., the Technology Development Strategy or the Acquisition Strategy) is being prepared or updated (e.g., milestone review, full rate production decision, change in strategy, etc.).

2. Capability Need

2.1. Summarize the requirement. Indicate the key operational and sustainment requirements for this system (i.e., the time-phased capability requirements as described in the Initial Capabilities Document, Capability Development Document, and/or Capability Production Document). Highlight system characteristics driven by interoperability and/or joint integrated architectures, capability areas, and family- or system-of-systems.

2.2. Summarize the expected operational mission of this program. Identify the user and summarize the user's Concept of Operations (CONOPS). Indicate how the program fits into current and future integrated architectures.

2.3. Summarize the threat assessment in relation to the capabilities or operational concepts the system will support (see the applicable System Threat Assessment document for details). Specify which elements of the threat (if any) are not yet fully defined, and which elements of the threat (if any) will not currently be countered by the system capabilities or CONOPS. Include a projected plan/schedule to define and counter the remaining threat elements.

2.4. If this is a Technology Development Strategy, summarize the Net-Centric Data Strategy, as required by DoD Directive 8320.02. At subsequent milestone decisions, summarize the Net-Centric Data Strategy in the Information Support Plan.

2.5. Include an Operational View (OV)-1 Illustration. (See example in Figure 1, below.)

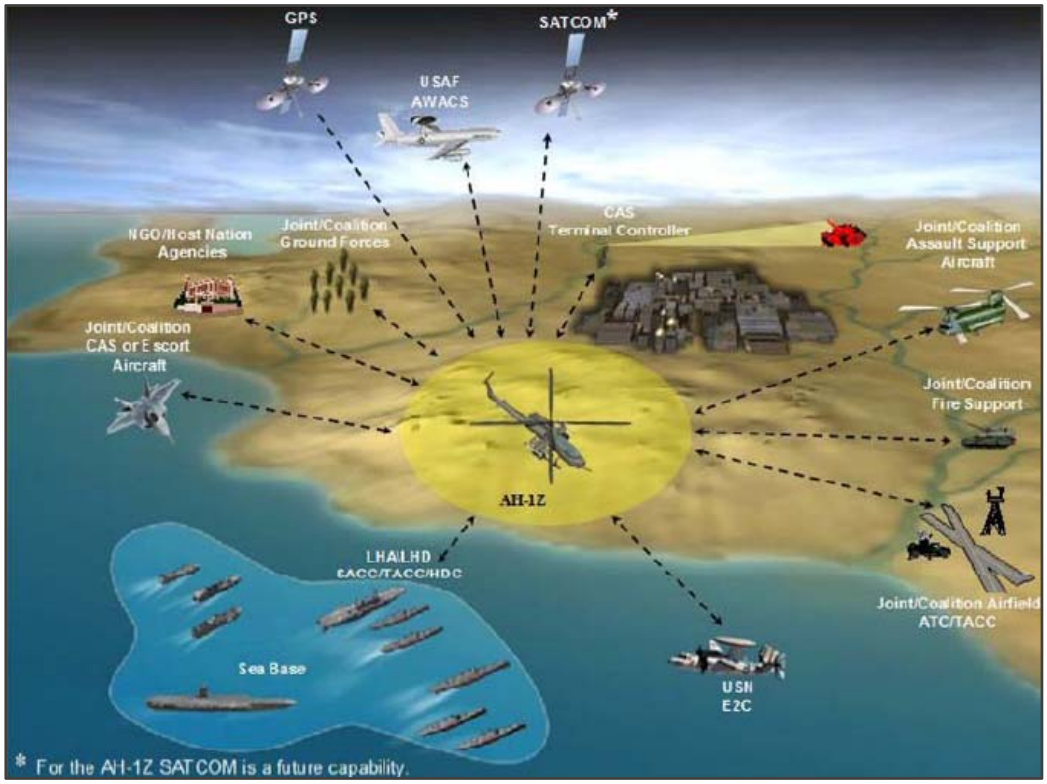


Figure 1. Example OV-1 Illustration

2.6. For Milestone B, provide a reference design concept for the product showing major subsystems and features (one or more drawings as needed to describe or illustrate the expected features of the product; see the example in Figure 2).

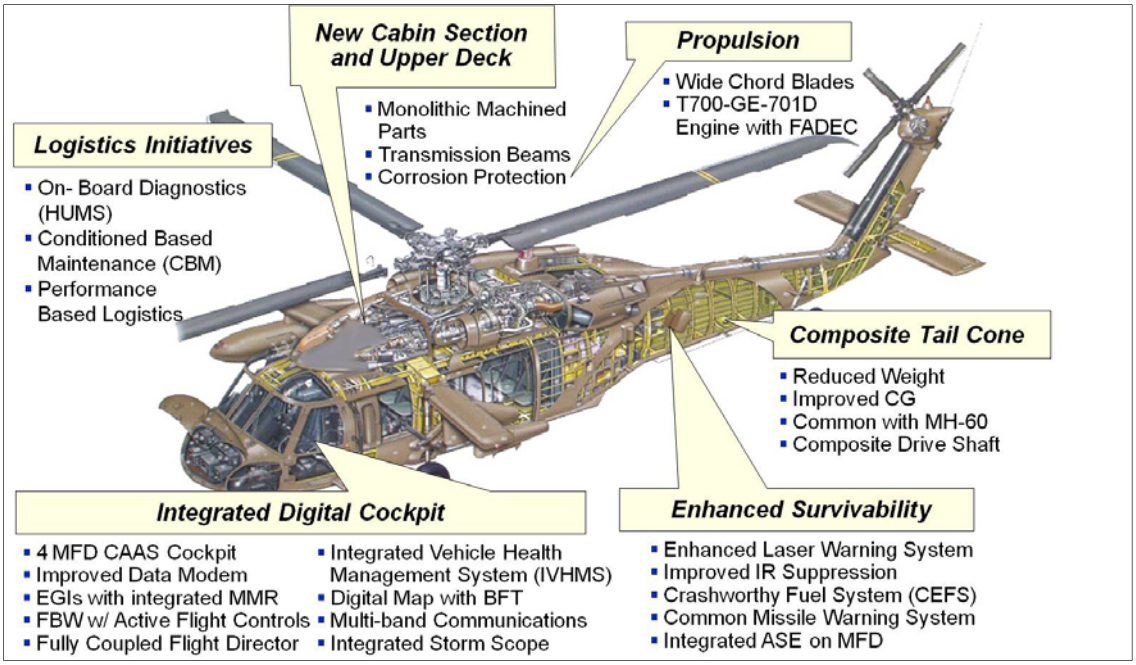


Figure 2. Sample Drawing of the Reference Design Concept

3. Acquisition Approach. Indicate whether the program strategy will be evolutionary or single step to full capability. Note: If this program employs an evolutionary acquisition approach, this strategy will primarily apply to the current increment, while occasionally addressing some topics in the context of the overall program.

3.1. If this program employs an evolutionary acquisition approach, summarize the cost, schedule, and performance drivers for the increment under consideration, and the plan to transition from the initial increment to later increments.

3.2. Specify any unique program circumstances, such as transitioning from a technology project, selection as a special interest program, etc.

3.3. Indicate whether this program will replace an existing system, is a modification to an existing system, or is a new capability.

3.4. Indicate whether this is a New Start program. Verify that the appropriate Congressional notifications have been completed for a New Start. (Reference DoD 7000.14-R, *DOD Financial Management Regulation*, Volume 3, Chapter 6 for guidance on new start determinations.)

3.5. Indicate whether this is a joint program. If so, specify the joint nature and characteristics of the program. Identify the Service(s) or DoD Components involved, state the key Service-specific technical and operational differences in the end item deliverables, and provide the principal roles and responsibilities of each DoD Component in the management, execution, and funding of the program.

3.6. If this is a Technology Development Strategy, identify the feasible technical approaches for developing the approved materiel solution, the impact of prior acquisitions on those approaches, and any related preceding effort.

3.7. If this strategy supports the Milestone B or C decision, in a table showing quantity per year, indicate the total planned production quantity and provide the LRIP quantity. Summarize the Low-Rate Initial Production (LRIP) plan. If the planned LRIP quantity exceeds ten percent of the total planned production quantity, provide the justification. (Not applicable to software-intensive programs without production components.)

4. Tailoring

4.1. Consistent with statutory and federal regulatory requirements, the Program Manager (PM) and Milestone Decision Authority (MDA) may tailor the phases and decision points to meet the specific needs of the program. If tailoring is planned, state what is being proposed and why.

4.2. List all requests for either regulatory policy waivers or waivers permitted by statute. Include a table similar to notional Table 1.

WAIVER REQUESTS					
Requirement to Be Waived	**Type: Regulatory or Statutory**	**Granting Authority**	**Rationale**	**Required by [date or event]**	**Status**

Table 1. Notional Table of Program Waiver Requests

5. Program Schedule

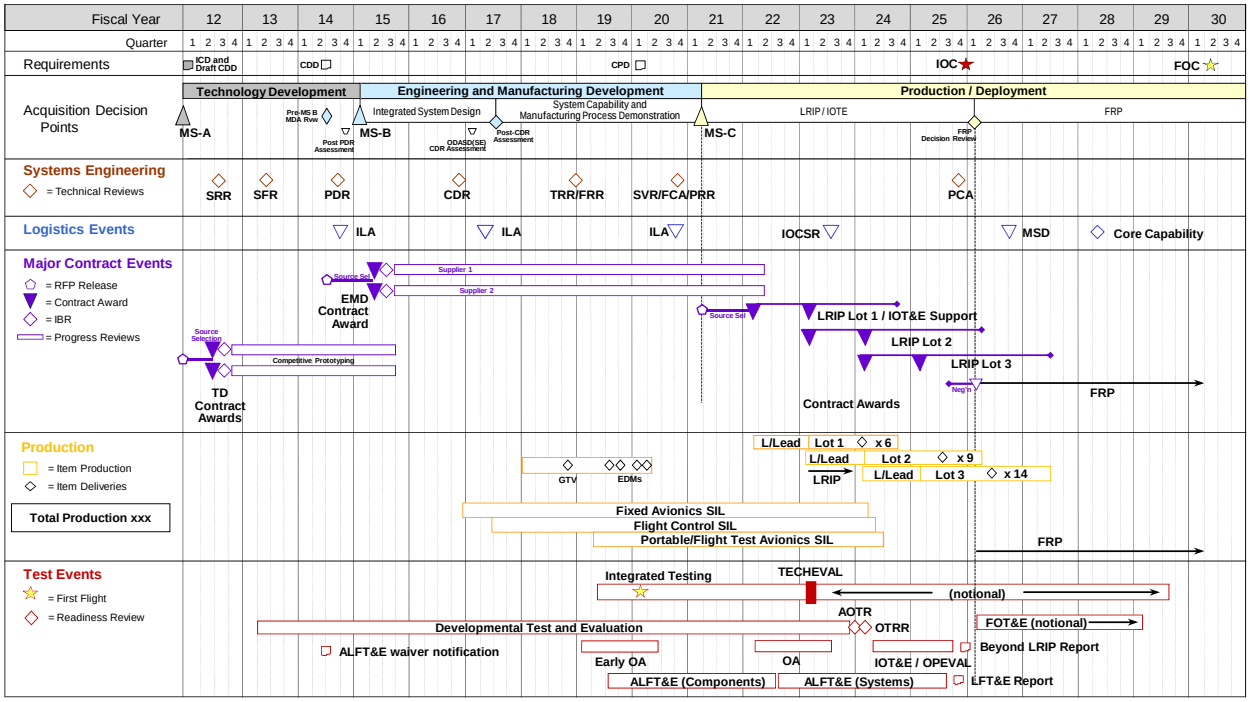
5.1. Provide a detailed graphic illustrating program milestones, phases, and events. Depicted events will vary by program, but will minimally include key acquisition decision points; principal systems engineering and logistics activities such as technical reviews and assessments; planned contracting actions such as request for proposal (RFP) release, source selection activity, and contract awards; production events and deliveries; and key test activities. (Figure 3 is a notional depiction of the expected level of detail. For example, contract details will vary with the contracting approach and the plan for competition and multiple suppliers; the use of options, re-competes, and/or new negotiated sole source; etc.)

5.2. Indicate the basis for establishing delivery or performance-period requirements. Explain and justify any urgency if it results in concurrency of development and production or constitutes justification for not providing for full and open competition.

5.3. Summarize the analysis justifying the proposed program schedule (list analogous programs or models used to derive schedule).

5.4. Briefly discuss the activities planned for the phase following the milestone (or other decision event) for which approval is sought.

Figure 3. Notional depiction of the Integrated Schedule for Program



AOTR: Assessment of Operational Test Readiness
ALFT&E: Alternative Live Fire Test & Evaluation
CDR: Critical Design Review
EDM: Engineering Development Model
EMD: Engineering & Manufacturing Development
FCA: Functional Configuration Audit
FOT&E: Follow-On Operational Test & Evaluation
FRP: Full Rate Production
FRR: Flight Readiness Review
GTV: Ground Test Vehicle
ILA: Integrated Logistics Analysis

IOCSR: Initial Operational Capability Supportability Review
IOT&E: Initial Operation Test & Evaluation
LFT&E: Live Fire Test & Evaluation
LRIP: Low-Rate Initial Production
MDA: Milestone Decision Authority
MSD: Material Support Date
OA: Operational Assessment
OASD(SE): Office of the Assistant Secretary of Defense (Systems Engineering)
OPEVAL: Operational Evaluation

OTRR: Operational Test Readiness Review
PCA: Physical Configuration Audit
PDR: Preliminary Design Review
PRR: Production Readiness Review
SFR: System Functional Review
SIL: Systems Integration Lab
SRR: System Requirements Review
SVR: System Verification Review
TD: Technology Development
TECHEVAL: Technical Evaluation
TRR: Test Readiness Review

5.5. Interdependencies. Specify programmatic interdependencies with other programs. Discuss the relationship of the interdependencies with program activity on the critical path. If any memorandums of agreement are required to formalize these relationships/interfaces, list them in the format presented in Table 2. Identify the interface (i.e., the system this product interfaces with); the agency that owns the other system; the authority (e.g., PEO, CAE, delegated PM) responsible for controlling the interface (i.e., the individual who can set the requirement; direct the solution to the interface issue; and direct who provides the funding for the solution); the required by date; and the impact if not completed.

REQUIRED MEMORANDA OF AGREEMENT				
Interface	**Cooperating Agency**	**Interface Control Authority**	**Required By Date**	**Impact if Not Completed**

Table 2. Notional table of Required Memoranda of Agreement

5.6. If using an evolutionary acquisition approach with concurrent increments, state the relationship between the milestones and activities in one increment to those in the other increment(s). Include criteria for moving forward to subsequent phases of the same or other increments.

6. Risk and Risk Management

6.1. Summarize the approach used to identify, analyze, mitigate, track, and control performance/technical/manufacturing cost, schedule, sustainment, and programmatic risk throughout the life of the program.

6.2. List and assess any program interdependency issues that could impact execution of the acquisition strategy. If the program is dependent on the outcome of other acquisition programs or must provide capabilities to other programs, the nature and degree of risk associated with those relationships should be specified. Summarize how these relationships and associated risk will be managed at the PM, PEO, and DoD Component levels.

6.3. List the key program technologies, their current technology readiness levels (TRL), the basis for including a technology (e.g., available alternative or low-risk maturation path) if it is below the TRL 6 benchmark for Milestone B, and the key engineering and integration risks. NOTE: Key technologies should include those technologies that are part of the system design and those associated with manufacturing the system.

6.3.1. If conducted, summarize the results of the Technology Readiness Assessment.

6.3.2. Summarize technology maturation plans and risks for each key technology, engineering risk, and integration risk identified.

6.3.3. Briefly explain how the program‘s strategy is appropriate given the maturity of the system technology and design.

6.4. If the strategy is for the Technology Development Phase:

6.4.1. Identify alternate technologies that could be employed if a technology chosen for the system does not achieve the maturity necessary to incorporate it into the baseline system design and define their impact on system performance and cost.

6.4.2. Identify the specific prototyping activities that will be conducted during Technology Development and specify how those activities and any others planned for Engineering and Manufacturing Development will be used to reduce program cost, schedule, and/or performance risk.

6.5. Identify the principal programmatic risks (e.g., staffing, resources, infrastructure, industrial base, etc.) and summarize mitigation plans, including key risk-reduction events.

6.6. Identify any risks that have been deferred to future increments. Explain why these risks were deferred and whether any residual risks remain in this increment.

6.7. The acquisition strategy at the Full-Rate Production/Full Deployment Decision Review should identify principal manufacturing (if applicable)/sustainment/operational risks, and summarize mitigation plans, to include key risk reduction events.

7. Business Strategy

7.1. Competition Strategy. Explain how a competitive environment will be sought, promoted, and sustained throughout all program phases.

7.1.1. Summarize the competition strategy for the upcoming phase

7.1.2. In situations where head-to-head competition is not possible, explain how dissimilar competition or other competitive approaches will be used

7.1.3. Indicate how the results of the previous acquisition phase impact the competition strategy for the approaching phase

7.1.4. Indicate how the competition strategy facilitates execution of the acquisition strategy

7.2. Market Research. Summarize the research conducted and the results of market research. Indicate the specific impact of those results on the various elements of the program. Summarize

plans for continuing market research to support the program throughout development and production. Market research information provided in the strategy should be sufficient to satisfy the requirements of 10 United States Code (USC) 2366a and 10 USC 2366b. For more information, see Federal Acquisition Regulation (FAR) Part 10, *Market Research*, and Defense Federal Acquisition Regulation Supplement (DFARS) section 210.001).

7.3. Advance Procurement. Indicate whether advance procurement of long lead items is planned. List highest dollar value items. The Technology Development Strategy/Acquisition Strategy must clearly indicate the intention to employ advance procurement. NOTE: The MDA must separately and specifically approve advance procurement if authorization is sought prior to the applicable milestone decision. See Defense Acquistion Guidebook (DAG) Chapter 2 for additional information.

7.4. Sustainment Strategy. The details of program sustainment planning are included in the Life Cycle Sustainment Plan, which will be prepared and approved as a separate document. This portion of the strategy should:

7.4.1. Specify the contracting strategy to provide product support throughout the system life cycle. The sustainment strategy should reflect the Maintenance or Support CONOPS and consider: impacts to system capability requirements; responsiveness of the integrated supply chains across government and industry; maintaining long-term competitive pressures on government and industry providers; and providing effective integration of weapon system support that is transparent to the warfighter and provides total combat logistics capability.

7.4.2. State the assumptions used in determining whether contractor or agency support will be employed, both initially and over the life of the acquisition, including consideration of contractor or agency maintenance and servicing (see FAR Subpart 7.3), support for contracts to be performed in a designated operational area or supporting a diplomatic or consular mission (see FAR section 25.301); and distribution of commercial items.*

** Note: Items marked with an asterisk (*) in this section are not required for the Technology Development Phase or Technology Development Strategy.*

7.4.3. Provide an overview of the sustainment-related contract(s) including how the integrated product support package will be acquired. The discussion should provide:

7.4.3.1. The performance measures being used (including the extent to which it is traditional transaction based/process focused and performance-based/outcome focused);

7.4.3.2. The portion of the system covered with the associated sustainment-related functions;

7.4.3.3. How the support concept ensures integration with other logistics support and combat support functions to optimize total system availability while minimizing cost and the logistics footprint;

7.4.3.4. How the product support strategy will ensure the selection of best value support providers, maximize partnering, and advocate integrated logistics chains in accordance with DoD product support objectives;

7.4.3.5. How manpower and spares will be optimized;*

7.4.3.6. Efforts to ensure secure and integrated information systems across industry and government that enable comprehensive supply chain integration and full asset visibility;*

7.4.3.7. Dedicated investments needed to achieve continuous improvement of weapon system supportability and reduction in operating costs;

7.4.3.8. How performance expectations (as defined in performance agreements) will be compared to actual performance results (post Milestone C);*

7.4.3.9. If Interim Contract Support (ICS) is planned, the ICS requirements, approach, and a plan to transition to normal sustainment support.*

7.4.3.10. If the strategy includes contractor logistics support (CLS), indicate how CLS contract flexibility will support the sustainment concept;* and

7.4.3.11. How the program will ensure product support integration throughout the system life cycle.

7.5. Major Contract(s) Planned. For each contract with an estimated total value greater than $100 million dollars ($40 million dollars if during the Technology Development Phase), including all options:

7.5.1. Provide a table (see example Table 3) that identifies the purpose, type, value, performance period, and deliverables of the contract.

MAJOR CONTRACTS					
Contract	**Purpose**	**Type**	**Value**	**Performance Period**	**Major Deliverables**

Table 3. Notional Table of Major Contracts

7.5.1.1. Specify what the basic contract buys; how major deliverable items are defined; options, if any, and prerequisites for exercising them; and the events established in the contract to support appropriate exit criteria for the phase or intermediate development activity.

7.5.1.2. Identify the contract type(s) and period(s) of performance. The acquisition strategy shall provide the information necessary to support the decision on contract type. (See FAR Part 16 and Section 818, Public Law (P.L.) 109-364 for additional direction.)

7.5.1.3. Address the alignment of the contract with the overarching acquisition strategy and the competition strategy.

7.5.1.4. Indicate whether a competitive award, sole source award, or multiple source development with down select to one production contract is planned.

7.5.1.5. If expecting to use other than full and open competition, cite the authority and indicate the basis for applying that authority, identify source(s), and explain why full and open competition cannot be obtained.

7.5.1.6. Indicate how subcontract competition will be sought, promoted, and sustained throughout the course of the acquisition. Identify any known barriers to increasing subcontract competition and address how to overcome them.

7.5.1.7. Specify breakout plans for each major component or sub-system as well as spares and repair parts.

7.5.1.8. Assess the comparative benefits of awarding a new contract vice placing a requirement under an existing contract. (10 USC 2306, 10 USC 2304.)

7.5.1.9. If planning to award a new indefinite delivery contract, indicate how many contracts are planned to be awarded. If a single award is planned, explain why multiple awards are not feasible. Indicate the ordering period.

7.5.1.10. Undefinitized contracts. Indicate if an undefinitized contract will be awarded and provide the rationale. Identify steps to avoid using an undefinitized

contract, and list the planned incentives to motivate the contractor to achieve timely definitization.

7.5.2. Provide the planned contract incentives:

7.5.2.1. Provide the specific incentive structure. Indicate how the incentive structure will motivate contractor behavior resulting in the cost, schedule, and performance outcomes required by the government for the contract and the program as a whole.

7.5.2.2. If more than one incentive is planned for a contract, the strategy should explain how the incentives complement each other and do not conflict with one another.

7.5.3. Summarize the financial reporting that will be required by the contractor on each contract, including requirements for Earned Value Management.

7.5.4. Identify the source selection evaluation approach (e.g., Trade-off or Lowest Price Technically Acceptable) and briefly summarize planned procedures (10 USC 2305).

7.5.4.1. Highlight the considerations influencing the proposed source selection procedures. Indicate how these may change from phase to phase.

7.5.4.2. State the timing for submission and evaluation of proposals. Identify the criteria that will be used to select the winning bidder. Indicate how those criteria reflect the key government goals for the program.

7.5.5. Sources

7.5.5.1. List the known prospective sources of supplies or services that can meet the need. Consider required sources of supplies or services (see FAR Part 8), and sources identifiable through databases including the government-wide database of contracts and other procurement instruments intended for use by multiple agencies available at https://www.contractdirectory.gov/contractdirectory/.

7.5.5.2. Based on results of market research, identify the specific opportunities for:

- small business,
- veteran-owned small business,
- service-disabled veteran-owned small business,
- HUBZone small business,
- small disadvantaged business, and
- women-owned small business concerns, and

specify how small business participation has been maximized at both the direct award and subcontracting levels (see FAR Part 19).

7.5.6. Contract Bundling or Consolidation

7.5.6.1. If the contract is a bundled acquisition (consolidating two or more requirements for supplies or services, previously performed under smaller contracts, into a single contract that is likely to be unsuitable for award to a small business), indicate the specific benefits anticipated to be derived from bundling. Reference FAR section 7.107, *Acquisition Planning*. (15 USC 644)

7.5.6.2. If applicable, identify the incumbent contractors and the contracts affected by the bundling.

7.5.6.3. Per DFARS section 207.170, if the acquisition strategy proposes consolidation of contract requirements with an estimated total value exceeding $6 million, provide: (1) the results of market research; (2) identification of any alternative contracting approaches that would involve a lesser degree of consolidation; and (3) a determination by the senior procurement executive that the consolidation is necessary and justified.

7.5.7. Subcontracting Plan / Small Business Participation. When FAR Subpart 19.7 applies, the acquisition strategy should establish maximum practicable individual socio-economic subcontracting goals, meaningful small business work, and incentives for small business participation.

7.5.7.1. Outline planned award evaluation criteria concerning small business utilization in accordance with FAR Subpart 15.3, and DFARS Subpart 215.3 regarding source selection; and

7.5.7.2. Summarize the rationale for the selection of the planned subcontract tier or tiers.

7.5.7.3. Indicate how prime contractors will be required to give full and fair consideration to qualified sources other than the prime contractor for the development or construction of major subsystems and components.

7.5.8. Identify any special contracting considerations: list any unique clauses or special provisions (e.g., any contingent liabilities (i.e., economic price adjustment or business base clauses, termination liability, etc.)) or special contracting methods (see FAR Part 17) included in the contract; list any special solicitation provisions or FAR deviations required (see FAR Subpart 1.4).

7.5.9. Identify any planned use of government-furnished special test equipment, unique tooling, or other similar contractual requirements.

7.5.10. Specify how testing and systems engineering requirements, including life-cycle management and sustainability requirements, have been incorporated into contract requirements.

7.5.10.1. Identify the engineering activities to be stated in the RFP and required of the contractor to demonstrate the achievement of the reliability and maintainability design requirements.

7.5.10.2. Provide a table (see example Table 4) to specify how the sustainment key performance parameter thresholds have been translated into reliability and maintainability design and contract specifications. Table 4, as presented here, is a sample. The actual format of this table may be varied to suit the nature of the procurement or to add additional requirements. The reliability threshold is often expressed as Mean Time Between Failure (MTBF). Use the appropriate life units (e.g., hours, cycles, etc.). "MTTR" is "mean time to repair;" "N/A" may be entered if an item is not applicable.

Reliability and Maintainability Requirements		
Parameter	**Threshold**	**Contract Specification Requirement**
Reliability (e.g., MTBF)		
Maintainability (e.g., MTTR)		

Table 4. Reliability and Maintainability Requirements

7.5.11. Indicate whether a warranty is planned, and if so, specify the type and duration; summarize the results of the supporting Cost Benefit Analysis. (See FAR Subpart 46.7 and DFARS Subpart 246.7.)

7.5.12. If this strategy is for Milestone C or later, indicate whether the production program is suited to the use of multiyear contracting (10 USC 2306b). Indicate any plans for multiyear contracting and address compliance with 10 USC 2306c and Office of Management and Budget (OMB) Circular A-11.

7.5.13. Indicate whether leasing was considered (applies to use of leasing in the acquisition of commercial vehicles and equipment) and, if part of the strategy, economically justify that

leasing of such vehicles is practicable and efficient and identify the planned length of the lease.

7.5.14. Modular Contracting (Major IT Programs only). Quantify the extent to which the program is implementing modular contracting (41 USC 434).

7.5.15. Payment. Identify financing method(s) planned and whether these provision(s) will be flowed down to subcontractors. Indicate if early progress payments will be traded off for lower prices in negotiations.

7.5.16. Provide any other pertinent information that may enhance understanding of the contracting strategy.

7.6. Technical Data Rights Strategy (formerly the Data Management Strategy). Summarize the Technical Data Rights strategy for meeting product life-cycle data rights requirements and to support the overall competition strategy. Include:

7.6.1. Analysis of the data required to design, manufacture, and sustain the system as well as to support re-competition for production, sustainment, or upgrade. The strategy should consider, but is not limited to, baseline documentation data, analysis data, cost data, test data, results of reviews, engineering data, drawings, models, and Bills of Materials (BOM);

7.6.2. How the program will provide for rights, access, or delivery of technical data the government requires for the system's total life cycle sustainment. Include analysis of data needs to implement the product support life cycle strategy including such areas as materiel management, training, Information Assurance protection, cataloging, open architecture, configuration management, engineering, technology refreshment, maintenance/repair within the technical order (TO) limits and specifically engineered outside of TO limits, and reliability management;

7.6.3. The business case analysis calculation, conducted in concert with the engineering tradeoff analysis, that outlines the approach for using open systems architectures and acquiring technical data rights;

7.6.4. The cost benefit analysis of including a priced contract option for the future delivery of technical data and intellectual property rights not acquired upon initial contract award; and

7.6.5. Analysis of the risk that the contractor may assert limitations on the government's use and release of data, including Independent Research and Development (IRAD)-funded data (e.g., require the contractor to declare IRAD up front and establish a review process for proprietary data).

7.7. Contract Management

7.7.1. Contract administration. Summarize how the contract(s) will be administered. Include how inspection and acceptance corresponding to the work statement's performance criteria will be enforced (see FAR Part 42).

7.7.2. Priorities, allocations, and allotments. When urgency of the requirement dictates a particularly short delivery or performance schedule, certain priorities may apply. If so, specify the method for obtaining and using priorities, allocations, and allotments, and the reasons for them (see FAR Subpart 11.6).

8. Cost and Funding

8.1. Investment Program Funding and Quantities. Provide a copy of the program's "Investment Program Funding and Quantities" Chart (see Figure 4), with a current "as of date." A template and instructions for the development of this chart are provided at: https://extranet.acq.osd.mil/dab/what_funding_chart.html (login with password or Common Access Card required).

Pre-OIPT/OIPT/DAB Funding Chart version PB12	**Program Funding & Quantities,** as of mm/dd/yyyy										
($ in Millions / Then Year)	**Prior**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**	**FY15**	**FY16**	**FY12-16**	**To Comp**	**Prog Total**
RDT&E											
Prior $ (PB 11)	106.4	6.7	8.3	17.2	7.1	0.0	0.0	0.0	24.3	0.0	145.7
Current $ (PB 12)	106.4	5.0	4.2	1.2	6.9	16.9	7.1	3.0	35.1	0.0	150.7
Delta $ (Current - Prior)	0.0	(1.7)	(4.1)	(16.0)	(0.2)	16.9	7.1	3.0	10.8	0.0	5.0
Required $	110.0	7.0	8.1	17.0	7.0	0.0	5.0	10.0	39.0	0.0	164.1
Delta $ (Current - Required)	(3.6)	(2.0)	(3.9)	(15.8)	(0.1)	16.9	2.1	(7.0)	(3.9)	0.0	(13.4)
Should Cost $	108.2	6.5	7.9	16.0	6.5	0.0	4.9	8.6	36.0	0.0	158.6
Delta $ (Current - Should Cost)	(1.8)	(1.5)	(3.7)	(14.8)	0.4	16.9	2.2	(5.6)	(0.9)	0.0	(7.9)
PROCUREMENT											
Prior $ (PB 11)	0.0	128.3	133.2	145.2	133.5	0.0	0.0	1.0	279.7	1707.8	2,249.0
Current $ (PB 12)	0.0	89.6	135.2	104.6	90.0	94.0	93.7	87.0	469.3	1606.7	2,300.8
Delta $ (Current - Prior)	0.0	(38.7)	2.0	(40.6)	(43.5)	94.0	93.7	86.0	189.6	(101.1)	51.8
Required $	0.0	130.0	131.8	144.0	133.0	0.0	0.0	27.0	304.0	1700.0	2,265.8
Delta $ (Current - Required)	0.0	(40.4)	3.4	(39.4)	(43.0)	94.0	93.7	60.0	165.3	(93.3)	35.0
Should Cost $	0.0	123.2	130.3	135.6	133.0	2.3	0.0	26.1	297.0	1525.3	2075.8
Delta $ (Current - Should Cost)	0.0	(33.6)	4.9	(31.0)	(43.0)	91.7	93.7	60.9	172.3	81.4	225.0
O&M											
Prior $ (PB 11)	53.3	3.5	3.8	14.5	2.3	1.6	0.0	2.0	20.4	0.0	81.0
Current $ (PB 12)	71.4	4.2	1.9	0.9	4.3	14.2	5.2	5.0	29.6	0.0	107.1
Delta $ (Current - Prior)	18.1	0.7	(1.9)	(13.6)	2.0	12.6	5.2	3.0	9.2	0.0	26.1
Required $	78.3	12.0	8.0	7.0	3.0	2.5	0.0	5.0	17.5	0.0	115.8
Delta $ (Current - Required)	(6.9)	(7.8)	(6.1)	(6.1)	1.3	11.7	5.2	0.0	12.1	0.0	(8.7)
Should Cost $	77.2	10.8	6.9	6.8	2.9	2.4	0.0	4.2	16.3	0.0	111.2
Delta $ (Current - Should Cost)	(5.8)	(6.6)	(5.0)	(5.9)	1.4	11.8	5.2	0.8	13.3	0.0	(4.1)
TOTAL											
Prior $ (PB 11)	159.7	138.5	145.3	176.9	142.9	1.6	0.0	3.0	324.4	1707.8	2475.7
Current $ (PB 12)	177.8	98.8	141.3	106.7	101.2	125.1	106.0	95.0	534.0	1606.7	2558.6
Delta $ (Current - Prior)	18.1	(39.7)	(4.0)	(70.2)	(41.7)	123.5	106.0	92.0	209.6	(101.1)	82.9
Required $	188.3	149.0	147.9	168.0	143.0	2.5	5.0	42.0	360.5	1700.0	2545.7
Delta $ (Current - Required)	(10.5)	(50.2)	(6.6)	(61.3)	(41.8)	122.6	101.0	53.0	173.5	(93.3)	12.9
Should Cost $	185.4	140.5	145.1	158.4	142.4	4.7	4.9	38.9	349.3	1525.3	2345.6
Delta $ (Current - Should Cost)	(7.6)	(41.7)	(3.8)	(51.7)	(41.2)	120.4	101.1	56.1	184.7	81.4	213.0
QUANTITIES											
Prior (PB 11)	0	552	575	681	587	0	0	3	1271	0	2,398
Current (PB 12)	0	445	450	467	376	382	379	355	1959	0	2,854
Delta $ (Current - Prior)	0	(107)	(125)	(214)	(211)	382	379	352	688	0	456
Required Qty	0	440	445	450	376	382	379	332	1919	0	2,804
Delta Qty (Current - Required)	0	5	5	17	0	0	0	23	40	0	50

Figure 4. Example "Investment Program Funding and Quantities" Chart

8.1.1. If the chart reflects funding shortfalls, indicate how they will be addressed and state the programmatic impact if they are not.

8.1.2. If the program is jointly funded, provide a separate chart reflecting the funding contributions required of each joint participant.

8.1.3. Provide and briefly explain funding support from the Working Capital Fund.

8.1.4. If multiple program increments are in progress, funding will be tracked separately for each increment (e.g., for subsets of the program that will be subject to a separate Acquisition Program Baseline). Provide separate charts for each increment.

8.2. Cost. Indicate the established cost goals for the increment and the rationale supporting them.

8.2.1. If a Technology Development Strategy, indicate the Affordability Target that has been established for the program (initially, average unit acquisition cost and average operational support cost per unit). The affordability target should be presented in the context of the resources that are projected to be available in the portfolio(s) or mission area(s) associated with the program under consideration. For new start programs, provide the quantitative analytical basis for determining that the resources expected to be available in the portfolio/mission area can support the program under consideration. Employ a graphic to illustrate.

8.2.2. Acquisition strategies for ACAT I programs will specify (no more than one page) how the procurement rate and schedule were set, with reference to Economic Order Quantity (EOQ) and the affordability target set at Milestone A, as adjusted at Milestone B.

8.2.3. "Should Cost"

8.2.3.1. Provide "Should Cost" targets in the Program Funding Chart (Figure 4).

8.2.3.2. Summarize the application of should-cost analysis to the acquisition. Identify the should-cost initiatives that have been planned for the program. Specify how the associated "should cost targets" will be used as a basis for contract negotiations and contract incentives, and to track contractor, PEO, and PM performance.

8.2.4. Explain how the cost management approach adequately considers funds management. Identify any contingent liabilities (award fee, special incentives, economic price adjustment, business base clauses, termination liability, etc.) planned for or associated with the program. Identify which contingent liabilities have been funded. Summarize the plan to obtain approval for any unfunded contingencies (see DFARS 217.171.a.(4) and 217.172.(e)).

8.2.5. For acquisitions of Federal Information Processing resources with expected costs greater than $100 million, identify the key outcome performance measures. Indicate the tracking system that will be used to measure and report on selected outcome performance measures.

8.2.6. Summarize plans to control program costs, specifically Program Acquisition Unit Cost, Average Procurement Unit Cost, and Life-Cycle Cost. List and describe cost control tools and processes.

8.2.7. Summarize the process to update estimates (e.g., x months before each decision review or x months before beginning each increment).

9. Resource Management. Address program resource requirements; consider changes in effort as the program progresses.

9.1. Program Office Staffing and Organization

9.1.1. Manning Profile. Provide a time-phased workload assessment identifying the manpower and functional competencies required for successful program execution. Considering the overall, technical, acquisition, sustainment, and management approach, specify the number of personnel, by functional area, that are required to manage this program for the next phase and through fielding. Include a projected manning profile based upon the overall approach and program schedule for government, Systems Engineering and Technical Assistance, and Federally Funded Research and Development Center(s) support.

9.1.2. Organization Chart. Provide an organization chart reflecting program manning requirements by functional area. Identify the Services filling billets for a joint program. Prepare a table to indicate whether billets are military, civilian, or contractor, the seniority level of the billets, and whether the billets are currently filled or vacant. (See Table 5.)

PROGRAM MANNING REQUIREMENTS						
Billet ID	Billet Name	(If Joint) DoD Component	Manning Type	Seniority Level	DAWIA Level	Fill Status

Table 5. Notional table of Program Manning Requirements

9.1.3. Acquisition Chain of Authority. Indicate specific lines of programmatic authority. Show how the authority chain meets the requirements identified in DoD Directive 5000.01, paragraph E.1.1.26.

9.2. Identify the primary stakeholders. Indicate the planned organization to effectively manage the program and ensure all stakeholders are involved (Integrated Product Teams (IPT), boards, reviews, etc.). If applicable, indicate how the contractor will be involved in program IPTs. Summarize the anticipated business management relationship between (1) the program office and the contractor, and (2) the program office and other government agencies.

9.3. Requirements Community Involvement. Specify how the customer-representing organization will interface with the program management office and acquisition chain of command to provide for timely and effective review of requirements and/or cost trade-offs. Define levels of authority required to change requirements of various types.

10. International Involvement

10.1. Indicate any limitations on foreign contractors being allowed to participate at the prime contractor level.

10.2. International Cooperation.

10.2.1. Summarize any plans for cooperative development with foreign governments or cognizant organizations. List the MOAs in place and identify the contracting activities.

10.2.2. Summarize plans to increase the opportunity for coalition interoperability as part of the developing DoD program.

10.2.3. Employ the AT&L-developed template[1] to provide a coalition interoperability section in the Acquisition Strategy. Using the template will satisfy the cooperative opportunities document requirement of 10 USC 2350a.

10.3. Foreign Military Sales. Specify the potential or plans for Foreign Military and/or Direct Commercial Sale and the impact upon program cost due to program protection and exportability features.

11. Industrial Capability and Manufacturing Readiness.

11.1. Industrial Capability. Summarize the results of industrial base capability analysis (public and private) to design, develop, produce, support, and, if appropriate, restart the acquisition program. Specify the impact of this acquisition approach on the national technology or industrial base and the analysis used to make this determination. If there is an impact, summarize the industrial base constraints, how they will be managed, and the plan for future assessment, including frequency.

11.2. Industrial and Manufacturing Readiness (not applicable to software-intensive programs without production components). Estimate the risk of industry being unable to provide program design or

[1] URL: https://acc.dau.mil/GetAttachment.aspx?id=288191&pname=file&aid=44021&lang=en-US

manufacturing capabilities at planned cost and schedule. Identify the Manufacturing and Quality Management systems and summarize how they will contribute to minimizing cost, schedule, and performance risks throughout the product life cycle.

11.3. Sustaining Industrial Capabilities. Summarize the make-or-buy approach to establish and maintain access to competitive suppliers for critical areas at system, subsystem, and component level (e.g., requiring an open-systems-architecture or a make-or-buy plan). List critical items and their sources. When the analysis indicates that the needed industrial capabilities are in danger of being lost, the strategy should indicate whether government action is required to preserve the industrial capability. The strategy should also address product technology obsolescence, replacement of limited-life items, regeneration options for unique manufacturing processes, and conversion to performance specifications at the subsystems, component, and spares levels.

11.4. Identify any planned or completed MOAs.

12. Life-Cycle Signature Support

12.1. If a Technology Development Strategy, provide a table (see example Table 6) that indicates the program life-cycle signature support requirements. Identify the mission data type (signatures, electronic warfare integrated reprogramming, order of battle, geospatial intelligence, and system characteristics and performance data sets); specific subcategories, if known (Radar, Thermal, Acoustic, etc.); the domain (Space, Air, Land, Naval, Missile Defense, etc.); subcategories within the domain (e.g., for Air domain: 'Fighter Aircraft'); and data fidelity required, if known (e.g., dB, °C, resolution, Hz, etc.). If additional or more-specific requirements have been identified, they should be included.

Life-Cycle Signature Support Requirements				
Mission Type	**Mission Type Subcategory**	**Domain**	**Domain Subcategory**	**Data Fidelity**

Table 6. Notional Table of Life-Cycle Signature Support Requirements

12.2. Life-cycle signature support funding requirements will be reflected in the program funding summary (see Paragraph 8 and Figure 4).

13. Military Equipment Valuation.

Federal accounting standards require military equipment to be capitalized on the Department's financial statements. For Milestone C and the Full-Rate Production Decision, provide the following information for any program, project, product, or system that has deliverable end items with a unit cost at or above $100,000 (the current capitalization threshold):

13.1. A level 2 work breakdown structure (as described in MIL_HDBK-881A) for reporting Military Equipment Valuation and Accountability;

13.2. The end item(s) meeting the unit cost threshold (i.e., $100,000);

13.3. The government furnished property that will be included in the end item;

13.4. Other deliverables that will accompany the end item (e.g., manuals, tech data, etc.); and

13.5. Other types of deliverables that will be purchased with program funding (e.g., initial spares, support equipment, special tooling and test equipment, etc.), but cannot be directly attributed to a specific end item.

(NOTE: The unit cost can be calculated by summing the estimated cost of the end item with the estimated costs of all associated government furnished equipment, training manuals, technical data, engineering support, etc., NOT including spares and support equipment. For additional information, see:

- http://www.acq.osd.mil/pepolicy/training_tools/quick_reference_tools.html; or
- http://www.acq.osd.mil/pepolicy/training_tools/bfma_instructions.html.)

SYSTEMS ENGINEERING PLAN (SEP) OUTLINE

20 April 2011

Version 1.0, 04/20/2011

OPR: ODASD (Systems Engineering) SEP@osd.mil

MANDATED FORMAT FOR ALL
SYSTEMS ENGINEERING PLANS

PROGRAM NAME – ACAT LEVEL

SYSTEMS ENGINEERING PLAN
VERSION ___

SUPPORTING MILESTONE _
AND
[APPROPRIATE PHASE NAME]

[DATE]

****

OFFICE OF THE SECRETARY OF DEFENSE (OSD) APPROVAL

_____ _____
Date

Deputy Assistant Secretary of Defense
Systems Engineering
(for MDAPs and MAIS Programs)

[or designated SEP approval authority]

SUBMITTED BY

Name Program Lead Systems Engineer	Date	Name Program Manager	Date

CONCURRENCE

Name Lead/Chief Systems Engineer (Program Executive Office, System Center or Command)	Date	Name Program Executive Officer or Equivalent	Date

COMPONENT APPROVAL

Name Title, Office Component SEP Approval Authority	Date

Table of Contents

NOTE: All sections above are driven by Section 139b of title 10 United States Code and DoDI 5000.02 policy; additional content is optional at the discretion of the Component.

Tables and Figures

(Mandated are listed below)

Tables

Figures

(Additional, non-mandatory tables and figures may be included at the Component's direction or the PM's discretion.)

1. Introduction – Purpose and Update Plan

- Who will use the Systems Engineering Plan (SEP)?
- What is the plan to align Prime Contractor's Systems Engineering Management Plan (SEMP) with the Program Management Office (PMO) SEP?
- Summarize how the SEP will be updated and the criteria for doing so to include:
  - Timing of SEP updates (e.g., following a conducted technical review, prior to milestones, as a result of SE planning changes, as a result of specific contractor-provided inputs),
  - Updating authority, and
  - Approval authorities for different types of updates.

Expectations:

SEP should be a "living" "go to" technical planning document and the blueprint for the conduct, management, and control of the technical aspects of the government's program from concept to disposal. SE planning should be kept current throughout the acquisition lifecycle.

- ***SEP is consistent with other program documentation.***
- ***SEP defines the methods for implementing all system requirements having technical content, technical staffing, and technical management.***
- ***Milestone Decision Authority (MDA)- approved SEP provides authority and empowers the Lead SE (LSE)/Chief Engineer to execute the program's technical planning.***
- ***SE planning is kept current throughout acquisition lifecycle. For ACAT I programs, OSD/ Directorate Systems Engineering (DSE) expects to approve SEP updates to support milestone reviews (e.g., Milestone (MS) A, B, and C) and program restructures; the PEO can approve SEP updates to support SE technical reviews and program changes that impact the technical strategy.***

Tailoring for Technology Development (TD) and Engineering and Manufacturing Development (EMD) phases: SEP should be updated after contractor award to reflect winning contractor(s)' technical strategy reflected in SEMP.

Revision Number	Date	Log of Changes Made and Description of Reason Changes	Approved By
0.7	April 2008	Addressed Lead Systems Engineer's (LSE's) concerns – see comments in separate file	LSE
0.8	June 2008	Updated Section 1 with draft requirements Added Section 4, Design Verification section	LSE
0.9	October 2008	Addressed SE WIPT (to include Service and OSD) comments – many changes – see Comment Resolution Matrix (CRM)	LSE
Etc.			

Table 1.1-1 SEP Update Record (mandated) (sample)

2. Program Technical Requirements

2.1. Architectures and Interface Control – List the architecture products that will be developed, to include system level physical and software architectures and DODAF architectures. Summarize the approach for architecture development to include:

- Program's DODAF architecture development efforts.
- A system physical architecture diagram (delineating physical interfaces), if available.
- A system functional architecture diagram (delineating functional interfaces), if available.
- How software architecture priorities will be developed and documented.
- How architecture products are related to requirements definition.
- How engineering and architecture activities are linked.

REQUIRED MEMORANDA OF AGREEMENT				
Interface	**Cooperating Agency**	**Interface Control Authority**	**Required By Date**	**Impact if Not Completed**

Table 2.1-1 Required Memoranda of Agreement (mandated) (sample)

Expectations: Programs whose system has external interfaces need to have dependencies (i.e., hierarchy) clearly defined. This should include interface control specifications, which should be confirmed early on and placed under strict configuration control. Compatibility with other interfacing systems and common architectures should be maintained throughout the development/design process.

2.2. Technical Certifications - Summarize in the following table format the system-level technical certifications which must be obtained during program's life-cycle.

Certification	PMO Team/PoC	Activities to Obtain Certification[1]	Certification Authority	Expected Certification Date
Airworthiness	Airframe IPT			?Q FY?
Clinger Cohen		Confirm compliance	Component CIO (MDAP/MAIS also by DoD CIO)	?Q FY?
Transportability				?Q FY?
Insensitive Munitions	Manufacturing WG	Reference Document: *PEO IM Strategic Plan*		?Q FY?
Etc.				?Q FY?

Table 2.2-1 Certification Requirements (mandated) (sample)

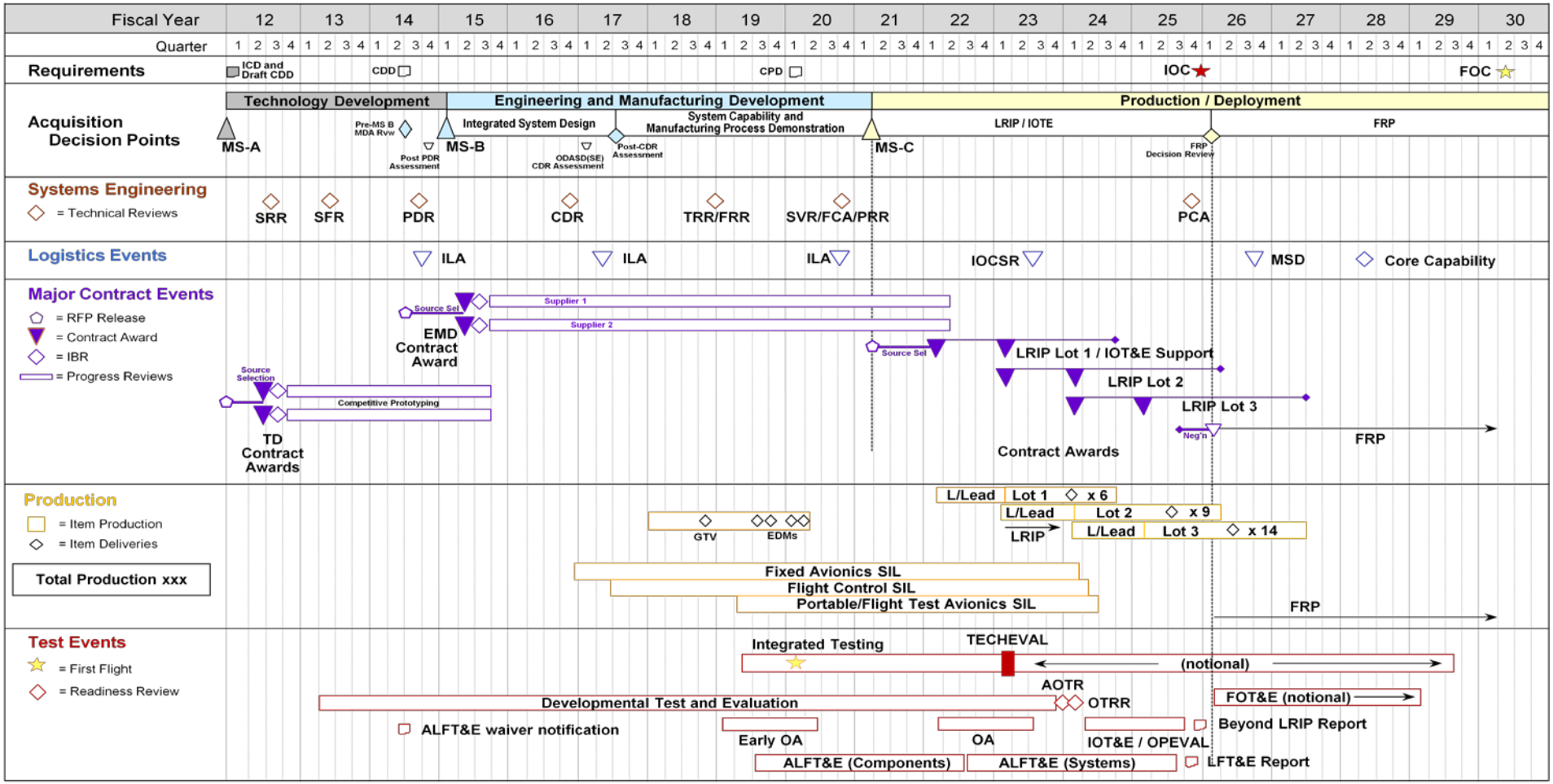
[1] This entry should be specific such as a specification compliance matrix; test, inspection, or analysis, or a combination. It can also reference a document for more information such as the TEMP.

Expectations: Programs plan required technical certification activities and timing into the program IMP and IMS.

3. Engineering Resources and Management

3.1. Technical Schedule and Schedule Risk Assessment

- Who is responsible for technical schedule planning and execution?
- How are program tasks identified and managed?
- List scheduling/planning assumptions.
- Identify which program office position/team is responsible for keeping the schedule up-to-date.



AOTR: Assessment of Operational Test Readiness
ALFT&E: Alternative Live Fire Test & Evaluation
CDR: Critical Design Review
EDM: Engineering Development Model
EMD: Engineering & Manufacturing Development
FCA: Functional Configuration Audit
FOT&E: Follow-On Operational Test & Evaluation
FRP: Full Rate Production
FRR: Flight Readiness Review
GTV: Ground Test Vehicle
ILA: Integrated Logistics Analysis

IOCSR: Initial Operational Capability Supportability Review
IOT&E: Initial Operation Test & Evaluation
LFT&E: Live Fire Test & Evaluation
LRIP: Low-Rate Initial Production
MDA: Milestone Decision Authority
MSD: Material Support Date
OA: Operational Assessment
OASD(SE): Office of the Assistant Secretary of Defense (Systems Engineering)
OPEVAL: Operational Evaluation

OTRR: Operational Test Readiness Review
PCA: Physical Configuration Audit
PDR: Preliminary Design Review
PRR: Production Readiness Review
SFR: System Functional Review
SIL: Systems Integration Lab
SRR: System Requirements Review
SVR: System Verification Review
TD: Technology Development
TECHEVAL: Technical Evaluation
TRR: Test Readiness Review

Figure 3.1-1 System Technical Schedule (mandated) (notional sample) *Note: Include an "as-of" date – time sensitive figure.*

- **Technical Schedule** - Provide a detailed, integrated, life-cycle system schedule (see Figure 3.1-1) (with particular emphasis on the next acquisition phase) to include:
- **Planned milestones**
  - Planned significant activities (viz., activities which must be performed in order to produce the system):
    - SE technical reviews
    - Technology on/off –ramps
    - RFP release dates
    - Software releases
    - Hardware (HW)/Software (SW) Integration events
    - Contract award (including bridge contracts)
    - Testing events/phases
    - System-level certifications
    - Key developmental, operational, integrated testing
    - Technology Readiness Assessments (TRAs)
    - Logistics/sustainment events
    - Long-lead or advanced procurements
    - Technology development efforts to include competitive prototyping
    - Production lot/phases

Expectations: Programs should properly phase activities and key events (e.g., competitive prototyping, TRA, CDRs, etc.) to ensure a strong basis for making financial commitments. Program schedules are event driven and reflect adequate time for systems engineering (SE), integration, test, corrective actions and contingencies.

- **Schedule Risk Assessment** - Summarize the program's schedule risk assessment (SRA) process and its results to include:
  - What SRA techniques will be used to determine program schedule risk (e.g., critical path analysis, Monte Carlo simulations, etc.).
  - Inherent impact of schedule constraints and dependencies and actions taken or planned to mitigate schedule drivers.
  - Results of any SRAs accomplished.
  - List significant critical path or likely critical path events/activities and any planned actions to reduce risk for each.

Expectation: Programs should use SRAs to inform source selection and milestones, in addition to technical reviews.

3.2. Engineering Resources and Cost/Schedule Reporting – List and summarize the program oversight and management systems that will integrate cost, schedule, and technical performance goals, metrics, and resources. Specifically address:

- Work Breakdown Structure (WBS)
  - Summarize the relationship among the WBS, product structure, and schedule.
  - Identify the stakeholders who will develop the WBS.
  - Explain the traceability between the system's technical requirements and WBS.
- Integrated Master Plan (IMP)/ Integrated Master Schedule (IMS)

- What is the relationship of the program's IMP to the contractor(s) IMS; how are they linked/interfaced; and what are their primary data elements?
- Who or what team (e.g., IPT/WG) is responsible for developing the IMP; when is it required; will it be a part of the RFP?
- If used, how will the program use EVM cost reporting to track/monitor the status of IMS execution?

Expectations:

- ***Program should have an adequate IMP and IMS and requires the same from its contractor(s). The IMP and IMS clearly communicate the expectations of the program team, and provide traceability to the management and execution of the program by IPTs. They also provide traceability to the WBS, the Contract WBS (CWBS), the Statement of Work (SOW), systems engineering, and risk management, which together define the products and key processes associated with program success.***
- ***Programs should require offerors to provide a tight linkage across IMP, IMS, risk mitigation, WBS, and cost in their proposals and with EVMS when implemented.***
- ***Program events, accomplishments, and criteria defined in the government's IMP/program schedule, when combined with offeror-proposed events, should define top-level structure of IMS for execution.***
- ***In the RFP, offerors should be directed to:***
  - ***Add key tasks only to the level necessary to define and sequence work, identify dependencies, document risk mitigations and deliverables, and support cost estimation and basis of estimate (BOE) preparation.***
  - ***Include cross linkage to the IMP in the offeror's IMS, WBS/BOE, and risk mitigation steps.***
  - ***Incorporate additional detailed planning as part of the program kickoff and Integrated Baseline Review (IBR) process.***

3.3. Engineering and Integration Risk Management

- **Risk Management Process Diagram** – Diagram the process for how the program plans to manage engineering and integration risk and how these processes will be integrated with the contractor(s). This should include how the PMO will identify and analyze risks; and plan for, implement (including funding), and track risk mitigation.
- **Roles, Responsibilities, and Authorities**
  - Indicate roles, responsibilities, and authorities within the risk management process for:
    - Reporting/identifying risks
    - Criteria used to determine if a "risk" submitted for consideration will become a risk or not (typically, criteria for probability and consequence)
    - Adding/modifying risks
    - Changing likelihood and consequence of a risk
    - Closing/retiring a risk
  - If Risk Review Boards or Risk Management Boards are part of the process, indicate who are the chair and participants and how often they meet.
  - List the risk tool(s) the program (program office and contractor(s)) will use to perform risk management in Table 4.7-1.

- If program office and contractor(s) use different risk tools, how will the information be transferred across them? NOTE: In general, the same tool should be used. If the contractor's tool is acceptable, then this merely requires Government direct, networked access to that tool.

- **Technical Risks and Mitigation Planning** – Provide a risk cube (see Figure 3.3-1) or a listing of the current system-level technical risks with:
  - As-of date
  - Risk rating
  - Description
  - Driver
  - Mitigation status

Expectations: Programs commonly use hierarchal boards to address risks and have integrated risk systems with their contractors, and their approach to identify risks is both top-down and bottoms-up. Risks related to technology maturation, integration, and each design consideration indicated in Table 4.6-1 should be considered in risk identification process.

Technical Risks		Mitigation Activities (Closure Dates)
R1. Failure to meet TOC reduction goals may cause budget exceedance		Continue current plan; expedite cuff/yoke redesign (Dec 2015)
R2. Main rotor cuff/yoke redesign not complete in time for test		Certification milestone plan developed and monitored by PM. (Jun 2011)
Technical Issues		
1. Production parts; spares		Continue focus on contractor's SCM and make parts (ongoing)
2. Structural Repair Manual late to need		Expedite approval of DL&T's (ongoing with NAVAIR)
Opportunities		
O1. Capture lessons learned; best practices; store in command library		Low investment; great benefit for program and NAVAIR

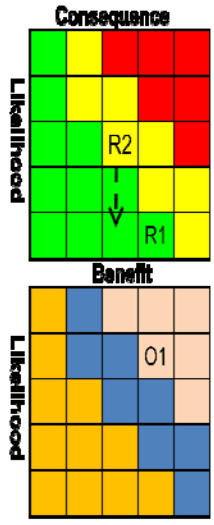


Figure 3.3-1 Risk Cube (mandated) (sample)
Note: Include an as-of date – time sensitive figure

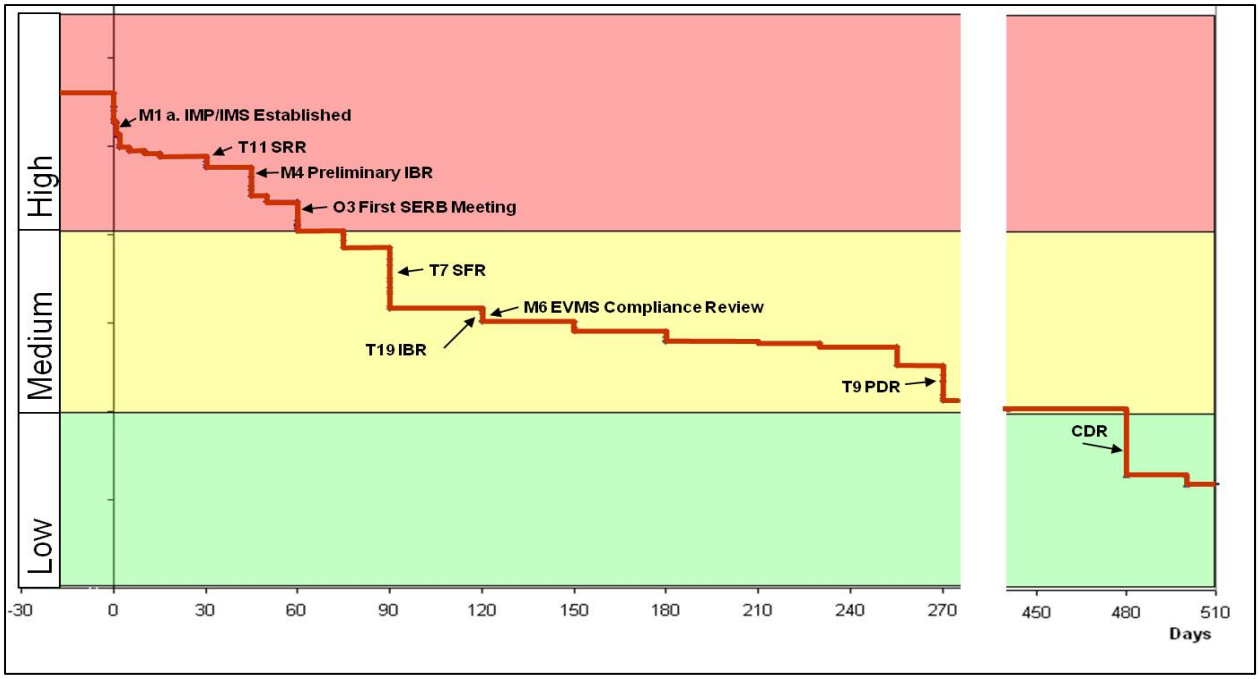


Figure 3.3-2 Risk Burn-down Plan (optional) (sample)
Note: Include an as-of date – time sensitive figure

3.4. Technical Organization

3.4.1. Government Program Office Organization - Provide planned program office organization structure (i.e., wiring diagram to illustrate hierarchy) with an as-of date and include the following elements:

- Legend, as applicable (e.g., color-coding)
- Organization to which the program office reports
- Program Manager (PM)
- Lead/Chief Systems Engineer (LSE/CSE)
- Functional Leads (e.g., T&E, logistics, risk, reliability, software)
- Core, matrix, and contractor support personnel
- Field or additional Service representatives

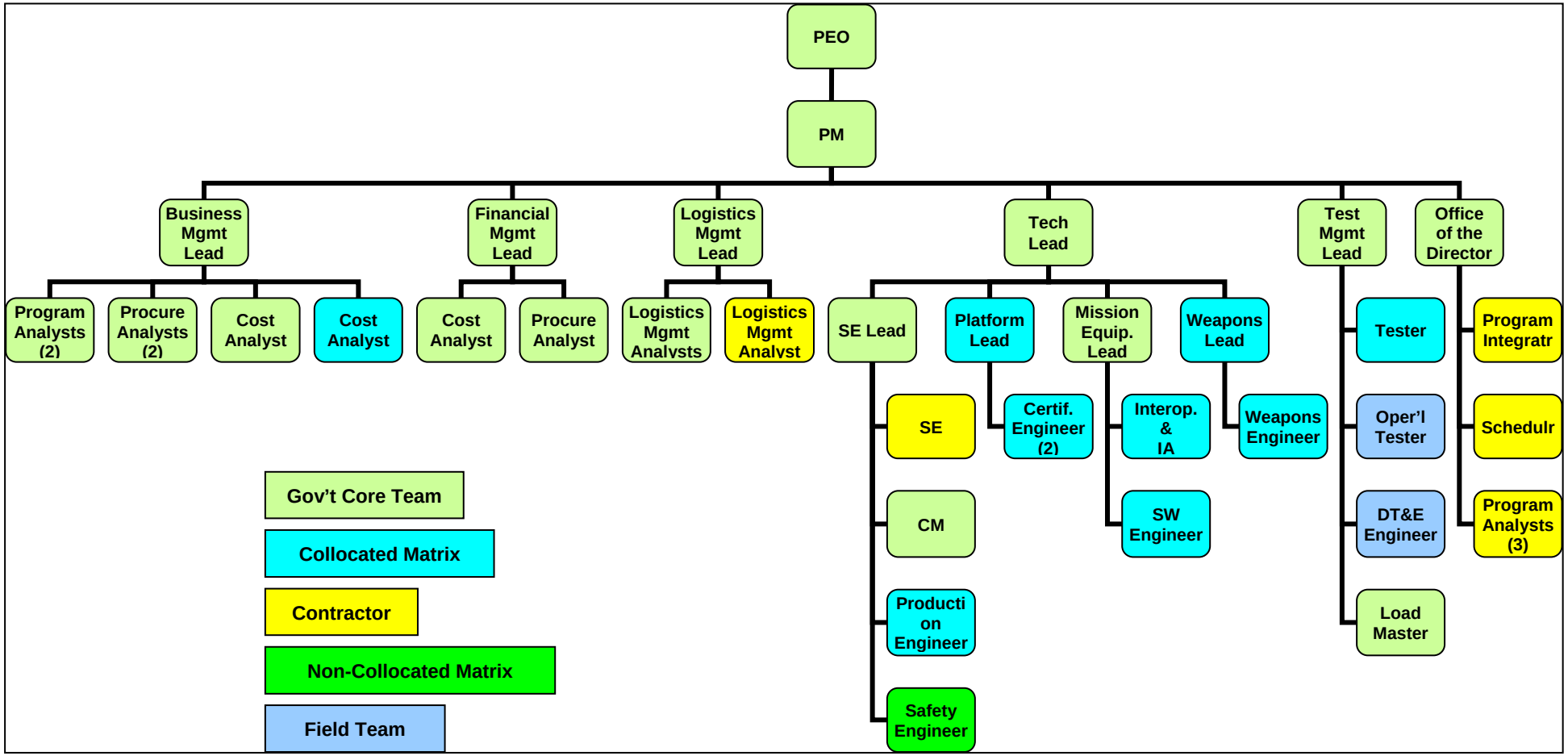


Figure 3.4.1-1: Program Office Organization (mandated) (sample)
Note: Include an as-of date – time sensitive figure

3.4.2. Program Office Technical Staffing Levels – Summarize the program's technical staffing plan to include:

- Process and tools program will use to determine required technical staffing;
- Risks and increased demands on existing resources if staffing requirements are not met;
- A figure (e.g., sand chart) to show the number of required full-time equivalent (FTE) positions (e.g., organic, matrix support, and contractor) by key program events (e.g., milestones and technical reviews).

Expectation: Programs should use a workload analysis tool to determine adequate level of staffing, appropriate skill mix, and required amount of experience to properly staff, manage, and execute successfully.

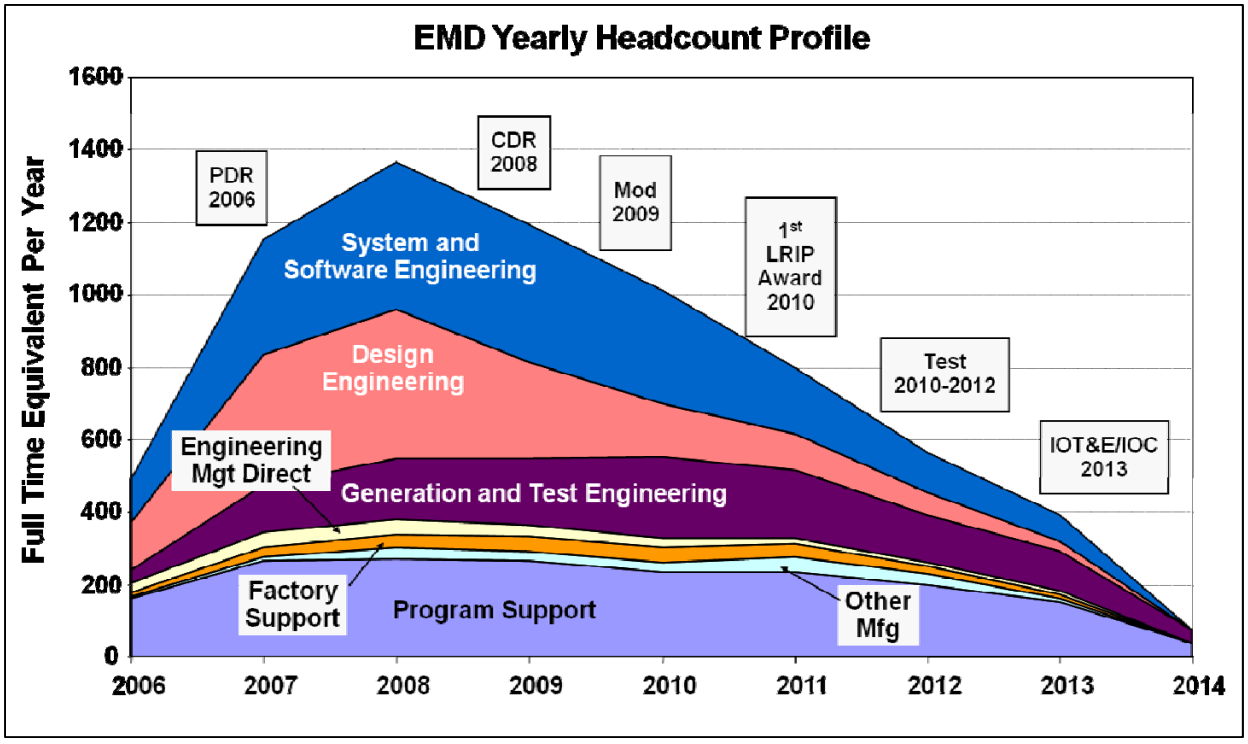


Figure 3.4.2-1 Program Technical Staffing (mandated) (sample)

3.4.3. Contractor(s) Program Office Organization – When available, provide diagrams of the contractor(s) program office organization and staffing plans in figures analogous to Figures 3.4.1-1 and 3.4.2-1.

3.4.4. Engineering Team Organization and Staffing

- **Integrated Product Team (IPT) Organization** – Provide diagrams that show the ALL Government and contractors (when available) IPTs and their associated Working IPTs and Working Groups interrelated vertically and horizontally and that illustrate the hierarchy and relationship among them (see Figure 3.4.4-1). Identify the Government and contractor(s)' leadership for all teams.

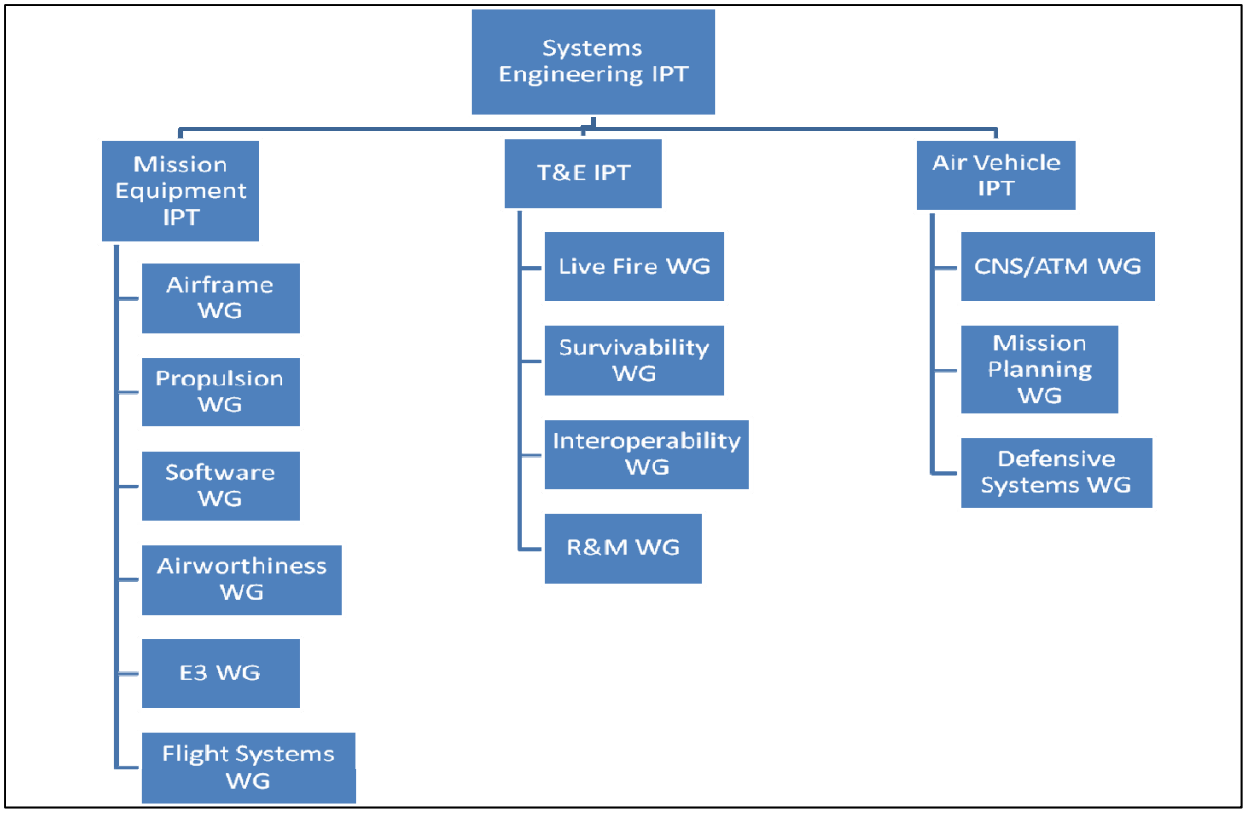


Figure 3.4.4-1 IPT/WG Team Hierarchy (mandated) (sample)

- **IPT Details** – For ALL Government and contractor(s) (when available) IPTs and other key teams (e.g., Level 1 and 2 IPTS and WGs), include the following details either by attaching approved charters or as a table as seen below, Table 3.4.4-2:

  - IPT name
  - Chairperson position and name
  - Functional team membership (to include all design consideration areas from Section 4.6)
  - IPT roles, responsibilities, and authorities
  - IPT processes
  - IPT products (e.g., updated baselines, risks, etc.)
  - IPT-specific metrics

  Note: Make sure that the IPTs in the figure above match the IPTs in the table below!

Expectation: Program personnel should integrate SE activities with all appropriate functional and stakeholder organizations. In addition, IPTs should include personnel responsible for each of the design consideration areas in Section 4.6, Table 4.6-1.

Team Name	Chairperson	Team Membership (by Function or Organization)	Team Role, Responsibility, and Authority	Products and Metrics
SE IPT	Lead SE	• Program Office o Platform Lead o Mission Equipment Lead o Weapons Lead o Test Manager o Logistics Manager o SW Lead o Production/Quality Manager o Safety Lead o Interoperability Rep. o R&M Lead • PEO and PM • Service Representative • OSD SE • Key Subcontractor or Suppliers	Role: IPT Purpose Responsibilities: Integrate all technical efforts • Team Member Responsibilities • Cost, Performance, Schedule Goals • Scope, Boundaries of IPT Responsibilities Schedule and frequency of meetings Date of signed IPT charter and signatory	Products: SEP/SEP Updates IMP/IMS Input Specifications Metrics: -Cost -Performance -Schedule
XXX IPT	XXX Lead	• Program Office o Lead SE o Mission Equipment Lead o Weapons Lead o Test Manager o Logistics Manager o SW Lead o R&M Lead o Production/Quality Manager o Safety Lead o Interoperability Rep. Key Subcontractor or Suppliers	Role: IPT Purpose Responsibilities: Integrate all technical efforts • Team Member Responsibilities • Cost, Performance, Schedule Goals • Scope, Boundaries of IPT Responsibilities Schedule and frequency of meetings Date of signed IPT charter and signatory	Products: Specification input SEP input TES/TEMP input AS input Metrics: Technical Performance Measure (TPM) 1 TPM 2

Table 3.4.4-2 IPT Team Details (mandated unless charters are submitted) (sample)

- **IPT Alignment** – Briefly summarize how the Government teams relate to/interact with the Prime Contractor's teams, if they are not the same teams.

Expectation: Programs should shift IPT focus depending on the acquisition phase.

Tailoring for the Production and Deployment Phase: *Describe how the organizational structure evolves after MS C. If the program doesn't have a Production IPT during EMD Phase, one should be established in the P&D Phase.*

3.5. Relationships with External Technical Organizations – What processes or methods will be used to document, facilitate, and manage interaction among SE team(s), external-to-program government organizations (e.g., FoS/SoS and contractor(s)/ competing contractor(s)) on technical tasks, activities, and responsibilities (e.g., requirements, technical baselines, and technical reviews) down to and including subcontractors.

- **Responsible Organization and Authority** - Identify the organization responsible for coordinating SE and integration efforts associated with the FoS/SoS and its authority to reallocate resources (funding and manpower).
- **Management** – Summarize how FoS/SoS interfaces will be managed to include:
  - Resolution of issues that cross PM, PEO, and Component lines;
  - Interface Control Documents (ICDs) and any interface control WGs (ICWGs);
  - Memorandums-of-Agreement (MOAs);
  - "Triggers" that require a FoS/SoS member to inform the others if there is a cost, schedule, or performance deviation;
  - Planned linkage between hardware and software upgrade programs within the FoS/SoS;
  - Any required Government Furnished Equipment/Property/Government Furnished Information (GFE/GFP/GFI) (e.g., test ranges, integration laboratories, and special equipment).
- **Schedule** - Include a schedule (optional) which shows FoS/SoS dependencies such as alignment of technical reviews, major milestones, test phases, GFE/GFP/GFI, etc.

Expectations: Programs should:

- ***Recognize the importance of managing both the internal program schedule while maintaining synchronization with external programs' schedules.***
- ***Develop MOAs with interfacing organizations that include:***
  - ***Tripwires and notification to FoS/SoS members of any significant (nominally > 10%) variance in cost, schedule, or performance;***
  - ***Mechanisms for FoS/SoS members to comment on any proposed interface changes; and***
  - ***Fast-track issue identification and resolution process.***
- ***Develop a synchronized program schedule with interfacing programs schedules to provide insight into the potential impact of interfacing program schedule changes to include milestones, technical reviews, test periods.***
- ***Inform Component and OSD staffs so they better understand synchronizing funding and aligning priorities with external programs.***

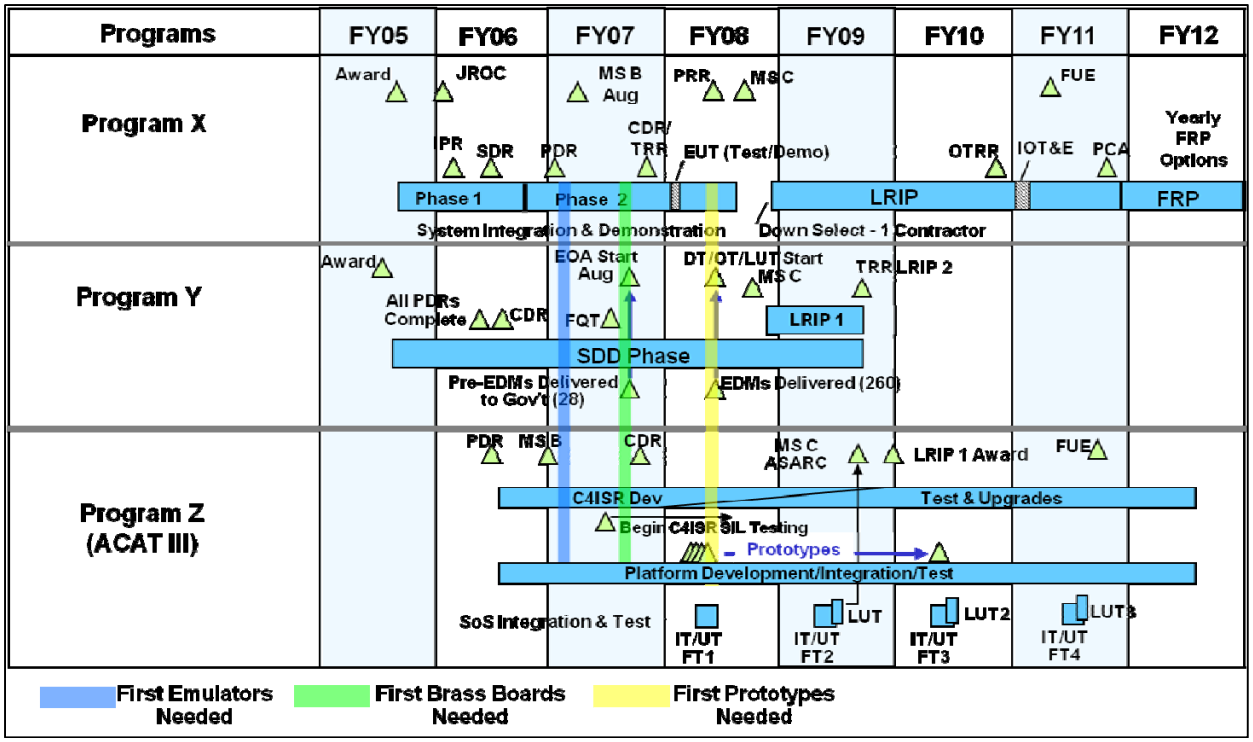


Figure 3.5-1 System-of-Systems Schedule (optional) (sample)
Note: Include an as-of date – time sensitive figure

3.6. Technical Performance Measures and Metrics – What is the program's strategy for identifying, prioritizing, and selecting the set of metrics for monitoring and tracking program SE activities and performance? This explanation should include:

- An overview of the measurement planning and metrics selection process, including the approach to monitor execution to the established plan, and identification of roles, responsibilities, and authorities for this process.
- A minimum set of technical performance measures (TPMs) and intermediate goals and the plan to achieve them with as-of dates (to provide quantitative insight into requirements stability and specification compliance). Examples include TPMs in the areas of software, reliability, manufacturing, and integration to assess "execution to plan."
- For reliability, PMs shall use a growth curve to plan, illustrate, and report progress. Growth curves will be stated in a series of intermediate goals and tracked through fully integrated, system-level test and evaluation events until the reliability threshold is achieved, see Figure 3.6-1. If a single curve is not adequate to describe overall system reliability, provide curves for critical subsystems with rationale for their selection.

  Note: For ACAT I programs, performance-to-plan will be checked during Program Support Reviews (PSRs).

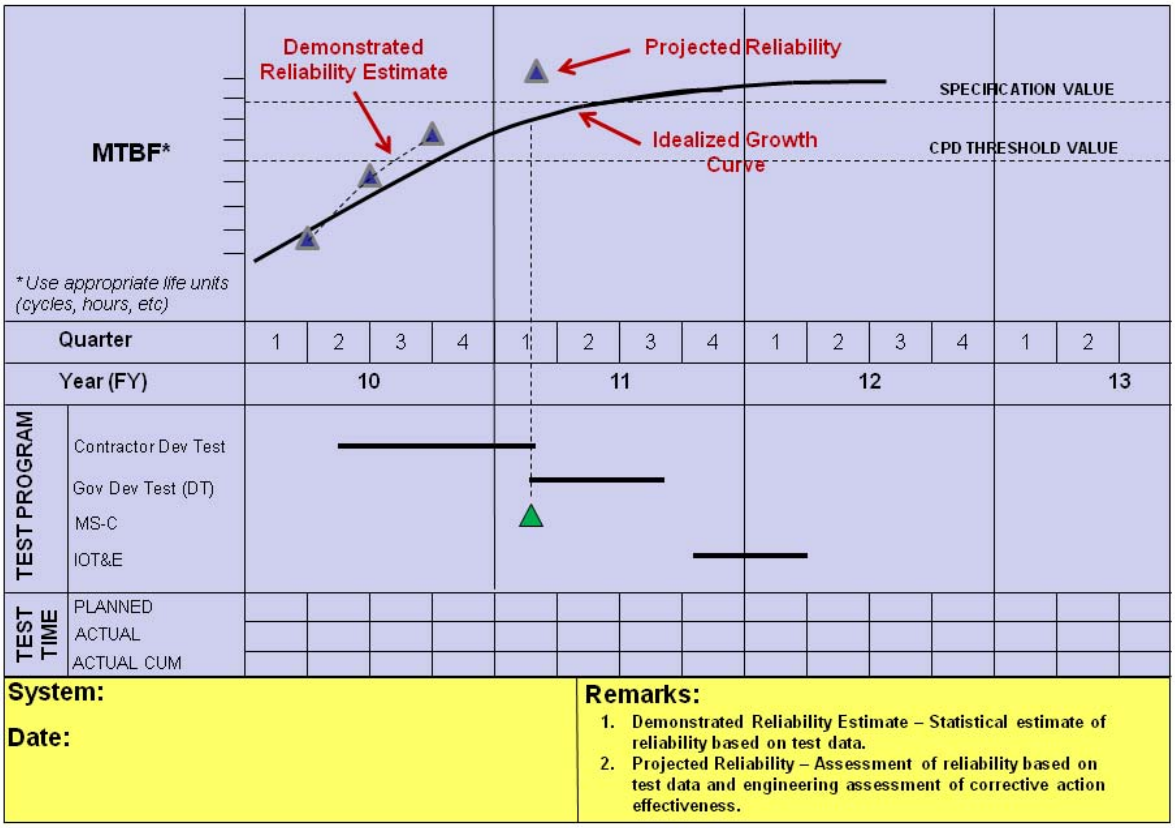


Figure 3.6-1 Reliability Growth Curve (mandated) (sample)

Expectation: Programs should understand the amount of testing, test schedule and resources available for achieving the specification requirement. Programs should consider the following:

- ***Develop the growth planning curve as a function of appropriate life units (hours, cycles, etc,) to grow to the specification value.***
- ***How the starting point that represents the initial value of reliability for the system was determined.***
- ***How the rate of growth was determined. Rigorous test programs which foster the discovery of failures, coupled with management-supported analysis and timely corrective action, will result in a faster growth rate. The rate of growth should be tied to realistic management metrics governing the fraction of initial failure rate to be addressed by corrective actions along with the effectiveness of the corrective action.***
- ***Describe the growth tracking and projection methodology that will be used to monitor reliability growth during system-level test (e.g., AMSAA-Crowe Extended, AMPM).***

Name	Responsible Position /IPT	KPP or KSA	Performance Spec.	PDR Status Actual	MS B Status Actual	CDR Status Actual	MS C Status Planned	FRP Status Planned
Aerodynamic Drag (count)	SE IPT		<222	225	223	220	187	187
Thermal Utilization (kW)	SE IPT		<60	56	59	55	51	50
Electrical Power Usage (kW)	SE IPT		<201	150	185	123	123	123
Operating Weight (lb)	SE IPT		<99,000	97,001	101,001	97,001	85,540	85,650
Range (nm)	SE IPT		>1,000	1,111	1,101	1,111	1,122	1,130
Average Flyaway Unit Cost (number)	SE IPT		<1.5	1.3	1.58	1.37	1.35	1.32

*Note: Margin is 10%

Table 3.6-2 TPMs (mandated) (sample)

Expectation: Programs will use metrics to measure progress.

4. Technical Activities and Products

4.1. Results of Previous Phase SE Activities - Summarize (consider a tabular format) system-level technical reviews, trade studies, and independent reviews conducted to date; date(s) conducted; and key results or impact(s) to design and any related recommendations and status of actions taken. For MDAPs, these reviews shall include an assessment of manufacturing risk and readiness.

4.2. Planned SE Activities for the Next Phase – Summarize key planned system engineering, integration, and verification processes and activities established or modified since the previous acquisition phase, including updated risk reduction and mitigation strategies and technical and manufacturing maturity.

4.3. Requirements Development and Change Process

4.3.1. Analysis and Decomposition – How will top-level requirements (i.e., from AoA, KPPs, KSAs, statutory, regulatory, certification, safety, software, hardware, etc.) be traced from the source JCIDS documents down to configuration item (CI) build-to specifications and Verification and Validation (V&V) plans?

- Identify which program office position or team (e.g., IPT/WG) is responsible for continuously ensuring the accurate traceability of requirements.
- Identify the tool (s) the program plans to use (or continues to use) for requirements traceability in Tools Table 4.7-1.
- If the program office and prime contractor(s) use different tools, how will information be transferred across them?

- What approach will be used to ensure that there are no orphan or childless requirements?
- Describe how the JCIDS sustainment characteristics were translated into R&M contract specifications.

Tailoring for TD phase: *Describe how competitive prototyping, the TRA, the PDR, and test results will inform the program's KPP/KSAs for the EMD phase.*

Expectation: Program should trace all requirements from JCIDS into a verification matrix.

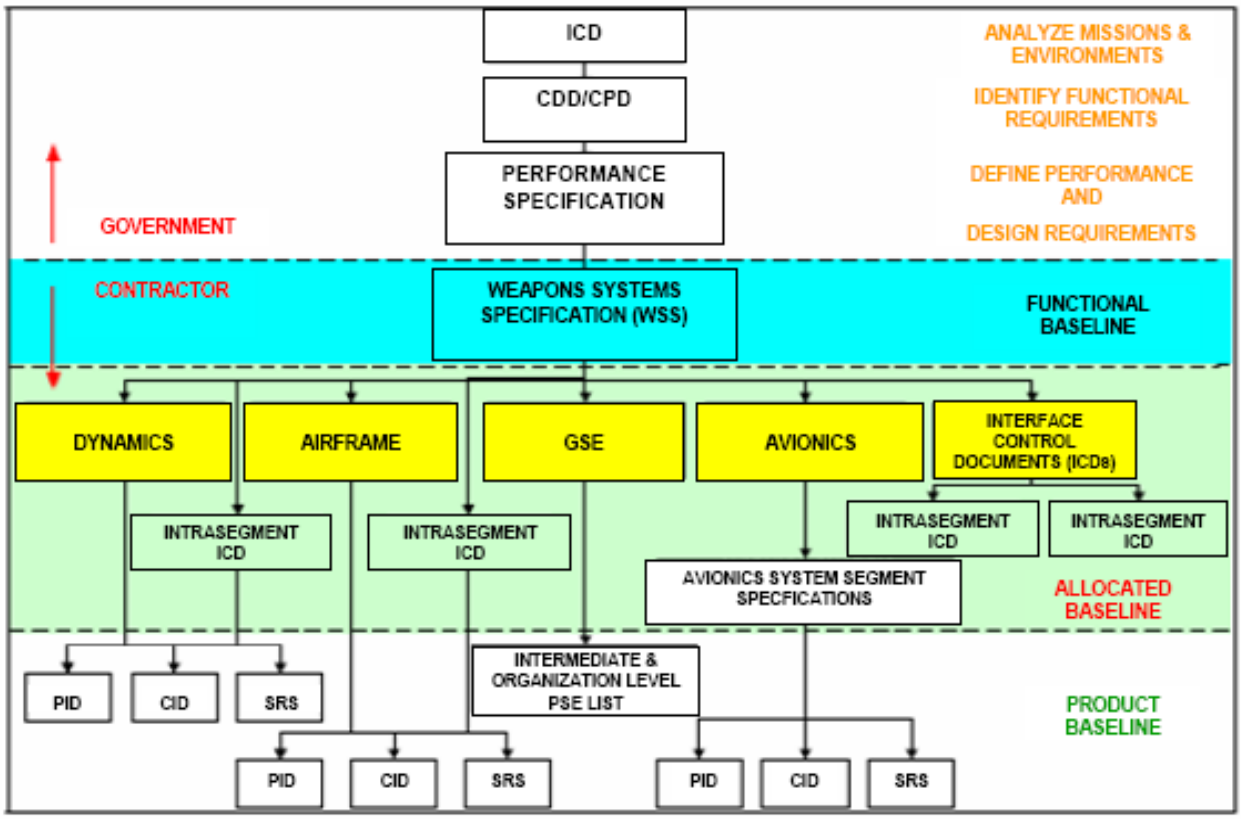


Figure 4.3.1-1 Requirements Decomposition/Specification Tree/Baselines (mandated) (sample)

4.3.2. Requirements Management and Change Process – How will requirements be managed and changes made and tracked?

- If the program is a MDAP, and if it were to have a change in requirement which could result in a cost and/or schedule breech, summarize the mechanism by which the program will involve its Configuration Steering Board.
- Identify which program office position or team (e.g., IPT/WG) will be responsible for continuously ensuring the accurate management of requirements and requirement changes.

Expectation: Programs should ensure requirements traceability from the lowest level component all the way back to the user's capability document.

4.4. Technical Reviews

- **Technical Review Process** – Summarize the PMO's plans for conducting each technical review with particular emphasis and detail on those technical reviews planned in the program's next acquisition phase. Identify which program office position is responsible for the overall conduct of system-level and/or key subsystem-level technical reviews. A diagram of the process with the objective timeframes for each activity before, during, and after the technical review may prove useful.

    - Identify who or what team has responsibility, authority, and accountability for determining:
        - Whether/when technical review entry criteria have been met;
        - What action items are to be tasked;
        - That tasked action items have been closed appropriately; and
        - That technical review exit criteria are met.
    - If not already addressed, identify the role of the program manager, LSE/CSE, and Technical Review Chair in the technical review process.

Expectation: Programs should use a standard process for conducting technical reviews.

- **Planned System-Level Technical Reviews** – For each planned system-level technical review in the next acquisition phase, include a marker on the program schedule (Figure 4.1-1-n) and a technical review table. This table, or something analogous, is mandatory.

XXX Details Area	**XXX Review Details** (For this acquisition phase, fill out tailored criteria, etc.)
Chairperson	Identify the Technical Review Chair (Normally the LSE)
PMO Participants	Identify Positions/functions/IPTs within the program offices which are anticipated to participate. **(**Engineering Leads; Risk, Logistics, and Configuration Managers, Defense Contracting Management Agency (DCMA) Rep., and Contracting Officer, etc.)
Anticipated Stakeholder Participant Organizations	Representatives (stakeholders) from Service SE and Test, OSD SE and Developmental Test and Evaluation (DT&E), FoS/SoS, and the User
Anticipated Peer and Program-Independent SME Participant Orgs.	Identify Organizations which can provide a peer perspective and participants who will provide an independent assessment of how well the program is progressing but which have no stake in the program's success.
Purpose (of the review)	Describe the main purpose of the review and any specific SE goals
Entrance Criteria	Identify tailored Entrance Criteria
Exit Criteria	Identify tailored Exit Criteria
Products/Artifacts (from the review)	List expected products from the technical Review (for example) • Established system allocated baseline • Updated risk assessment for EMD • Updated Cost Analysis Requirements Document (CARD) or CARD-like document based on system allocated baseline • Updated program schedule including system and SW critical path drivers • Approved LCSP updating program sustainment development efforts and schedules • Draft Post-PDR Report (MDAPS)

Table 4.4-1 Technical Review Details (mandated) (sample)

Tailoring for TD Phase: *At a minimum, provide details for System Requirement Review (SRR)(s), System Functional Review (SFR)(s), and Preliminary Design Review (PDR) (s) as planned by the program. For MDAPs, Section 2366b certification requires an MDA-level Post-PDR Report Assessment.*

Tailoring for EMD Phase: *At a minimum, provide details for delta PDR (if conducted), PDR if entering acquisition at MS B, CDR, and System Verification Review (SVR)/ Functional Configuration Audit (FCA) and Production Readiness Review (PRR), as planned.*

Tailoring for P&D Phase: *At a minimum, provide details for SVR/FCA/PRR (if not already detailed in the EMD Phase SEP), Physical Configuration Audit, and In-Service Reviews, as planned.*

Expectation: Program shall have event-driven technical reviews.

4.5. Configuration and Change Management

- **Technical Baseline Artifacts** – For each baseline established at a technical review, list and describe the planned or established artifacts (if not already identified in Section 4.4). Typically, at a minimum, the following apply:
  - SFR = Functional Baseline = System Specification and external specifications
  - PDR = Allocated Baseline = Item Performance Specification for each end product, internal interface specifications, and allocated external interface specifications, and preliminary drawings
  - CDR = Initial Product Baseline = Item Detail Specification for each end product, internal interface specifications, allocated external interface specifications, and detailed (build-to) drawings

Expectation: Programs should understand which artifacts make up each technical baseline and manage changes appropriately.

- **Configuration Management/Control (and Change) Process Description** – Provide a process diagram of how the program will maintain configuration control of its baselines. Identify when in the acquisition lifecycle the program will assume initial and full configuration control of its baselines.

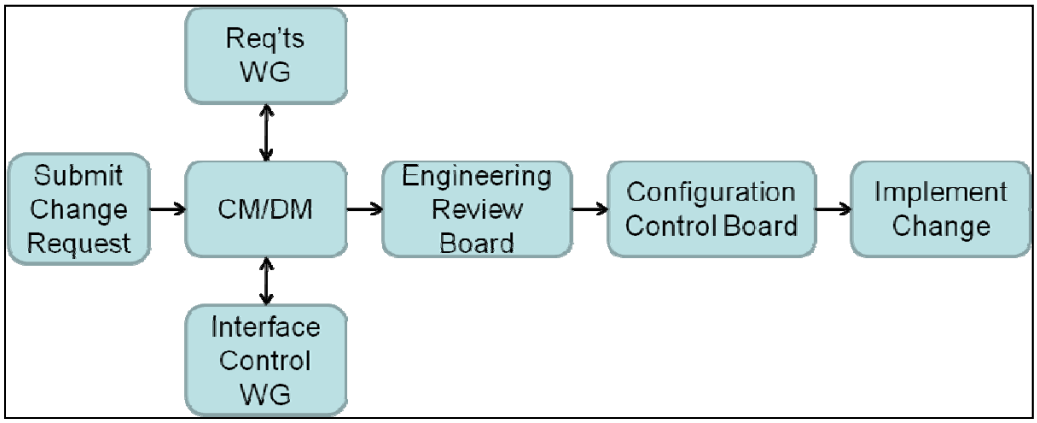


Figure 4.5-1 Configuration Management Process (mandated) (sample)

  - **Roles, Responsibilities, and Authorities** - Summarize the roles, responsibilities, and authorities within the CM process. If this includes one or more configuration boards, describe the hierarchy of these boards, their frequency, who (by position) chairs them, who participates, and who (by position) has final authority in each.
  - **Configuration Change Process** – Outline the process the program will use to change the technical baseline/configuration and specifically address:
    - How changes to a technical baseline are identified, evaluated, approved/disapproved, recorded, incorporated, and verified;
    - How product information is captured, maintained, and traced back to requirements;
    - How requirements for in-service configuration/design changes are determined and managed/controlled; and
    - How internal interfaces are managed and controlled.

- **Classification of Changes** – Define the classification of changes (Class 1, Class 2, etc.) applicable to the program.
- **Roles, Responsibilities and Authorities** – Identify by position who in the CM process is responsible for determining the classification of a change and who (by position) verifies/confirms/approves it.

Expectation: Programs will control their baselines.

4.6. Design Considerations – DAG Section 4.4 contains a non-exhaustive list of design considerations; not all are equally relevant or critical to a given program, but all should be examined for relevancy. In the mandated table below, identify design considerations that are critical to the achievement of the program's technical requirements. The entries below are mandated by policy for inclusion as are their reference documents which must be embedded in the SEP or hot linked.

Expectation: SEP demonstrates that the mandated design considerations are an integral part of the design decision process including trade study criteria.

Mapping Key Design Considerations into Contracts					
Name (Reference)	**Cognizant PMO Org**	**Certification**	**Documentation (hot link)**	**Contractual Requirements (CDRL #)**	**Description/Comments**
SE Tradeoff Analysis for Affordability			(MS B)		Provide the systems engineering trade-off analysis showing how cost varies as the major design parameters and time to complete are traded off against one another. The analysis will reflect attention to capability upgrades. The analysis will support MDA approval of an Affordability Requirement to be treated as a Key Performance Parameter (KPP) in the Acquisition Decision Memorandum. The analytical summary will include a graphic illustrating cost tradeoff curves or trade space around major affordability drivers (including KPPs when they are major cost drivers) to show how the program has established a cost-effective design point for those affordability drivers.
Corrosion Prevention and Control (ACAT I only)			CPCP (MS B & C)		Describe how design will minimize impact of corrosion and material deterioration on system throughout system life cycle.
Environmental Safety and Occupational Health (ESOH)			PESHE NEPA Compliance Schedule (MS B & C)		Describe how design will minimize ESOH by summarizing how program will integrate ESOH considerations into SE processes to include method for tracking hazards and ESOH risks and mitigation plans throughout the life cycle of system.
Human Systems Integration (HSI)					Summarize how HSI will be integrated within the SE processes, specifically addressing the human operator and maintainer requirement allocation approach that accounts for total system performance.
Item Unique Identification (IUID)			IUID Implementation Plan (MS B & C)		Describe how the program will implement IUID to identify and track applicable major end items, etc.
Manufacturing					Assess the manufacturing risk and readiness of all contributory processes and particularly those that are new or unproven in a full-rate production environment.

Open Systems Architectures					Describe how open systems architectures will be incorporated into the program's design to enable affordable change, evolutionary acquisition, and interoperability.
Program Protection and Information Assurance			PPP (MS A, B & C)		Describe how design will address safeguarding Critical Program Information (CPI) and provide countermeasures against hacking.
Reliability and Maintainability[3]			RAM contract language[1] RAM-C Report[2] (MS A, B, & C)		Describe how the program will implement and contract for a comprehensive R&M engineering program to include the phased activities in Table 4.6-2 and how R&M is integrated with SE processes.

Table 4.6-1 Design Considerations (mandated) (sample)

Table 4.6-1 Legend:

Name – See DAG Chapter 4.4 for more comprehensive listing of design considerations; listed items are mandated by statute or policy and must be addressed. Others are at PMO's discretion as appropriate for the system.

Cognizant PMO Organization – Assigned IPT/WIPT/WG for oversight

Certification – As appropriate, to include Technical Authority and timeframe

Documentation – List appropriate PMO and/or contractor documents and hot link.

Contractual Requirements – List contract clauses which the PMO is using to address the named topic.

Description/Comments – As needed, to inform other PMO members and stakeholders

[1] Relevant R&M sections of the Systems Specification, SOW/SOO, and Sections L and M

[2] DoD RAM-C Report Manual, June 1, 2009

[3] Programs operating under Space Systems Acquisition Procedures shall address Mission Assurance (MA) planning in the context of reliability and provide a description of MA activities undertaken to ensure that the system will operate properly once launched into orbit. Specifically, space programs will describe how the Mission Assurance process employed meets the best practices described in the Mission Assurance Guide (reference Aerospace Corporation TOR-2007(8547)-6018). This description should include program phase-dependent processes and planning for MA in the next phase of the program and the way program MA processes adhere to applicable policies and guidance. Also describe the launch and operations readiness process.

R&M Engineering Activity	Planning and Timing
R&M Allocations	
R&M Block Diagrams	
R&M Predictions	
Failure Definitions and Scoring Criteria	
Failure Mode, Effects, and Criticality Analysis (FMECA)	
Maintainability and Built-in Test Demonstrations	
Reliability Growth Testing at the System and Subsystem Level	
Failure Reporting , Analysis, and Corrective Action System (FRACAS)	

Table 4.6-2 R&M Activity Planning and Timing (mandated) (sample)

Expectation: Programs should understand that the content of the R&M artifacts need to be consistent with the level of design knowledge that makes up each technical baseline.

- ***R&M Allocations – R&M requirements assigned to individual items to attain desired system level performance. Preliminary allocations are expected by SFR with final allocations completed by PDR.***
- ***R&M Block Diagrams – The R&M block diagrams and math models prepared to reflect the equipment/system configuration. Preliminary block diagrams are expected by SFR with the final completed by PDR.***
- ***R&M Predictions – The R&M predictions provide an evaluation of the proposed design or for comparison of alternative designs. Preliminary predictions are expected by PDR with the final by CDR.***
- ***Failure Definition and Scoring Criteria – Failure definitions and scoring criteria to make assessments of R&M contract requirements.***
- ***FMECA – Analyses performed to assess the severity of the effects of component/subsystem failures on system performance. Preliminary analyses are expected by PDR with the final by CDR.***
- ***Maintainability and Built-In Test – Assessment of the quantitative and qualitative maintainability and Built-In test characteristics of the design.***
- ***Reliability Growth Testing at the System and Subsystem Level – Reliability testing of development systems to identify failure modes, which if uncorrected could cause the equipment to exhibit unacceptable levels of reliability performance during operational usage.***
- ***FRACAS – Engineering activity during development, production, and sustainment to provide management visibility and control for R&M improvement of hardware and associated software by timely and disciplined***

utilization of failure data to generate and implement effective corrective actions to prevent failure recurrence.

4.7. Engineering Tools – In a table, identify the tools the program plans to use.

Engineering Tool	Purpose	Position/IPT Responsibility
IMS		
IBM®Rational® DOORS®	Requirements Traceability and Verification Methodology and Completion	SE IPT/Rqmts Manager
Requirements Verification Matrix (RVM)	Requirements Verification	
Computer-Aided Three-Dimensional Interactive Application (CATIA)	Design	SE IPT
Risk Mgmt Information System (RMIS)	RM	SE IPT/Risk Manager
SW Integration Lab (SIL)	M&S	SW WG
SW Engineering	Design	SW WG
SW cost estimating (e.g., COCOMO)		SW WG
Producibility/Throughput Analysis Tool		Manufacturing WG
Line of Balance	Production planning	Manufacturing WG
Reliability Growth (e.g., RGA®, PM2, RGTM, AMPM)	Reliability growth planning and tracking	SE IPT/R&M Lead
Etc.		

Table 4.7-1 Engineering Tools (mandated) (sample)

Expectation: Program should ensure design solutions are documented based upon sound SE practices using engineering tools to augment the technical approach. Programs should define tool interfaces when the government and contractor(s) plan to use different tools for the same purpose.

Annex A – Acronyms

Provide a list of all acronyms used in the SEP