

INTELLIGENCE COMMUNITY STANDARD

801-01

# **Major System Acquisitions**

- **A. AUTHORITY:** The National Security Act of 1947, as amended; Executive Order 12333, as amended; Intelligence Community Directive (ICD) 801, *Acquisition*; Intelligence Community Policy Guidance (ICPG) 801.1, *Acquisition*; and other applicable provisions of law.
- **B. PURPOSE:** This document provides standards for the application of ICD 801 and ICPG 801.1 to Major System Acquisitions (MSAs) through acquisition-related management practices, processes and plans, program reviews and assessments, and workforce development.

## C. APPLICABILITY

- 1. This Standard applies to the Intelligence Community (IC), as defined by the National Security Act of 1947, as amended; and to such elements of any other department or agency as may be designated an element of the IC by the President, or jointly by the Director of National Intelligence (DNI) and the head of the department or agency concerned.
- 2. This Intelligence Community Standard (ICS) applies to all Major System Acquisitions (MSAs) for which ICD 801 is applicable.
- **D. REFERENCES:** ICD 104, National Intelligence Program (NIP) Budget Formulation and Justification, Execution, and Performance Evaluation; ICD 801, Acquisition; ICPG 801.1, Acquisition; Director of National Intelligence (DNI) Memorandum, E/S 00076, Delegation of Certain Authorities and Responsibilities of the Director of National Intelligence.
- E. BACKGROUND: ICD 801 and ICPG 801.1 establish and define the framework necessary to achieve acquisition excellence throughout the IC. An IC element's acquisition policies, guidance, processes, and procedures will be structured to address the element's specific and unique circumstances, while complying with ICD 801, and ICPG 801.1.

## F. IC ACQUISITION MODEL

1. The IC acquisition approach will follow the IC Acquisition Model (ICAM) and will be either a single-step development or, more frequently, an evolutionary development. A single-step development will progress a single time through the project cycle activities (Initial Concept Studies through Deployment and Sustainment) to meet validated user requirements. An evolutionary approach delivers the system in multiple steps or increments. With this approach, validated user requirements are increasingly satisfied as each increment is completed. Each increment produces a capability or capabilities to satisfy the validated user requirements for that increment, and each increment may consist of multiple development periods (spirals). Both single-step and evolutionary developments are characterized by discrete phases that correspond to the maturity of a technical

solution to meet validated user requirements. Effective systems development requires collaboration among user, tester, acquisition manager, and others. Such collaboration depends on validated and managed acquisition baselines; proactively managed risk, including the appropriate maturation and insertion of technologies; consistent application of acquisition and systems engineering processes and procedures; and well-trained, highly experienced system engineers and acquisition professionals. Appendix A provides details regarding the ICAM, including an explanation of terminology and specific milestone criteria.

- 2. With prior concurrence of the Milestone Decision Authority (MDA), the ICAM may be tailored to reflect the specific circumstances of each acquisition. The MDA may authorize entry into the ICAM at any point consistent with milestone criteria. Progression through the milestones (A, B, C) for each phase requires MDA approval. The composition of the MDA milestone advisory group is identified in Appendix B with nominal milestone documentation outlined in Appendix C.
- G. PROGRAM MANAGEMENT PLANS: The National Security Act of 1947, as amended, ICD 801 and ICPG 801.1 state the requirement that all NIP-funded MSAs shall have an approved Program Management Plan (PMP). Appendix D provides a description of the program information to be included in each PMP. The PMP may be tailored to fit the particular conditions of a given acquisition, but must still comply with applicable statutes, regulations, and DNI policy and guidance.
- H. INDEPENDENT PROGRAM ASSESSMENT: ICPG 801.1 requires that an Independent Program Assessment (IPA), or equivalent assessment, be conducted prior to convening a Milestone decision event. See Appendix E for additional information on IPAs.

I. EFFECTIVE DATE: This Standard becomes effective on the date of signature.

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## APPENDIX A: INTELLIGENCE COMMUNITY ACQUISITION MODEL

The Intelligence Community (IC) Acquisition Model (ICAM), depicted in Figure A-1, emphasizes robust systems engineering and evolutionary development processes across all phases of an acquisition with each phase culminating in a decision point. ICAM decision points include the Concept Development Decision prior to beginning concept studies, and three milestone decisions (A, B, C) that separate the phases of acquisition execution. An acquisition project cycle typically runs from Initial Concept Studies through Deployment and Sustainment. Each decision point is preceded by a program review addressing the readiness of the acquisition to advance to the next step in the acquisition. Such a review considers: an Independent Program Assessment (IPA); completion of pre-established phase exit criteria; a risk assessment to include counterintelligence risks and mitigation plan(s), as appropriate; affordability; acquisition tradeoffs: acquisition strategy (or updates); and the development of exit criteria for the next phase. The results of the acquisition review are presented to the National Intelligence Acquisition Board (NIAB). The Joint Intelligence Acquisition Board (IIAB) may serve as a substitute for all uses of NIAB when the acquisition is a joint program, as defined in ICD 801, section D., so that a decision can be made to initiate, continue, or terminate an acquisition. An Acquisition Decision Memorandum (ADM) is generated to document the results of the decision process. Although the ICAM process may be tailored, the Milestone Decision Authority (MDA) for acquisitions with significant resource requirements, high IC criticality, or less mature technology is expected to apply the ICAM process elements in conjunction with appropriate risk management techniques to meet the intent of this policy guidance. IC element policy documents may provide greater process detail within the ICAM framework to address IC element specific circumstances.

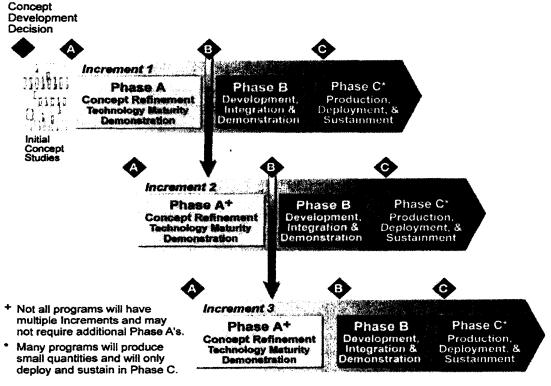


Figure A-1: Intelligence Community Acquisition Model

All National Intelligence Program (NIP) funded Major System Acquisitions (MSAs) are budgeted to an Independent Cost Estimate (ICE) prepared by the DNI Cost Analysis Improvement Group (CAIG) or an Agency Cost Position (ACP) endorsed by the DNI CAIG. An overlay of the ICAM and cost estimates is depicted in Figure A-2. Life Cycle Cost Estimates (LCCEs) that determine alternative affordability are initiated in Initial Concept Studies. The LCCE is based on realistic projections of the dollars and manpower likely to be required in future years and is reflected in the ICE. Cost parameters include: research, development, test and evaluation costs; procurement costs; construction costs; and acquisition-related operations, maintenance and support costs. The initial Intelligence Capability Baseline Description (ICBD), in accordance with the DNI CAIG process, is created in Phase A to facilitate both the ACP and the DNI CAIG-endorsed ICE. These cost estimates are updated in Phase B and C, as needed. Acquisitions requiring future increments to achieve their Full Operational Capability (FOC) will include the Phase A costs, if any, for the next increment in the cost estimate for the current increment. Affordability assessments are completed prior to Milestones B and C to ensure that the acquisition is properly staffed and that the schedule is executable within the existing budget.

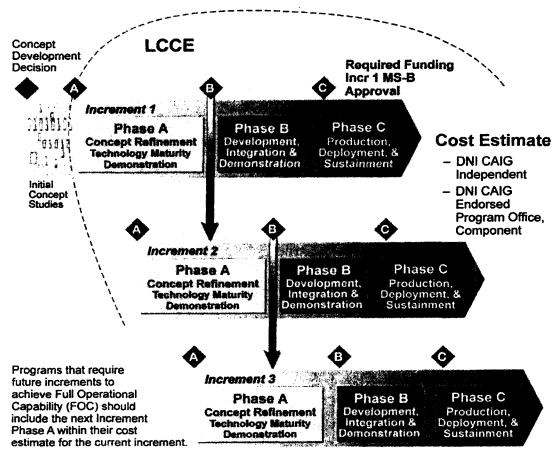


Figure A-2: IC Acquisition Model Coordinated with Cost Analysis

- 1. Concept Development Decision (CDD). The CDD is made by the DNI MDA in an Acquisition Decision Memorandum (ADM) based on the recommendation of the DNI Acquisition Review Board (ARB). This decision determines whether sufficient information exists regarding a set of requirements, possible solutions (alternatives), and a plan to analyze and evaluate the alternatives to warrant spending resources on Initial Concept Studies.
- 2. Initial Concept Study. The focus of the Initial Concept Studies is the creation of a requirements document (Statement of Capability (SOC-A)), ICE, and a Phase A Program Management Plan (PMP). The Initial Concept Studies creates a Principal Deputy DNI (PDDNI)-approved and validated SOC-A and subsequently conducts an Analysis of Alternatives (AoA) to evaluate the capability alternatives (including support concepts) that meet Phase A mission capability requirements. The AoA also performs concept analysis to gain performance insight, and creates initial LCCEs to determine affordability, and evaluates counterintelligence risks for each alternative. A preferred system concept (or increment dependent on available mature technology) is identified that is cost effective, affordable, potentially operationally effective and suitable, and can be developed to provide a timely solution at an acceptable level of risk. The results of the AoA will guide the development of the Technology Development Strategy, which will be approved at Milestone A.
- 3. Milestone A. The Milestone A decision authorizes entry into Phase A or the Concept Refinement and Technology Maturity Demonstration Phase. The MDA reviews the Milestone A package in light of the acquisition-specific milestone exit criteria, determines that there is a potential solution or affordable increment of useful capability, and ensures resources and capability needs are matched. An initial PMP will be created to baseline Phase A activities.
- 4. Phase A: Concept Refinement and Technology Maturity Demonstration. The focus of this phase is to:
  - Conduct appropriate risk mitigation, technology maturation, and prototyping necessary to complete the Phase A exit criteria.
  - Continue to refine the AoA including the evaluation of counterintelligence risks.
  - Identify the most probable solution to use in estimating acquisition budget requirements.
  - Develop a program architecture and concept of operations and to assess IC Information
     Technology Enterprise Architecture compliance.
  - Develop a PDDNI-validated and approved requirements document for Phase B identifying-key performance parameters and schedule goals. (This requirements document is often referred to as a Capability Development Document).
  - Create an initial PMP including cost, schedule, and performance goals based on the PDDNI-validated and approved requirements document for Phase B.
  - Create an initial ICBD facilitating the Program Office Estimate (POE) and a DNI CAIGdeveloped ICE.

The concept identified in the Initial Concept Studies is refined to assess the technical risk (including technology maturity) of the critical technologies. An Affordability Assessment is completed to demonstrate that the program's projected funding and manpower requirements are realistic and achievable in the context of the IC overall strategic plan. A risk identification and mitigation plan is implemented to reduce technology risk and to determine the appropriate set of

technologies that are sufficiently mature and affordable to be integrated into the acquisition. An IPA, or equivalent assessment, is completed to evaluate all potential risk areas, among other objectives. Technology maturity demonstrations are completed to indicate that the technology is sufficiently mature to perform in the relevant environment as intended.

- 5. Milestone B. This milestone decision authorizes acquisition (or increment) entry into the Development, Integration, and Demonstration Phase based on satisfactory completion of the elements in Phase A. In light of any pre-established Milestone B exit criteria, the MDA makes an affordability determination, reviews and considers the acquisition key assumptions, and establishes the PMP baseline, including any desired phase exit criteria.
- 6. Phase B: Development, Integration, and Demonstration. The key Phase B exit criterion is to produce a first article, and in the IC this may be the only article, providing the capability to satisfy the PDDNI-validated and approved requirements document for Phase B. (Note that Phase C is used to produce and deploy additional identical copies of the first article, while Phase B is used again if an acquisition will produce an article similar to one previously produced but with a significant change, effectively yielding a new first article.) An acquisition manager will be assigned at the beginning of this acquisition phase. The focus of this phase is to:
  - Develop a system (or a capability increment) using robust systems engineering.
  - Integrate subsystems in a build-test-build approach solving compatibility issues as they are encountered to ensure compliance with the IC Enterprise Architecture.
  - Demonstrate in increasingly stressful environments that a capability will perform as identified in the PDDNI-validated and approved requirements document for Phase B.
  - Complete Phase B exit criteria.
  - Preclude or mitigate mission endangering security or counterintelligence issues.

Within Phase B, major efforts involve reducing integration and manufacturing risk; ensuring operational supportability; implementing human systems integration; ensuring affordability; protecting critical program information and system capabilities; mitigating security and counterintelligence risks; and demonstrating system integration. The ICBD is updated and a revised POE and ICE are completed as appropriate. If appropriate, an IPA, or equivalent assessment, is completed to evaluate the risks and other concerns for the next phase. This phase may have multiple increments, each of which is treated as a separate acquisition, with its own PDDNI-validated and approved requirements document for Phase B ICE and PMP. Each increment can have multiple spirals to build capabilities in a rapid and iterative manner, which may include provisional deployment in an operational environment. The requirements document for Phase C is produced in Phase B and is validated by the PDDNI when the PDDNI determines validation is appropriate.

7. Milestone C. This milestone decision authorizes entry into the Production, Deployment, and Sustainment Phase upon successful completion of Phase B exit criteria. The MDA ensures resources and capability needs are matched (program is properly staffed and schedule is executable within existing budget), makes an affordability determination, and approves the updated PMP baseline. For many IC acquisitions that are essentially a first article development, Milestone C is a deployment and sustainment readiness review since there is no significant "production."

8. Phase C: Production, Deployment, and Sustainment. The focus of this phase is to produce multiple copies, if appropriate; deploy; and sustain the operational capability stated in the requirements document for Phase C and complete Phase C exit criteria. This phase delivers the fully funded quantity of systems and supporting material and services for the acquisition (or increment) to the users. In the IC, many acquisitions will not enter "production", but will produce one or two deliverable "articles" as part of the development phase that will be deployed and sustained in Phase C. As appropriate, removal and disposal of capability no longer required for operations are included in this phase. During this phase, FOC is attained for the given increment. Sustainment includes supply; maintenance; transportation; sustaining engineering; data management; configuration management; manpower; personnel; training, habitability; survivability; environment; occupational health; protection of critical program information/ systems capability; anti-tamper provisions; IT supportability; and interoperability functions. Appropriate security and counterintelligence actions must be maintained throughout this phase.

# APPENDIX B: INTELLIGENCE ACQUISITION BOARDS

Table B-1: National Intelligence Acquisition Board Composition

Organization	Responsibilities	
ADNI/AT&F or ODNI Designee	MDA	
ADNI/S&RA	IC Requirements and Cost Analysis	
IC CIO	IT Architecture, Standards, Info Sharing, and Integration	
ADDNI/ACQ and IC SAE	Acquisition Support to MDA	
	Advisors	
ADNI/CFO	Resource Management	
IC Element Head	Integration within the IC Element	
IC Element AE or equivalent	IC Element Acquisition Topics	
ADDNI/Procurement and IC SPE	Procurement and Contracting Topics	

Table B-2: Joint Intelligence Acquisition Board (JIAB) Composition

ODNI		Department		
Organization	Responsibilities	Organization	Responsibilities	
DNI MDA	MDA	Department MDA (DoD-SECDEF MDA)	MDA	
ADNI/S&RA	IC Requirements and Cost Analysis	Department Senior (DoD-USD(I))	Department Equities	
IC CIO	IT Architecture, Oversight and Information Integration	Department CIO	IT Architecture, Oversight and Information Integration	
ADDNI/ACQ and IC SAE	Acquisition Support to MDA	Department Customer Advocate (DoD-Joint Staff-J8)	Requirements	
		Department Acquisition Oversight (ASD/ACQ)	Acquisition Support to MDA	
	Ads	isors		
Agency Head	Program Integration (e.g., CCP, NRP, NGP)	Agency Head (Service Chief)	Program Integration (e.g. CCP, NRP, NGP)	
ADNI/CFO	Resource Management	Department CFO (DoD-USD(I))	Resource/Cost Analysis	
Agency AE	Agency Acquisition Topics	Agency AE (Service AE)	Agency Acquisition Topics	
ADDNI/Procurement and IC SPE	Procurement and Contracting Topics	Dept Procurement Executive (Dir. Defense Procurement)	Procurement and Contracting Topics	

(Department of Defense used for departmental reference)

# APPENDIX C: MILESTONE DOCUMENTATION REQUIREMENTS

Unless tailored by the MDA, completion of the documentation identified in Table C-1 is required to enter each subsequent acquisition phase. Formats for documents in Table C-1 are established by an IC element in its acquisition policy and policy guidance.

**Table C-1: Milestone Documentation Requirements** 

Table C-1. Milestone Documentation Requirements					
Initial Concept Studies Phase	Phase A Concept Refinement Technology Maturity	Phase B Development, Integration & Demonstration	Phase C Production/ Sustainment		
Documentation Created:	Documentation Created/Updated:	Documentation Created/Updated:	Documentation Created/Updated:		
created:  Analysis of Alternatives (AoA)  ICBD, POE, ICE & Affordability Assessment  Technology Development Strategy (TDS)  CONOP  Program Architecture  Initial Program Management Plan  Security Classification Guide	Created/Updated:  Acquisition Strategy Program Management Plan (PMP) Bandwidth Capability Assessment Vulnerability Assessment Report Systems Engineering Plan (SEP) Test and Evaluation Master Plan (TEMP) CONOP Risk Identification & Mitigation Plan ICBD, POE, ICE & Affordability Assessment Integrated Program Assessment Centerprise Architecture Compliance	Created/Updated:  Acquisition Strategy  Program Management Plan (PMP)  Systems Engineering Plan (SEP)  Test/Evaluation Master Plan (TEMP)  Risk Identification & Mitigation Plan  ICBD, POE, ICE & Affordability Assessment  Integrated Program Assessment  IC Enterprise Architecture Compliance  Information Support Plan  Security and Counter intelligence Assessment  Verification that key assumptions remain valid  Security Classification Guide	Documentation to be determined by MDA on a case-by-case basis		
<u></u>	TDS & Technology Maturity Assessment Security and Counter intelligence Assessment Verification that key assumptions remain valid AoA		FOC		
Initial Concept Studies Phase	Phase A Concept Refinement — Technology Maturity	Phase B Development, Integration & Demonstration	Phase C Production/ Sustainment		
SOC Capability Document:  PDDNI-validated requirements document for Phase A [May already exist for Mission Area!	Capability Document:  PDDNI-validated requirements document for Phase B	Capability Document:  Requirements document for Phase C (if required)			

#### APPENDIX D: PROGRAM MANAGEMENT PLANS

The Program Management Plan (PMP) for an acquisition documents the cost baseline goal, schedule and performance goals (objective and threshold), and milestone (phase exit) criteria. A list of acquisition positions is maintained in parallel with a PMP. The PMP is approved by the Milestone Decision Authority (MDA) for the acquisition as part of the milestone decision process. MDA approval to change an acquisition's baseline is reflected in an Acquisition Decision Memorandum (ADM) and an updated PMP. The first baseline and all changes over time in cost baseline, schedule and performance goals, and milestone criteria are maintained in the PMP together with the reason for any change. The ADNI/AT&F and IC Senior Acquisition Executive (SAE) will review progress against PMP goals and milestone criteria periodically. The PMP content is determined by the Intelligence Community Acquisition Model (ICAM) phase the acquisition is undergoing.

For Major System Acquisitions (MSAs) entering Phase A, a "Phase A" PMP is established that includes cost, schedule, and performance objectives for Phase A. Reviews of the Phase A PMP will focus on progress toward completing the documentation (e.g., Phase A exit criteria, Principal Deputy Director of National Intelligence (PDDNI)-validated and approved requirements document for Phase A, Technology Maturity Objectives), and other elements necessary to enter Phase B.

The PMP baseline for an MSA is established at Milestone B. For MSAs entering Phase B, the PMP addresses the total acquisition and is focused on the cost, schedule, and performance goals associated with the development, integration, and demonstration of the acquisition. For MSAs entering Phase C, the PMP also addresses the total acquisition and is focused on the cost, schedule, and performance goals associated with the production and fielding aspects of the acquisition.

Phase B and Phase C PMP cost baseline goals are stated in base year dollars, are taken from the DNI Cost Analysis Improvement Group (CAIG) Independent Cost Estimate (ICE) or the DNI CAIG endorsed Agency Cost Position (ACP), and are broken out for each planned capability increment.

Phase B and Phase C PMP schedule and performance goals (both objective and threshold) are also identified for each planned capability increment. Objective goals represent the user's desires. Threshold goals represent the minimum value the user will accept and that are achievable with limited and manageable risk, including technical maturity considerations. The acquisition manager may treat the difference between an objective and its associated threshold as a "trade space" to achieve the best balance of cost, schedule and performance.

A PMP contains the following information:

- 1. <u>Cost</u>: The PMP formally documents the cost baseline goal. Acquisition cost baseline goals are identified for each planned capability increment performance result. The PMP cost baseline is revised when the change is formally approved by the MDA following a normal milestone event or a special program review and the decision is documented in an ADM.
- a. For MSAs entering Phase A, the acquisition manager will develop an initial PMP cost goal based on program planning documentation such as the PDDNI-validated and approved requirements document for Phase A.

- b. For MSAs entering Phase B or Phase C, the PMP documents the acquisition cost baseline goal, in base year dollars, from the original DNI CAIG-approved ICE established at Milestone B and from the most current DNI CAIG-approved ICE, if applicable.
- 2. <u>Schedule</u>: The PDDNI validates schedule goals (objectives and thresholds) in approved requirements documents for Phase B or Phase C. Schedule goals are identified for each planned capability increment.
- a. For MSAs entering Phase A, the PMP includes the schedule goals for all Phase A activities including risk reduction efforts, demonstration, proofs of concept, or operational validation efforts.
- b. For MSAs entering Phase B or Phase C, the PMP documents the PDDNI-approved end state (different schedule objective and threshold values) established at Milestone B with identified intermediate waypoints that reflect an ability to achieve the end state.
- 3. <u>Performance</u>: The PDDNI also validates performance goals (objectives and thresholds) in approved requirements documents for Phase B or Phase C. Performance goals are identified for each planned capability increment.
- a. For MSAs entering Phase A, the PMP includes performance goals based upon acquisition planning documentation such as the PDDNI-validated and approved requirements document for Phase A.
- b. For MSAs entering Phase B or Phase C, the PMP documents the PDDNI-approved end state (different performance objective and threshold values) established at Milestone B with identified intermediate waypoints that reflect an ability to achieve the end state. Performance goals, also known as Required Performance Metrics (RPMs), succinctly describe the critical characteristics and attributes of the acquisition.
- 4. <u>Milestone (Phase-Exit) Criteria</u>: The PMP includes current phase exit criteria or upcoming milestone entrance criteria as described by Appendix C, and additionally any criteria established by the MDA in an ADM. The ADM is included as an annex to the PMP.
- 5. <u>Key Acquisition Positions</u>: A list of key acquisition positions and required certification levels is maintained in parallel with the PMP.

## APPENDIX E: INDEPENDENT PROGRAM ASSESSMENT

Independent Program Assessments (IPAs), or equivalent assessments, are conducted on National Intelligence Program (NIP)-funded major system acquisitions (MSAs) prior to a milestone decision review. Intelligence Community (IC) elements are expected to supplement this guidance with specific implementation instructions tailored to their IC element.

- 1. Definition: An IPA is a focused, short-duration, peer review performed by experienced technical experts and acquisition professionals. The objective of an IPA is to assess the adequacy of the proposed approach and an acquisition's readiness to proceed including a technology maturity assessment. The IPA focus is the identification and evaluation of key acquisition elements, with the exception of cost, since the Independent Cost Estimate (ICE) addresses cost-related elements of an acquisition in parallel with the IPA.
- 2. IPA Process: As a precursor to a milestone decision, the head of the IC element will notify the IC stakeholders of an IPA and will select an IPA team (IPAT) leader, who is responsible for the overall performance of the IPA.
- a. The IPAT leader will select individuals to serve as IPAT members based on the acquisition's technical focus (e.g., space, information technology, communications, security) and an individual's qualifications (experience and expertise) match to the IPA focus. IPAT members cannot be directly affiliated with the acquisition under review, a member of the acquisition office, nor be a member of the development contractor team. The Assistant Director of National Intelligence for Acquisition, Technology, and Facilities (ADNI/AT&F), DNI milestone decision authority (MDA), or IC SAE, at their discretion, may name the Office of the DNI (ODNI) members to the IPA. In addition to full-time members, the IPAT leader may request that the stakeholder organizations provide specific expertise at anytime during the IPA.
- b. During the IPA, the IPAT leader will review progress with the IPA convening official and the ODNI on a regular basis and additionally, when requested. In addition to the ADNI/AT&F and the ODNI MDA, the IPA convening official may extend an invitation to the reviews to other interested parties.
- c. The assessment process is a cooperative effort between the acquisition office and the IPAT. Acquisition managers will generate a consolidated set of acquisition-related documentation and make available all necessary data, documentation, and program staff for the IPAT to complete its assessment prior to the milestone review. The IPAT leader will discuss major IPAT findings or questions with the program office as the assessment is being developed in advance of the milestone review.
- d. The IPAT leader, with the participation and support of the IPAT membership, will assimilate the team's assessments and present the team's findings and recommendations in the form of an annotated briefing to the National Intelligence Acquisition Board (NIAB) (or agency acquisition decision forum in the case of a delegated acquisition). The findings and recommendation(s) resulting from the IPA are solely those of the IPAT leader, reflecting as appropriate the input from the IPA members and other stakeholders of the acquisition. Specifically, the management chain executing the acquisition may offer comments to be included in the report, but may not change or alter the content, findings or conclusions of the IPA report. The IPA report and briefing will reflect minority opinions when the views of some IPA members differ on significant points from the views of the IPAT leader.
- e. An IPA concludes when the NIAB, Joint Intelligence Acquisition Board (JIAB) or other IPA convening official receives the report from the IPAT leader.