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Acquisition

**OPERATIONS OF CAPABILITIES BASED
ACQUISITION SYSTEM**

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This Air Force Instruction (AFI) implements Air Force Policy Directive (AFPD) 63-1, *Capabilities-Based Acquisition System*, the policies in Department of Defense Directive DOD 5000.1, *The Defense Acquisition System*, and DoD Instruction DOD 5000.2, *Operation of the Defense Acquisition System* (collectively called the 5000-series); 10 USC 2330, Procurement of Services, and *USAF Management and Oversight of Service Process (MOASP)*; Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01, *Joint Capabilities Integration and Development System*, and CJCS Manual (CJCSM) 3170.01, *Operation of the Joint Capabilities Integration and Development System*. This AFI **must** be used in conjunction with AFI 10-601, *Capabilities Based Requirements Development*, and AFI 99-103, *Capabilities Based Test and Evaluation*. Additional recommended guidance can be found within the Defense Acquisition Guidebook.

This instruction applies to defense technology projects and acquisition programs procured under DOD 5000.2. It is not meant to be prescriptive, but serve as a tool to ensure a systematic framework approach is utilized when acquiring AF capabilities. Some requirements, where stated, apply only to Major Defense Acquisition Programs (MDAP) and Major Automated Information System (MAIS) Programs. Space programs are under the purview of the Under Secretary of the Air Force (SAF/US). Space programs named in the Space Virtual Major Force Program will use *National Security Space (NSS) Acquisition Policy 03-01* for acquisition policy procedures and instruction in lieu of DOD 5000.2 and are not covered by this instruction. Nuclear components governed by joint Department of Defense (DOD)-Department of Energy agreements are not covered by this instruction.

This instruction applies to regular Air Force, Air Force Reserve, and Air National Guard (ANG) as applicable. For this instruction, the term Major Command (MAJCOM) includes the ANG and field operating agencies (FOA).

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SUMMARY OF REVISIONS

Due to major changes in the DOD 5000-series, CJCSI 3170.01 and CJCSM 3170.01, this AFI is substantially revised and must be completely reviewed. The acquisition framework still provides milestones and phases, but with fundamental mandatory guidance to tailor the model to fit each acquisition program, consistent with technical risk, design maturity, and sound business practices. The goal is to provide capabilities to operators for valid mission needs in the shortest time possible.

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Chapter 1

VISION AND IMPLEMENTATION CONCEPTS

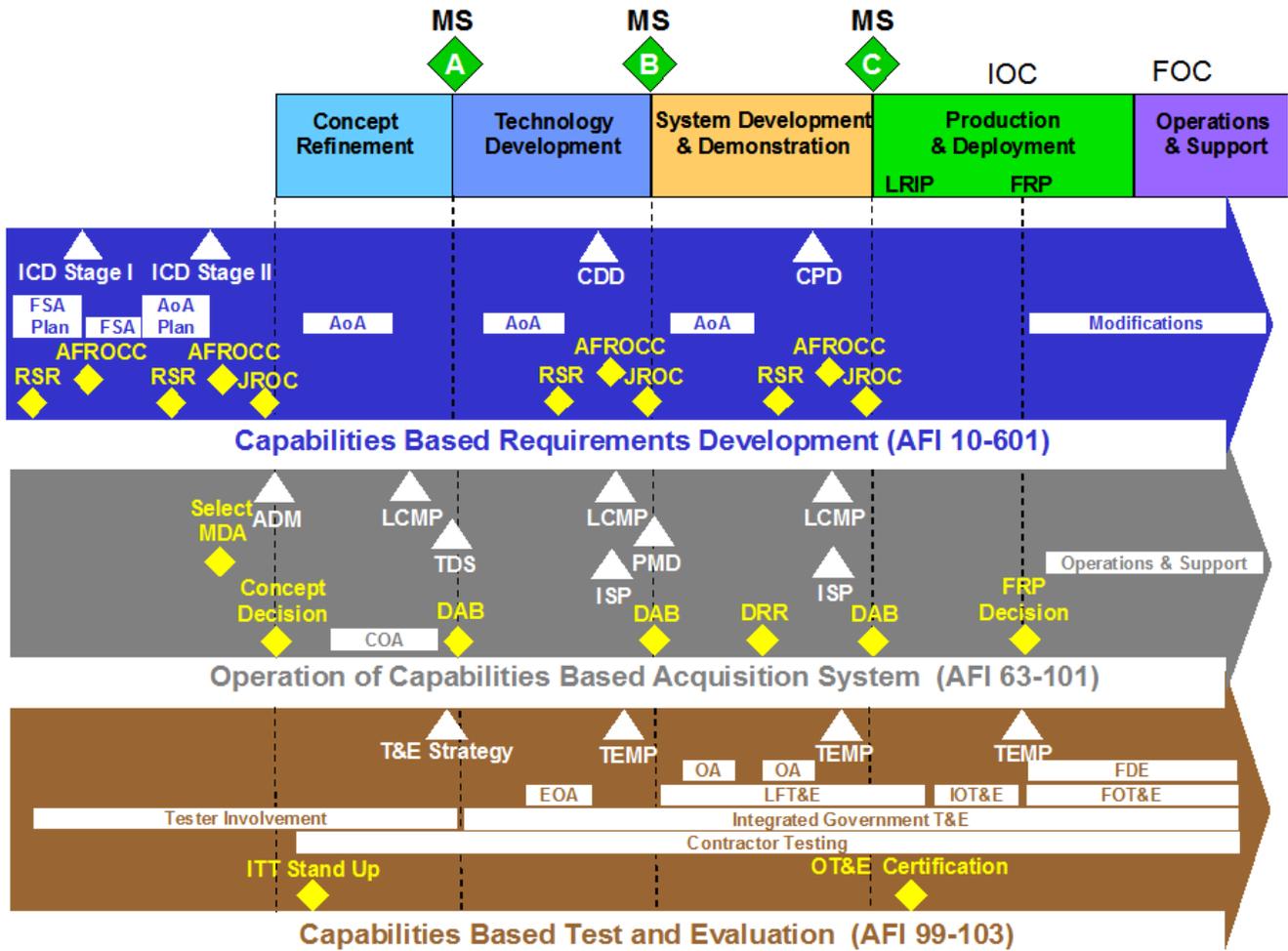
1.1. Purpose of Capabilities Based Acquisition System. The purpose of this instruction is to implement guidance from the Secretary of the Air Force (SECAF) and Chief of Staff of the Air Force (CSAF), referred to as the Commanders' Intent, which states the primary mission of our acquisition system is to rapidly deliver affordable and sustainable capabilities that meet the operators' expectations. This instruction provides the flexibility required for today's Air Force and must be used in conjunction with [AFI 10-601](#), *Capabilities Based Requirements Development*, and [AFI 99-103](#), *Capabilities Based Test and Evaluation*, to provide an integrated framework for the implementation of a capabilities based acquisition system.

1.2. Acquisition Environment. The goal of Capabilities Based Acquisition is to better deliver combat capability demanded by the warfighter by reducing cycle time and improving program credibility. The future of the Air Force's warfighting capabilities depends on our ability to quickly respond to an ever-changing number of worldwide scenarios, which reflect new and revised threats to our forces and require new capabilities to meet those future needs. Capabilities Based Acquisition defines an overarching process that is responsive to these threats. It will help improve communications with senior leadership and assist Air Force leadership in better allocating investment dollars to top Air Force priorities.

Capabilities Based Acquisition is a process that begins with operational capabilities requirements generation and continues through design, development, test and evaluation (T&E), fielding, sustainment and system disposal. There are five mutually supporting tenets that comprise Capabilities Based Acquisition. Three of these tenets were initially issued under the banner of the Agile Acquisition initiative: Collaborative Requirements Process, Seamless Verification Process, and Technology Transition Process. The need for Robust System Engineering and Expectations Management were added as tenets to complete the acquisition picture for ensuring systematic flexibility and growth with the deliberate leadership oversight. By following the intent of the five tenets, we will improve credibility in delivering programs that meet the expectations of our customers. The tenets are addressed in more detail in [Chapter 2](#).

1.3. Integration of Concepts and Processes. Achieving the above goals requires a synergistic effort of all communities involved – requirements, technology, acquisition, systems engineering, test, sustainment, intelligence and industry. [Figure 1.1](#) shows the acquisition process as the “master clock” for the integration of requirements, acquisition, and T&E events and activities. Understanding the fundamentals of Capabilities Based Acquisition through the integration of these concepts and processes will enable Program Managers to streamline processes and establish accountability for their respective programs. Variations of [Figure 1.1](#) are used throughout this AFI to show acquisition events during each phase of the acquisition framework. For specific details on entrance and exit criteria for Milestones (MS), refer to [DOD 5000.2](#).

Figure 1.1. Integration of the Requirements, Acquisition, and T&E Processes.



NOTE: All acronyms in this figure are defined in Attachment 1. Terminology changes: LCMP replaced SAMP; ISP replaced C4ISP.

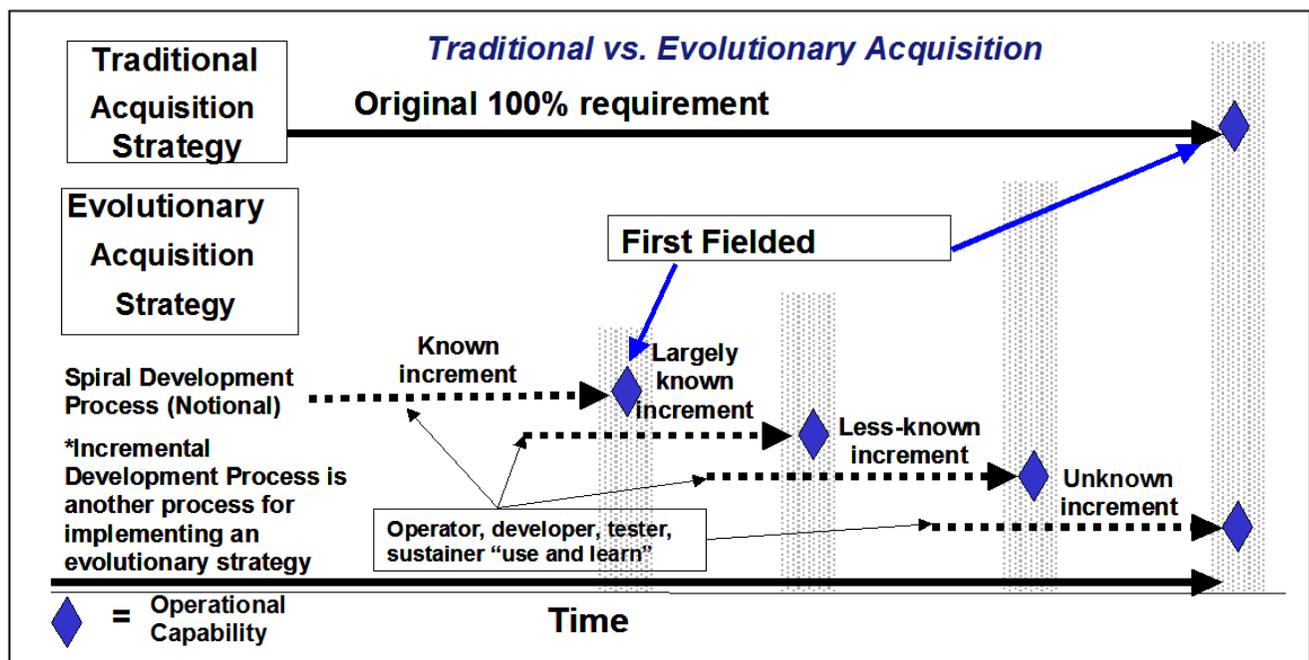
1.4. Evolutionary Acquisition (EA). EA is the DOD’s and Air Force preferred acquisition strategy for rapidly delivering needed capabilities, based on mature technologies, to the operators. An EA strategy requires substantial tailoring of the traditional acquisition milestones, phases, and activities such as budgeting, testing, and sustainment. The success of the strategy depends on consistent and continuous definition of operational capability requirements coupled with the maturation of technologies that lead to the disciplined development of systems that provide increasing capability. EA strategies also demand a robust systems engineering approach focused on adding capabilities in future increments. There is no “one size fits all” template for EA, but there are common characteristics and activities that programs can follow as a guide.

EA requires collaboration among users, testers, developers and sustainers and may be achieved through spiral development or an incremental development process as defined in DOD 5000.2. Under some circumstances, systems may be fielded using a traditional single step to full capabilities approach. However, an EA approach delivers capabilities in increments, recognizing, up front, the need for future capabilities

improvements. This allows for the ability to incrementally refine capability requirements, insert technology or additional capabilities, react to the environment, and exploit opportunities as they arise.

The objective is to balance needs and potential capabilities with resources, and to quickly put capabilities into the hands of the operator. During all phases of EA, logistics elements must be considered and included in acquisition planning in order for contractor or logistics personnel to maintain the system. **Figure 1.2.** below displays a notional and simplified program being developed using both traditional acquisition and EA strategies. Percentages and increments are notional. The diagram is intended to show how incremental capabilities may be delivered earlier in an acquisition timeline rather than waiting until the entire program is complete with full capability coming only at the end. The EA strategy delivers full capability as well, but will allow for incremental deliveries along the way, giving operators some capability sooner than later.

Figure 1.2. Traditional vs. Evolutionary Acquisition Strategies



*See DODI 5000.2

1.4.1. Spiral Development. This is the preferred process and relies on user feedback and technology maturation to define requirements for future increments. In this process, the capability requirements document(s) include a firm definition of the first increment while future increments and the precise end-state capabilities are not known at program initiation. The acquisition strategy defines the first increment of capability and how it will be funded, developed, tested, produced, and supported. It also describes the desired general capability the program is intended to satisfy, and establishes a management approach that will be used to define the exact capability needs for each subsequent increment. Capabilities requirements for subsequent increments are refined through demonstration and risk management.

1.4.2. Incremental Development. The capability requirements document(s) include a firm definition of the entire end-state capability, as well as firm definitions of interim increments, including an initial

operational capability (IOC) date for each increment. In this case, the acquisition strategy defines each increment of capability and how it will be funded, developed, tested, produced, and operationally supported. Incremental development differs from spiral development in that desired end-state requirements are known, but the requirements are met over time by developing several increments, each dependent on the availability of sufficiently mature technology.

Chapter 2

OVERVIEW: OPERATION OF CAPABILITIES BASED ACQUISITION SYSTEM

2.1. Five Tenets of Capabilities Based Acquisition. The two overarching goals of the capabilities based acquisition system are to reduce acquisition cycle time and to improve program credibility without impacting mission success within and outside the acquisition community. Working together as a team, with the right people involved up front as well as throughout the process, will yield the greatest results. Collaborative planning and execution are the methodologies the acquisition community will use to execute our mission – rapidly delivering capabilities to the operator.

Collaboration begins with developing capabilities requirements and continues through fielding and support. The execution chain has the responsibility to establish and lead collaborative teams to develop, document, and execute the acquisition strategy. The collaborative planning and execution methodologies are designed to provide a basis to reduce cycle time and recognize change in the environment so the required capability can be placed in the hands of the operator on schedule. To create a collaborative environment to achieve these goals, all the communities involved must collaborate in the planning and execution activities of the five tenets listed below.

2.1.1. Collaborative Requirements Process. The operator, acquirer, tester, developer, and enabler(s) will work collaboratively as one team beginning with the development of the requirement. While the operator is responsible for generating the requirement, the acquirer and developer will participate to gain understanding and communicate the “art of the possible.” Refer to CJCSI 3170.01 for additional details about the JCIDS process.

2.1.1.1. The Joint Capabilities Integration and Development System (JCIDS)

Process. JCIDS is closely integrated with the acquisition process and exists to identify, develop, and validate defense-related requirements. JCIDS implements a capabilities based approach that better leverages the expertise of DOD and non-DOD agencies and industry to identify, assess, and prioritize joint force capabilities. The process validates warfighting capabilities while considering the full range of materiel and non-materiel solutions. Within DOD, there is a distinct separation between the requirements authority and acquisition authority, which requires early and continual collaboration between both communities in order for the processes to work effectively together.

2.1.1.2. As a collaborative effort, Air Force operational capabilities (independent of ACAT level) are vetted with the Joint Staff Functional Capabilities Board (FCB) review process as described in CJCSI 3170.01 and CJCSM 3170.01. To implement a capabilities based approach, the FCB uses Joint Operations Concepts to establish a common understanding of how a capability will be used, who will use it, when it is needed, and why it is needed to achieve a desired effect. Each capability is assessed based on the effects it seeks to generate and the associated operational risk of not having it. The Joint Staff, Vice Director J-8, in the capacity of the Gatekeeper, determines the Joint Potential Designator of the proposed capability, which helps determine JCIDS validation, approval, and interoperability expectations.

2.1.1.3. Capabilities Review and Risk Assessment (CRRA). Under the new Air Force process of effects based, Capabilities Focused Planning (CFP), the CRRA is used to analyze the various Concept of Operations (CONOPS) written by the Major Commands (MAJCOMs) and assess the capabilities and effects embedded therein. The CRRA is the primary forum for vetting the MAJCOM-based Functional Area Analysis (FAA), Functional Needs Analysis (FNA), and Functional

Solution Analysis (FSA) in a risk framework for senior Air Force leadership. These products are input to the CRRA process through MAJCOM representation on the CRRA Risk Assessment Teams.

Using the capabilities/tasks identified through the FAA and documented in the CONOPS, the CRRA process uses a Subjective/Objective/Subjective phased approach, to produce a prioritized list of capabilities, capability gaps or shortfalls, and possible capability solutions. The assessment addresses sufficiency of the force structure to support the Defense Strategy and identifies redundancies in capabilities that reflect inefficiencies. The Integrated CRRA (I-CRRA), which integrates the outputs of the individual CRRAs into an overall Air Force sight picture, generates Courses of Action (COAs) and programming guidance at its completion.

2.1.2. Seamless Verification Process. The goal of Capabilities Based Test and Evaluation is to reduce fielding time for effective and suitable systems by integrating T&E as an efficient continuum known as seamless verification. Seamless verification concept helps testers structure T&E to more effectively support the requirements and acquisition processes by providing qualitative and quantitative information to decision makers throughout the program's life cycle. Seamless verification minimizes the seams between contractor, developmental, and operational testing by implementing integrated testing techniques and objectives to the maximum extent possible. Key stakeholders share all information in open T&E databases, identify problems early, engage contractors to fix deficiencies sooner, and ensure systems are ready to enter dedicated operational testing with a high probability of success. This concept transforms the traditional testing pass-fail process to a process that continuously evaluates system capabilities and limitations as the system progresses through development. Refer to [AFI 99-103](#) for more details on this process.

2.1.3. Technology Transition Process. One of the fundamentals that makes EA work is the rapid and streamlined incorporation of mature, high pay-off technology into each increment. As one of the prime sources for new technology, Air Force Research Laboratory (AFRL) technology projects must respond to a wide range of Air Force needs. These include technology developed in response to documented operator needs (technology pull) as well as technology that has the potential for new revolutionary warfighting capabilities (technology push).

As technologies approach the advanced development stage, AFRL will help Program Offices respond to operators' near-term documented requirements by enabling the rapid transition and successful integration of AFRL technology projects into a military product. AFRL will support the development of phased capabilities requirements by helping acquisition program offices and operators assess the maturity and viability of technologies being considered for incorporation in EA programs and assist, when appropriate, in the preparation of a Technology Development Strategy (TDS) for Milestone A, B, and C. This process should result in higher fidelity requirements that are time-phased to a more realistic schedule with more accurate cost estimates. Refer to paragraph [4.3.5.](#) and [5.2.](#) for additional application of this process.

2.1.4. Robust Systems Engineering (SE). Robust SE is a disciplined approach that results in an end-state that quickly delivers high-quality, affordable, and sustainable products (capabilities) that fully meets the operators' needs. These products are designed to easily and inexpensively accommodate growth (i.e., to be scalable and expandable) and to be relatively insensitive to variation in manufacturing processes and use. SE encompasses the interdisciplinary set of scientific, technical, and managerial efforts needed to evolve, verify, deploy/field, and support an integrated and life-cycle balanced set of system solutions (including systems/families of systems) using an Evolutionary Acquisi-

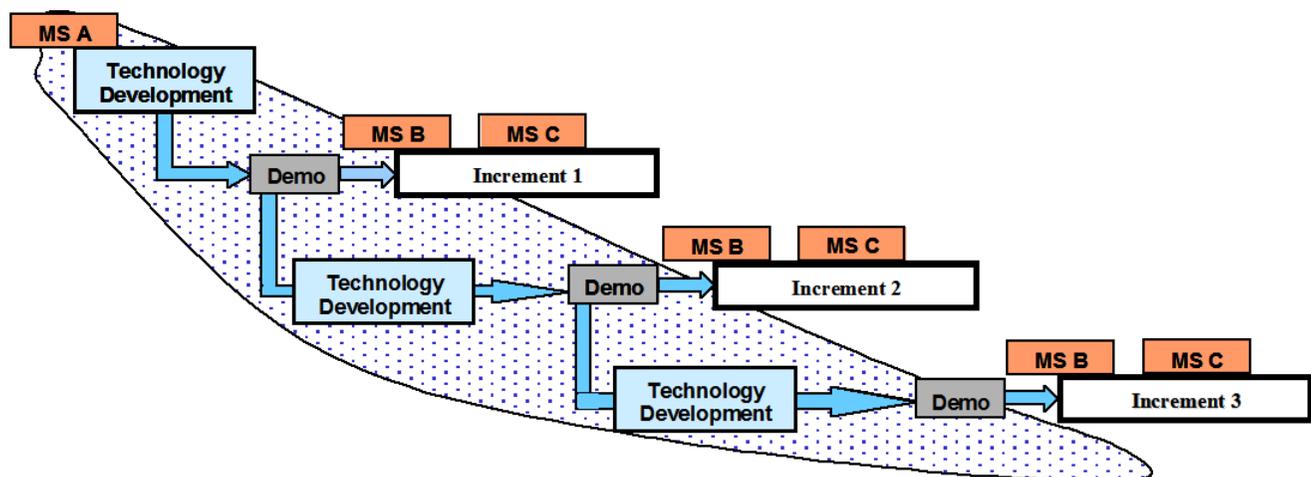
tion strategy. Good SE cannot be overemphasized. It is one of the critical elements of the Life Cycle Management Plan (LCMP). Failure to apply SE early in a program is likely to result in problems associated with cost, schedule, performance, and sustainability.

2.1.4.1. Solicitation and Contract Considerations. When establishing a solicitation (i.e., request for proposal (RFP)) and developing source selection criteria, it is important to emphasize the principles of robust SE mentioned above and the requirement for a design that can easily and inexpensively accommodate growth (i.e., scalability, expandability, variability, and sustainability) of capabilities in subsequent increments. The offeror must be required to adequately describe how their SE approach will achieve this desired end-state in their proposal. Where appropriate, the selection of a contractor should include an evaluation of both its proposed SE approach for the effort and its past SE performance. These critical aspects of SE must be captured within the scope of the final contract. Once a contract is awarded, the contractor's SE performance should be tied to the contract award fee or incentive fee structure.

2.1.4.2. EA Considerations. SE is particularly important when using an EA strategy because the requirement must be able to rationally evolve over time as shown in **Figure 2.1.** below. In addition, when fielding multiple configurations of a system, a disciplined SE process is essential to the program manager's (PM) ability to ensure the Operational Safety, Suitability, and Effectiveness (OSS&E) of each configuration is captured throughout the system's life cycle.

Therefore, the principal requirement is to design for scalability and/or expandability and address sustainability. Failure to lay the groundwork early in the initial increment design process may result in significant cost increases and delays in each follow-on increment if capabilities growth is not properly considered upfront. As the graphic below depicts, there are typically multiple (and possibly concurrent) technology development and maturation efforts focused on future increments. The demand to efficiently and effectively coordinate and integrate these efforts over multiple increments requires an intense and focused SE approach that achieves and maintains continuity over time. OSD SE policy, instructions and guidance can be found at <http://www/acq.osd.mil/ds/se/index.html>. Additional SE guidance is available in the SE Guide at <http://cse.afit.edu> and a link on www.safaq.hq.af.mil/ACE.

Figure 2.1. SE in Evolutionary Acquisition



2.1.4.3. **Use of Specifications and Standards.** Specifications and standards may be used in solicitations to define essential technical requirements (e.g., materiel interoperability and support requirements) and manage risk. Specific DOD policy on the use of specifications and standards and other methods to achieve objectives required by 10 U.S.C. 2451-2457, DOD 5000.1 and DOD 5000.2 are contained in DOD 4120-24M, *Defense Standardization Program Policies and Processes*. Air Force policy is contained in AFI 60-101, *Operations and Resources*.

2.1.4.4. **Software Considerations.** Programs must address, as a minimum, the following software focus areas throughout the life cycle, beginning with pre-Milestone/Key Decision Point A activities:

2.1.4.4.1. Estimate software development and integration at a high level (80-90%) confidence;

2.1.4.4.2. Ensure program baselines support the disciplined application of mature systems/software engineering processes, are compatible with the overall program's Expectation Management Agreement (See Para. 2.1.5.), and are supported by the program's budget;

2.1.4.4.3. Manage computer systems and software specific risks as an integral part of the program risk management process;

2.1.4.4.4. Identify the software-related strengths, weaknesses, experience, process capability, development capacity, and past performance for all developer team members with significant software development responsibilities;

2.1.4.4.5. Ensure the developer team establishes and applies effective software development processes;

2.1.4.4.6. Ensure the program office establishes and applies effective acquisition processes, is adequately staffed, and supports application of effective processes by the developer team;

2.1.4.4.7. Collect and analyze Earned Value Management data at the software level;

2.1.4.4.8. Employ a core set of basic software metrics;

2.1.4.4.9. Plan and develop life cycle software support capabilities and support operations; and

2.1.4.4.10. Support the transfer of lessons learned to future programs by providing feedback to center level Acquisition Center of Excellence (ACE) and other affected organizations.

These focus areas will be incorporated as appropriate in the System Engineering Plan, Integrated Program Summary, or acquisition plans. PEOs may tailor the implementation of these focus areas as required, and the Acquisition Executive will be notified of all tailoring. Additional SE guidance, including the core metrics, is available in the *Guidance for the use of Robust Engineering in Air Force Acquisition Programs*, found at <http://cse.afit.edu>, and various links on www.safaq.hq.af.mil/ACE.

2.1.4.5. **Systems Engineering Planning and the Systems Engineering Plan (SEP).** Systems engineering planning addresses the scope of the technical effort required to develop the system or solution. As a minimum, planning addresses what SE tasks must be scheduled, how they will be accomplished, how the effort will be scheduled, what resources are needed, how the SE effort will be monitored and controlled and how the technical effort will be folded into program planning,

including the requisite contractual documents. The planning effort includes developing or feeding multiple products into the program resulting in implementation of SE throughout its life-cycle.

The purpose of the SEP is to document the systems engineering planning effort guiding all technical aspects of the program. Program managers (PM) must submit a SEP for MDA approval on all programs responding to capabilities or requirements documents. The MDA review and approval will occur in conjunction with each Milestone review. MDAs have the authority to disapprove a program's System Engineering Plan if it does not provide evidence of sufficient attention being paid to SE.

The SEP should be developed early in the concept refinement phase and updated prior to each subsequent Milestone. It should incorporate the planning that is consistent with Technology Readiness Assessment (TRA) and successfully execute the Technology Development Strategy (TDS). It should be a living document, tailored to the program and should serve as a roadmap to support program management by defining comprehensive SE activities, addressing both government and contractor technical activities and responsibilities.

OUSD(AT&L) has developed a SEP Preparation Guide which describes the preferred SEP format for programs where either OUSD(AT&L) or ASD(NII) is the Milestone Decision Authority. Program managers should consider the Air Force Systems Engineering Plan Guide, 10 January 2005, found at <http://cse.afit.edu> when preparing a SEP. For programs where OUSD(AT&L) or ASD(NII) is the Milestone Decision Authority, additional guidance can be found at <http://www.acq.osd.mil/ds/se/publications.htm>. In all cases the SEP should address, as a minimum:

2.1.4.5.1. The program's overall technical approach to execute the Technical Development Strategy (TDS) and include SE processes and resources; key technical tasks, activities, and events; required staffing levels including training and experience; and associated metrics and success criteria.

2.1.4.5.2. How SE will support translation of system capability needs into an effective, suitable product that is sustainable at an affordable cost.

2.1.4.5.3. Integration of the technical aspects of the program with the overall program planning and management control (i.e., integrated master plans, integrated master schedules, risk management, technical performance measures, earned value management, the software focus areas identified above, etc.), SE activities, and execution tracking to include:

2.1.4.5.3.1. Description of the SE processes to be applied in the program (e.g., from a standard, a capability maturity model, or the contractor's process), including requirements development, traceability, and management: how processes will be implemented and tailored to meet individual acquisition phase objectives; and how SE will support technical and programmatic products of each phase including architectural views.

2.1.4.5.3.2. The systems technical baseline approach: how the technical baseline will be developed, managed, and used to control systems requirements, architecture, design, integration, verification, and validation; discussion of metrics (e.g., technical performance measures) for the technical effort and how metrics will be used to measure progress.

2.1.4.5.3.3. Event-driven timing, conduct, success criteria, and expected products of technical reviews: how technical reviews will be used to assess technical maturity, technical risk, and support program decisions.

2.1.4.5.3.4. Integration of SE into programs' integrated product teams (IPT): describe how SE activities will be integrated within and coordinated across IPTs; how IPTs will be organized; what SE tools they will employ; and their resources, staffing, management metrics, and integration mechanisms.

2.1.4.5.3.5. Planned systems engineering process improvement activities, as well as the program approach to ensuring adherence to established processes.

2.1.4.5.3.6. Strategy for integrating across Environment, Safety, and Occupational Health (ESOH).

2.1.5. Expectations Management. Providing the operator the capabilities needed when they are required, at the most affordable cost is the cornerstone to building credibility. The Expectations Management Agreement (EMA) is a jointly developed and formally documented agreement between the PM and the primary operator to proactively resolve or de-conflict potential issues to include cost, schedule and performance expectations over the life of the program.

The EMA is designed to facilitate effective two-way communication and provide real-time updates and support for building credibility between the acquirer and the operator. Once mutually agreed to realistic expectations are set, changes that impact those expectations, no matter what their source, must be identified and communicated to leadership by updating the original EMA. At a minimum, this process will encompass an annual review between the Acquisition Program Office and Operator to assess how well the program is progressing in meeting their expectations. The review should address (but is not limited to) the following:

Status of program execution against the Acquisition Program Baseline

- 2.1.5.1. Status of program execution against all requirements identified in the Capabilities Document
- 2.1.5.2. Review results to date from Test and Evaluation Programs
- 2.1.5.3. Other programmatic expectations identified and agreed to by the Program Manager and Operator as significant but not found in the Capabilities Document
- 2.1.5.4. Status of cost expectations vs. existing program cost estimates
- 2.1.5.5. Status of funding expectations for successful program execution
- 2.1.5.6. Any mutually agreed-to changes in expectations relating to cost, schedule and performance
- 2.1.5.7. Identified risks, risk mitigation strategies, and residual risk acceptance decisions
- 2.1.5.8. Any expectation concerns or areas of disagreement of either the Program Manager or the Operator (if none, so state)

For additional information refer to EMA website: Expectations Management Agreement - <https://afkm.wpafb.af.mil/ASPs/CoP/openCoP.asp?Filter=OO-AQ-MC-01>.

2.2. Government Planning and Execution. A key element for success is a true teaming relationship with industry partners, internal Air Force functionals, and other government stakeholders involved in the acquisition system framework. Real partnering demands trust. Leadership at all levels in the execution chain, supporting functionals and staffs, and industry partners need to create an environment of candor

and trust where individuals have the ability to provide those in the execution chain with candid information about program status and risks without fear of repercussion.

The government program team consisting of subject matter experts (SME) and functional experts (i.e., Contracting, Program Control, T&E, Logistics, SE, Intelligence) should work collaboratively toward the program's common goal. The team must gain a thorough understanding of the program, ensure sufficient detail exists in several key deliverables, and continue to work as a team to monitor contract execution throughout the life cycle of the program. Several key items or areas of importance are highlighted below.

2.2.1. Program Management Directive (PMD). The PMD provides the authority to execute a program and provides a framework to identify the major activities included in the life cycle of a program. The PMD conveys the guidance and direction of the decision authority and identifies the various organizations along with their essential responsibility for ensuring the success of a program or other effort. This includes the Component Acquisition Executive (CAE), MDAs, PEOs, Air Staff agencies, PMs, Capabilities Directors (CD), MAJCOMs, test organizations, FOAs, and any other component or organization essential for meeting the operational need. PMDs are written for funded programs. If funding changes necessitate programmatic changes, the PMD office of primary responsibility (OPR) must update the PMD within 120 days after the Defense Appropriations Act and Defense Authorizations Act are signed (reference HOI 63-1, *HQ Air Force Guidance for Preparing Program Management Directives*, for additional details).

2.2.2. Product Support. Early sustainment planning is key to the effective introduction and operation of a new weapon system. All elements of logistic support should be integral parts of management considerations in the capabilities based acquisition process. Performance Based Logistics (PBL) is the strategy for delivering a minimum life cycle cost set of sustainment resources, which provide mission readiness and life cycle support for required capability. **AFI 63-107, *Integrated Product Support Planning and Assessment*** provides important guidance for the development of the sustainment approach, to include the AFMC mission assignment function (who will manage the material being acquired), the source of repair assignment process (SORAP) (where depot level maintenance will be performed) and the Life Cycle Management Plan (LCMP). Additionally, the Contractor Supported Weapon System (CSWS) is a new approach to bring spare parts into the Government inventory.

2.2.2.1. Life Cycle Management Plan (LCMP). For non-space systems, the basis of the LCMP is a blending of the former Single Acquisition Management Plan (SAMP) and the Product Support Management Plan (PSMP) into one "cradle to grave" document. This document integrates the acquisition and sustainment strategy(ies) and provides all support requirements of a system, subsystem, or major end item. It shall reference the SEP, which is designed to ensure supportability considerations are implemented during the design, development, production and sustainment of a weapon system. An effective product support strategy (via the LCMP) establishes the initial foundation for the collaboration of acquisition and sustainment planning concepts and allows for the eventual transfer of program management responsibility from the PEO portfolio to the ALC portfolio (See [SAF/AQ - Policy Homepage](#) for LCMP Guide formally the SAMP for additional information)

Combining the SAMP and the PSMP into a single product support document eliminates redundancy, avoids potentially conflicting guidance, lays out full life cycle product support strategies, and maximizes system effectiveness from the perspective of the operator. LCMPs will be maintained on the Air Force Knowledge Now Portal: <https://afkm.wpafb.af.mil/ASPs/CoP/Entry.asp?Filter=OO>, Community of Practice (CoP). The PM will use this portal to document,

share, and update programmatic data. Fact-of-life changes such as updates to schedule and funding adjustments do not require a re-coordination of the LCMP unless they drive a significant change in the plan's technical content.

2.2.2.1.1. **Communication Tool.** Although other organizations may use the LCMP as an information source, the primary reason for writing the LCMP is to provide enough detail for the MDA to concur with the PM's overall strategy and plan for executing the Commanders' Intent. It is a communication tool between the PM and MDA and also satisfies the Federal Acquisition Regulation FAR 7.1 requirements. It is important that the PM tailor the LCMP with MDA concurrence. The LCMP will be coordinated and signed out at the levels dictated by the AFFARS, as appropriate to the program's dollar value. Refer to AFFARS Part 5307 for guidance.

2.2.2.2. **Contractor Supported Weapon System (CSWS).** CSWS is a supply support approach for integrating contractor inventory control points into the Air Force's supply support structure with the overall goal of achieving combat readiness. Under CSWS, a contractor is the Inventory Control Point and Source of Supply of peculiar spare parts that apply to an entire system during interim supply support. At the end of the Interim Supply Support Period, the concept is to transition support spares directly into replenishment spares. All personnel actively involved in the acquisition of initial and follow-on spares should become familiar with the nine steps, five tenets, and supporting activities as outlined in the CSWS Guide found at <https://www.il.hq.af.mil/ilg/ilgp/csws/default.htm>. The purpose of the CSWS Guide is two-fold:

2.2.2.2.1. To provide weapon system PMs and contractors with information on the CSWS nine-step process that outlines the flow of activities occurring during the various acquisition phases for initial spares support.

2.2.2.2.2. To present the five CSWS tenets, which are fundamental changes meant to provide "how-to" implementation guidance to PMs and contractors during weapon system acquisition.

2.2.2.3. When developing new Computer Software Configuration Items (CSCIs) for Air Force Weapons Systems and Automatic Test Equipment, the Air Force Automated Computer Program Identification Number System (ACPINS) *should be considered* for use in numbering each CSCI and related documentation and in ordering and tracking software.

2.2.3. **Acquisition and Sustainment Strategies.** Each PM shall develop and document an acquisition and sustainment strategy to guide program execution from initiation through procurement of systems, subsystems, components, spares, and services beyond the initial production contract award and during post-production support. The PM shall develop the acquisition and sustainment strategy in preparation for program initiation, prior to the program initiation decision, and update it prior to all major program decision points or whenever the approved acquisition and sustainment strategy changes or as the system approach and program elements become better defined. The MDA shall approve the acquisition and sustainment strategy prior to the release of the formal solicitation. Approval shall usually precede each decision point, except at program initiation, when the acquisition and sustainment strategy shall usually be approved as part of the milestone decision review. For additional information refer to Defense Acquisition Guidebook, **Chapter 2**.

2.2.4. **Acquisition Strategy Panels (ASP).** The AF will use a two-phase Acquisition Strategy Panel approach. The PM, or the contracting officer if a PM is not assigned, shall conduct an Acquisition Strategy Panel (ASP) for all ACAT programs, Commodity Strategy Official (CSO) acquisitions, and

AFPEO/CM acquisitions. The ASP chairperson has the authority to waive the requirement for an ASP. ASPs should take place as early as possible in the acquisition planning process to develop a systematic and disciplined approach to achieve an efficient and effective acquisition. MAJCOMs and Direct Reporting Units shall establish requirements as necessary, and streamlined procedures for ASPs for “Other Contracting” acquisitions. For more details regarding the acquisition strategy panel process and requirements go to [AFFARS Part 5307.104-90](#) and the [AF ASP Secretariat](#) websites.

2.2.5. Source Selection. To assure success for future programs, the government must select the right industry partner. The importance of this task cannot be overemphasized and it is essential to the success of any program. Source selection activities include ensuring a capable developer team is selected. This includes identifying the strengths, weaknesses, and risks; domain experience; process capability; development capacity; and past performance for all developer team members with significant development responsibilities. Consider this information when establishing program baselines and awarding contracts, and throughout program execution. Source selection activities also include ensuring the developer team establishes, effectively manages, and commits to consistent application of effective development processes across the program. For additional information on source selections refer to [AFFARS Part 5315.3](#).

2.2.6. Performance-Based Contracting. The contracting officer has the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. A contracting officer may bind the Government only to the extent of the authority delegated to them. A contract defines the relationship between the Government and the industry partner. It sets forth the contractual requirements that the contractor is obligated to meet. A contract should be written as a performance-based contract to the maximum practical extent.

Performance-based contracting is a procurement strategy that structures all aspects of an acquisition around the purpose of the work to be performed, as opposed to either the manner in which the contractor must perform the work or the processes that must be used. This strategy leverages the ingenuity of industry while providing the government with access to the best commercial products, services, and processes. Use of performance-based contracting strategies reduces acquisition cycle time and costs since contractors are not compelled to perform to detailed design type specifications that inhibit creativity and efficiency.

2.2.7. Integrated Master Plans (IMP) and Integrated Master Schedules (IMS). The PM should develop and maintain the IMP and IMS that integrates all program activities into a single, integrated schedule. This includes integrated master schedules from all contractors as well as government activities to include the integrated test plan (ITP). The IMP and IMS provide a basis for effective communication, serve as baselines for program plans, status, and progress; and provide a basis for resource analysis, exploration of alternatives, and cost, performance, and schedule tradeoff studies. They should be integrated at all levels, contain sufficient detail, and capture key events (e.g., acquisition, SE, logistics, National Environmental Policy Act (NEPA), and T&E perspectives). Refer to [Defense Acquisition Guidebook](#) for additional information.

2.2.8. Risk Management Plans. A key element of managing any complex program is the management of risk. PMs on all programs, including commercial-off-the-shelf and non-developmental item programs, must take steps to avoid preconceived notions about risk levels. It is imperative for the PM to communicate an accurate and complete statement of program risks to the leadership. PMs should pursue a comprehensive integrated risk analysis of cost, schedule and technical risks on a recurring basis and shall prepare and maintain a current risk management plan for their program. In order to

streamline and consolidate required risk documentation, the PM should incorporate the Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE) into the Risk Management Plan. Refer to Defense Acquisition Guidebook for additional information.

2.2.9. Performance Measurement Baseline (PMB) Analysis: The government team should perform recurring, cost, schedule, and risk analysis of the contractors' PMB to assure continuing progress and program realism. The PMB should contain sufficient detail, account for all scope, reflect accurate schedules, and must be jointly reviewed to assess implementation of the contractor's earned value system via the integrated baseline review (IBR) process. The IBR is a continuous, iterative process throughout the life of the effort to ensure continued realism of the integrated PMB. Disciplined and comprehensiveness reviews of the IMP, IMS, and PMB are essential to avoid surprises and miscommunication. For additional information refer to Defense Acquisition Guidebook, Chapter 4.3.2.4.2 - Integrated Baseline Review, and OSD(AT&L) IBR handbook.

2.3. Important Management Considerations (Business Focus). These are critical areas that will aid in the overview and understanding of Capabilities Based Acquisition Management.

2.3.1. New Start Notification. A New Start is any program, subprogram, modification, project, or subproject not previously justified by the Department of Defense/Respective Component (i.e., USAF) and funded by Congress through the normal budget process. When a determination has been made that the efforts undertaken meet the "New Start" criteria, Congress must be notified via either a Letter of Notification or DD1415-1 (Prior Approval Reprogramming Action). The methods of notification to be used are delineated in AFI 65-601, *Budget Guidance and Procedures*, Volume I and DOD 7000.14-R, *Financial Management Regulation*, Volume III Chapter 6.

2.3.1.1. New Start Validation Responsibilities. The Program Manager along with his/her respective Program Office Chief Financial Officer (CFO)/or Program Control Chief (PCC) is required to document and validate that efforts underway have been adequately assessed and have been determined not to meet the new start criteria before any funds are obligated for programs not categorized as "commodity" programs.

Pre-contract cost agreements are subject to new start criteria and require completion of the validation form. RFPs, proposal evaluation, and contract negotiations are part of normal Program Office activities and therefore do not represent new start activities.

In the case of Air Force Research Laboratory (AFRL) efforts, where there is no PM, this validation is the responsibility of the Technical Director (TD). In the absence of the PM/TD, the individual that has been designated as "acting on his or her behalf (i.e., Deputy PM/Deputy TD) is allowed to complete the required validation. The PM/TD and CFO or PCC should use AFI 65-601, *Budget Guidance and Procedures*, Volume I and DOD Financial Management Regulation Volume III Chapter 6 as a guide to help answer the key points delineated in the Validation Form at **Attachment 3**. If not a single item in the Validation Form (**Attachment 3**) is marked as a **YES**, then the Program Office shall work with its respective Program Element Monitor (PEM) and/or Capabilities Directorate (CD) at the HAF to coordinate the initiation of the appropriate New Start Notification package (i.e., Letter of Notification/1415-1 Packages). Once the Validation Form is completed it should be filed as part of the Program Office's contract file. Completion of the validation form is required prior to obligation of funds for these new start activities.

2.3.1.2. **Validation Form Exemptions.** Funding actions for the following are excluded from the requirement to complete the validation form prior to obligating funds. The exemption from completing the validation form does not absolve the above entities from ensuring adherence to all regulations pertaining New Start Notifications in the event that a New Start is planned for initiation.

2.3.1.2.1. All Basic Research (6.1), Applied Research (6.2) efforts, and (6.3) Advanced Technology Development efforts, UNLESS initiating a new research project (budget program activity code) not listed in the applicable descriptive summary (R-2 exhibit). These exemptions DO NOT include program elements (PEs) beginning with a 63 designation, but falling under the 6.4, Advanced Component Development and Prototypes, budget program activity code.

2.3.1.2.2. All Small Business Innovation Research (SBIR) Phase I and II efforts.

2.3.1.2.3. Incremental funding actions for ongoing efforts if **no** change in required work.

2.3.1.2.4. Contract changes pursuant to clauses that do not change the work requirement of the contract (i.e., award fees and some price adjustments).

2.3.1.2.5. Program management and administrative efforts directed at business management and Program Office operations.

2.3.1.3. Newly assigned personnel assigned to program management, contracting, and financial management positions should review AFI 65-601 Volume I and AFI 23-205, *Managing the Procurement Materiel Programs* to gain detailed insight and better understanding of the New Start Notification process, procedures and reporting requirements. In addition, individuals can contact SAF/FMBI for additional guidance and/or help regarding New Starts specific issues.

2.3.2. **Affordability.** Applying Performance Based Logistics in the context of total life cycle systems management PMs should address life cycle cost impacts when making program decisions. Decisions made early in the program often have far reaching impacts to affordably sustaining the program, and all program trades should carefully consider these life cycle impacts. These impacts should be made available and discussed with the operator for concurrence and managing program expectations.

2.3.3. **Government Cost Estimates.** Documentation is essential to ensure the operator and the program teams understand content of the program. Detailed cost estimates should be performed annually and compared to the program budget to assess program executability. Risk assessments and sensitivity analyses should be performed as level of knowledge and assumptions change.

2.3.4. **Cost Realism.** All participants in the acquisition system shall view cost as an independent variable and plan programs based on realistic projections of the funding and staffing likely to be available in the future. As a minimum, during reviews the MDA should be provided with cost estimates at the 50% and 90% confidence levels. To the greatest extent possible, MDAs shall identify the total ownership costs and the major drivers to this cost. Realistic program planning assumptions should be developed to ensure adequate analysis of cost, schedule, and performance risk. This should be documented in the Program Office Estimate, which is generally developed from the Cost Analysis Requirements Document for major programs, or a similar document for less than major programs. These cost estimates should be reconciled with the contractor's proposal prior to award. Refer to DFAR 215 for additional information.

2.3.5. **Budget Stability.** Budget perturbations from within and outside the Air Force are a known fact within the acquisition framework. However, there are still prudent steps a PM can take to maintain greater control over maintaining a stable budget. Steps include but are not limited to the following:

2.3.5.1. Obtain a high confidence cost estimate and ensure it is well documented to firmly support budget requests; enlist operator advocacy for the program via the Air Force and MAJCOM program objective memorandums (POM), or initially included as part of the courses of action (COA) effort.

2.3.5.2. Ensure funding for the execution year(s) is consistent with the contractor's ability to expend the funding according to the current program schedule; compare and reconcile information to the Contract Funds Management Report; reassess throughout the program's life cycle and make sure the data continues to firmly support budget requests; if not, enlist operator advocacy for the program when necessary. The key is to keep program funding phased correctly and emphasize meeting OSD expenditure and obligation goals. See DOD 7000.14-R, *Financial Management Regulation*, Volume 2A, for more detail.

2.3.5.3. Develop a range of independent estimates at completion from earned value data and analysis of the integrated master schedule. Compare the results to the contractor's projected final costs to assess realism and to form the basis for adjusting the program budget.

2.3.5.4. Reflect changes in the EMA as required.

2.3.6. **Documentation.** The PM is responsible for completing all program documentation required by statute and assessing the value to the program of other related documentation requirements. However, the law does not always specify format or level of detail. PMs are responsible for ensuring sufficient detail is included in documentation to facilitate a decision by the MDA. Likewise, PMs should look at the source statutes to ensure staff functionals' interpretations do not drive unnecessary workload. No document will be "held hostage." Reviewing offices need to expedite their coordination within the time specified by the MDA/PM and either "concur" or "non-concur." Concurrence and coordination by all parties involved may not be necessary for an MDA to make a decision. If applicable, staff packages should reflect the "non-concur" and stated reasons so the MDA can make a fully informed decision. Program documentation should be maintained and made available electronically.

2.3.7. **Information Support Plans (ISP).** All systems - ACAT and non-ACAT acquisitions, and fielded systems must be evaluated and certified prior to (initial or updated) fielding, and periodically during the entire lifecycle of the program. Program Managers shall prepare the ISP, which documents the information support needed to develop warfighter capabilities described in the Initial Capabilities Document (ICD), Capability Development Document (CDD), and Capability Production Document (CPD). The ISP describes and evaluates needs (including intelligence) infrastructure, interoperability and other IT and National Security Systems (NSS) interfaces that the acquisition program needs during development, testing, training and operations. The ISP also documents current/projected deficiencies in intelligence support needed to develop the weapon system capability.

2.3.7.1. An approved ISP is required not later than Milestone B (or appropriate and related "milestone-like event" (for Non-ACAT) and should be initially developed concurrently and collaboratively with the associated CDD or CPD, unless exceptions are noted in an Acquisition Decision Memorandum. As the program matures, or proceeds through multiple evolutionary blocks or phases, the Program Manager shall update the ISP. Updates shall contain progressively more detailed and specific time-phased descriptions of the types of information needed; integrated

architectures; spectrum supportability, security, connectivity, and interoperability issues; and infrastructure, intelligence, information assurance, net-readiness, and other information support needs. Changes in information support, infrastructure, interface requirements that result from proposed changes in approved JCIDS documents shall be highlighted to facilitate the ISP review.

2.3.7.2. The MDA or cognizant fielding authority shall review, assess, and approve ISPs for ACAT and Non-ACAT programs. At the end of MS B (or milestone-like event), the PM will ensure all support concept elements are fully identified with supporting documentation. At this point, the PM, together with the operator MAJCOM, will decide whether technologies will be organically supported, contractor supported, or a combination thereof. Examination and evaluation of existing support concepts and preparation for the development of the new support systems is key to posturing for the next phase. Additional guidance on ISPs can be found at <http://www.dau.mil/pubs/gdbks/acquologguide.asp>; DOD Directive 4630.5, *Interoperability and Supportability of Information Technology (IT) and (NSS)*, - <http://www.dtic.mil/whs/directives/corres/html/46305.htm>; DOD Instruction 4630.8, *Procedures for Interoperability and Supportability of Information Technology (IT) and (NSS)*, - <http://www.dtic.mil/whs/directives/corres/html/46308.htm>; and CJCSI 6212.01, *Interoperability and Supportability of Information Technology and NSS*, http://www.dtic.mil/cjcs_directives/cjcs/instructions.htm#6000.

2.3.8. **Management Information Systems and Program Control Metrics.** Whenever possible, the PM should use the contractor's management information and program control systems and associated metrics rather than impose unique requirements. It is the PM's responsibility to assess the value and benefits of these items and to ask only for those items that are essential to the effort. Part of this value assessment should be compatibility with existing Air Force information technology infrastructure to support Air Force integration and net-centric operations.

2.4. Important Management Considerations (Technical Focus)

2.4.1. **Directed Use of Joint Integrated Architectures.** CJCSI 3170.01 and DOD 5000.2 direct the use of joint integrated architectures to develop requirements. AFI 33-124, *Enterprise Information Technology Architectures*, directs that architecture data collection should be driven by the intended use and, if architectural views are necessary, that they are compliant with the DoD Architecture Framework. The USD(AT&L), (ASD/NII), DOD Chief Information Officer (CIO), Joint Staff, Military Departments, Defense Agencies, Combatant Commanders, and other appropriate DOD Components shall work together collaboratively to develop joint integrated architectures for capability areas as agreed to by the Joint Staff.

2.4.1.1. **Integrated Architectures.** Each integrated architecture shall have three views, i.e., operational, systems, and technical, as defined in the current DOD Architectural Framework guidance and have direct relationships to DOD Component-developed functional area integrated architectures.

2.4.1.1.1. **Operational View (OV).** The operational architecture view is a description of the tasks and activities, operational elements, and information flows required to accomplish or support a military operation. The OV contains graphical and textual products that comprise an identification of the operational nodes and elements, assigned tasks and activities, and information flows required between nodes.

2.4.1.1.2. **Systems View (SV).** The systems architecture view is a description, including graphics, of systems and interconnections providing for, or supporting, warfighting functions.

2.4.1.1.3. **Technical View (TV).** The technical architecture view is the minimal set of rules governing the arrangement, interaction, and interdependence of system parts or elements, whose purpose is to ensure that a conformant system satisfies a specified set of requirements. The standards used to form the Technical Views of integrated architectures shall be selected from those contained in the current approved version of the Joint Technical Architecture, accessible at DISRonline - <https://disronline.disa.mil/DISR/index.jsp>.

2.4.1.2. **The Global Information Grid Integrated (GIG) Architecture.** The integrated architecture should comply with the GIG, which is led by the DOD Chief Information Officer and underpins all mission and area capability architectures. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes and personnel for collecting, processing, storing, disseminating and managing information on demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services and other associated services necessary to achieve Information Superiority.

2.4.1.3. **Alternative Solutions.** DOD requires alternative solutions from all Service sources for doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOT-MLPF). These alternatives should be competed within a joint integrated architectural framework. If a materiel solution is required, the USD(AT&L) (or principal staff agencies for business areas) organizations will further refine the joint integrated architecture's data until the exact requirements of the optimum solution are defined. When available, use the detailed requirements to define system level capability within the correct JCIDS documents at Milestones B and C.

2.4.1.4. **Contract Issues.** Contractors should be required to use systems relationships and objective levels of performance, collected within the architecture, to support defined operational testing according to AFI 99-103. Subsequently, the operational test community uses the threshold levels of performance and the joint integrated architecture to develop the T&E strategy, preferably, before RFP release.

2.4.1.4.1. **RFPs.** RFPs should include the elements of the joint integrated architecture that were used to define the requirement as the starting point for the contractor's architectural development work. Section L of an RFP will include a requirement to develop architectural data as a part of the proposal, and demonstrate use of this data to evaluate proposed engineering solutions to the requirement in the context of the joint integrated architectures showing linkages from products to requirements.

2.4.1.5. **Architecture-Based Assessments.** Architectural data used in this way enables requirements decision authorities to assess the impacts of trades in the overall operational context. PMs should ensure that each review point includes an architecture-based assessment to confirm that the system development remains aligned to its operational requirements. Any changes to the solution should be negotiated with other programs that are affected as depicted in the joint integrated architecture.

2.4.2. **Information Technology (IT) Standards Compliance/National Security Systems (NSS).** In accordance with existing DOD policy, the PM shall ensure IT system development adheres to mandated IT standards outlined in the Defense Information Technology Standards Registry (DISR), Air

Force unique standards in the Infostructure Technology Reference Model and complies with *DOD Information Technology Security Certification and Accreditation Process (DITSCAP)* per DODI 5200.40 and AFI 33-202, *Network and Computer Security*. In addition, the PM should consider emerging standards in the DISR for future program enhancements. PMs will also collaborate with the mission or business process owner to ensure that architectural views (e.g., OV-1, -2, -3 and -5) are produced, which are necessary to address program needs, support all capabilities, and meet joint architectural requirements. Finally, PMs will ensure IT and NSS comply with the interoperability and supportability requirements found in Committee on National Security Systems Policy 11, *National Policy Governing the Acquisition of Information Assurance (IA) and IA Enabled IT Products* and CJCSI 6212.01, *Interoperability and Supportability of Information Technology and National Security Systems*.

For MAIS programs, the PM shall initiate Clinger-Cohen Act (CCA) compliance and certification package at program initiation or the earliest point possible. The PM shall prepare a matrix identifying the eleven items (See table located in E4.T1 of DOD 5000.2) for all IT (including NSS) acquisitions. This package should be a coordinated effort with the appropriate functional operator or requirer. The completed CCA package will be forwarded to the Air Force CIO to confirm compliance back to the MDA.

2.4.2.1. Information Technology (IT) Lean. An Information Technology (IT) Lean Reengineering team has produced recommended improvements to our IT and National Security Systems (NSS) acquisition and fielding process. The team identified improvements to IT and NSS acquisition through appropriate oversight, standardized design and test, networkiness assessment, and fielding processes. This “IT Lean” Process focuses on early stakeholder involvement and sharing of key information throughout the lifecycle of each program.

2.4.2.1.1. Programs will particularly benefit from the early identification of derived Security, Interoperability, Supportability Sustainability, and Usability (SISSU) requirements from program initiation forward. To facilitate this, a *SISSU Checklist* is used, which guides the requirements sponsor and program manager through the process to ensure that all SISSU needs are met.

2.4.2.1.2. IT Lean Process, including the *SISSU Checklist*, is fully described in the *IT Lean Guidebook*, available at the SAF/XC Lean Reengineering website: https://www.safxc.hq.af.mil/Lean_Reeng/index.htm.

2.4.3. Diminishing Manufacturing Sources/Material Shortages (DMSMS). This is the loss, or potential loss, of manufacturers or suppliers of parts, raw materials or other items needed to support and maintain a system. Material obsolescence may occur at the part, module, component, equipment, or other system indenture level. DMSMS obsolescence can occur in any program phase and can severely impact the program schedule, system availability, capability, or cost.

2.4.3.1. Open systems design can help mitigate the risks associated with technology obsolescence, avoiding being locked into proprietary technology or relying on a single source over the life of a system. Spiral development also helps to alleviate obsolescence concerns. The PM must insure that PBL product support efforts include an active DMSMS process to anticipate occurrences and take appropriate actions. This can be carried out by the Product Support Integrator. Actively addressing DMSMS will insure effective support throughout the system life cycle and prevent adverse impacts on readiness or mission capability. The Services and Defense Logistics

Agency have DMSMS efforts that can assist the PM in addressing DMSMS. For further information See: www.dmsms.org, *DOD Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook*, and [SAF/AQ - Policy Homepage](#) for DOD PBL guide, and DOD 4140.1-R, *DOD Supply Chain Material Management Regulation*.

2.4.4. Intelligence Integration. The increasing sophistication of emerging technologies and systems requires comprehensive intelligence planning and integration into all research and development (R&D), acquisition, and sustainment-related activities. The requirements and development communities must identify intelligence support requirements early in any initiative and continuously ensure intelligence supportability according to AFI 14-111, *Intelligence in Force Modernization*. These communities must team with Air Force intelligence experts to ensure intelligence is adequately represented as a major stakeholder in all their activities.

2.4.5. System Compatibility and Interoperability. CJCSM 3170.01 requires all CDDs and CPDs for IT and NSS systems to include a Net-Ready Key Performance Parameter (KPP) for interoperability based on the information exchange of the proposed system. CJCSM 3170.01 also states that other (non-IT/NSS systems) compatibility and interoperability attributes (e.g., databases, fuel, transportability, ammunition) might need to be identified and require verification to ensure a capability is interoperable for joint service, allied and coalition operations. DOD Directive 2010.6, *Materiel Interoperability with Allies and Coalition Partners*, requires consideration of future multinational operations in the acquisition of all materiel intended for use by U.S. Forces and makes commitments with NATO an imperative. DOD 4120.24M, *Defense Standardization Program Policies and Processes* and AFI 60-106, *US Air Force International Military Standardization Program*, provide guidance on considering applicable U.S. ratified international standardization agreements (ISAs) for compatibility, interoperability, and logistics interchangeability of materiel in allied and coalition operations.

2.4.6. Technology and Program Protection Planning (T/PPP). As an on going effort to fully implement an Information Support Plan, Critical Technology information must be protected. Critical technologies, systems, and information must be protected to prevent loss, theft, or compromises that could yield any of the following negative consequences: negatively impact cost, schedule, performance, and supportability; force a change in program direction; degrade systems capabilities; shorten the useful life of the system; enable unauthorized transfer of technology; or require additional resources to develop alternative countermeasures.

2.4.6.1. If Critical Program Information (CPI) is identified at any time during the life cycle of the program, PMs must prepare Program Protection Plans (PPPs) and submit the PPP to the MDA or designee for review. If no CPI is associated with a program (neither internal to the program nor inherited from a supporting program), as determined by the PM, a PPP is not required, provided MDA concurs in writing.

2.4.6.2. When Designated Science & Technology Information (DS&TI) is identified for S&T programs, the Technology Director (TD) will develop a Technology Protection Plan (TPP) and submit the TPP to the AFRL/CC or respective Program Office to include TPPs generated by the battlelabs and warfare centers. If the TD determines and documents in writing that DS&TI is not associated with an S&T program, a TPP is not required. Reference AFPD 63-17, *Technology and Acquisition Systems Security Program Protection*, for additional information and DODD 5200.39, *Security Intelligence, and Counterintelligence Support to Acquisition Program Protection*, for additional guidance.

2.4.7. Arms Control Compliance. PMs shall ensure that all activities within the acquisition cycle are compliant with all United States Government arms control obligations. Following the appropriate approval chain, PMs shall require SAF/GCI and AF/XOS to review program aspects that could reasonably generate arms control compliance questions. This assessment will occur prior to all Milestone reviews or when concerns arise. If necessary, the PM shall seek (with AF/XOS assistance) clearance to undertake or continue the activity in question from the appropriate Arms Control Compliance Review Group.

PMs who oversee acquisition programs involving strategic weapons (e.g., bombs, warheads), their delivery vehicles (e.g., ballistic missiles, bombers, and cruise missiles, including their associated basing, testing, and launch facilities), or chemical and biological weapon defense-related materials and equipment, should become aware of the implications and limitations that arms control treaties may have on or impact their program(s). Refer to AFI 16-601, *Implementation of, and Compliance With, Arms Control Agreements* and AFI 51-402, *Weapons Review*, for additional guidance.

2.4.8. Berry Amendment Compliance. PMs shall ensure that all activities within the acquisition cycle are compliant with the Berry Amendment. The *Berry Amendment*, 10 U.S.C. 2533a, establishes domestic source preferences for different commodities, including textiles, specialty metals, and machine or hand tools, in DoD acquisitions. Section 8109 of the Defense Appropriations Act for Fiscal Year 1997 (Public Law 104-208) states the Berry Amendment applies to contracts and subcontracts for procurement of commercial items. Furthermore, the Berry Amendment applies to Foreign Military Sales (FMS) cases. The Berry Amendment applies to both end products and raw materials. End products must be completely of U.S. origin and manufacture. That is if the end product is comprised of components made of restricted items, those components must also be wholly domestic of origin and manufacture. DOD has implemented the Berry Amendment in DFARS Subpart 225.70, *Authorization Acts, Appropriations Acts, and Other Statutory Restrictions on Foreign Acquisition*. In accordance with the Berry Amendment, DFARS Subpart 225.70 restricts DOD procurement of certain items either, as end products or components, unless the items have been grown, reprocessed, reused, or produced in the United States.

2.5. Contractor Planning and Execution. The government program team must work in collaboration with its industry partner(s) to gain a thorough understanding of the program and to ensure sufficient detail exists with key deliverables, such as the Integrated Master Plan, Integrated Master Schedule, Risk Management Plans, etc....

2.6. MDA Decisions and Reviews.

2.6.1. MDA Oversight and Reviews. The MDA and the PM may tailor program strategies and oversight, including documentation of program information, acquisition phase, the timing and scope of decision reviews, and decision levels to fit particular conditions of that program, consistent with applicable laws and regulations and the time sensitivity of the capability need. The MDA will consider factors such as the program's life cycle cost estimate, funding profile, risk assessment, schedule, relative importance to the operator, technical complexity of program interfaces, and the PM's experience level. Program reviews will review the adequacy of SE efforts, strategies for managing risk, and the IMS, just to name a few. The goal of program reviews is to provide the MDA sufficient, near real-time information that enables the MDA to provide direction without the need for formal oversight. A strategy of "Insight" (versus "Oversight") that provides the MDA and other stakeholders fre-

quent and current information on a program is the preferred approach. At the request of the MDA and/or PM, the Acquisition Center of Excellence (ACE) will make its resources available to the program.

2.6.2. Acquisition Centers of Excellence (ACEs) Role in Program Execution. The Air Force created and structured ACEs to provide direct program acquisition execution (pre and post award) support to the SAE. Dedicated and responsive staffs of highly skilled personnel provides a unique capability to support the SAE's vision of Air Force acquisition. In this role the ACEs provide specific acquisition help/advice/assistance and independent assessments as a "trusted agent" to the program execution leadership (MDA, SAE, PEO, Center Commanders, System Program Manager). ACEs support for programs includes providing knowledgeable, informed advice on a wide range of topics, from program execution and problem solving to policy and process change. ACEs work as a force multiplier to program teams and the acquisition workforce to ensure the quality and timeliness of acquisition and sustainment products. Providing advice/support that ultimately leads to the increased credibility and reduced cycle time of acquisition and sustainment programs is the overall measure of success for ACE performance.

2.7. Request for Reclassification of Acquisition Programs Categorization.

2.7.1. Notification. For reclassification of an ACAT I or IA program to a lower ACAT, the CAE must submit requests to USD(AT&L), or the ASD/NII or DOD CIO, whichever applies. The request shall identify the reasons for the reduction in ACAT. USD(AT&L), ASD/NII, or DOD CIO may reclassify an acquisition program as a pre-MDAP/MAIS or as an ACAT 1D or IAM at any time.

Chapter 3

RESPONSIBILITIES

3.1. Overview of Responsibilities. All members of the Air Force acquisition community will follow the principles articulated in **Chapter 1** of this AFI. The acquisition community must also use **Chapter 2** of this AFI to ensure Capabilities Based Acquisition and its associated tenets are executed as intended. The acquisition community must collaborate with all communities involved: e.g. requirements, technology, business management, systems engineering, T&E, sustainment, intelligence, training, and industry. This chapter defines the roles and responsibilities for organizations responsible for the operation and execution of the Air Force capabilities based acquisition process. Additional functions and organizational roles may be found in AFI 99-103 and AFI 10-601.

3.2. Assistant Secretary of the Air Force for Acquisition (SAF/AQ). The Assistant Secretary will:

- 3.2.1. Execute responsibilities as the senior corporate operating official for acquisition, the CAE, and the Senior Procurement Executive for overseeing Air Force acquisition activities.
- 3.2.2. Execute CAE responsibilities outlined in the DOD 5000-series for execution of Air Force acquisitions except for space and missile systems.
- 3.2.3. Provide direction for acquisition transformation across the Air Force (except Space).
- 3.2.4. Nominate candidates to the SECAF for Program Executive Officers (PEO) or Program Managers (PM) for ACAT I and selected programs.
- 3.2.5. Hold PEOs accountable for program execution and implementation of transformation initiatives within their programs and:
 - 3.2.5.1. Chair an annual program execution review with PEOs and MAJCOM commanders.
 - 3.2.5.2. Manage with proactive and real-time involvement facilitated with an automated toolset (e.g., the System Metrics & Reporting Tool (SMART) program health assessment tool).
 - 3.2.5.3. Conduct annual program reviews on select programs.
 - 3.2.5.4. Sign all ACAT ID APBs and forward them for Defense Acquisition Executive (DAE) approval. Sign and approve initial APBs and any subsequent changes that constitute a re-baseline for all ACAT IC, II, and selected programs.
 - 3.2.5.5. Chair ASPs for non-space related ACAT I programs.
- 3.2.6. Manage the S&T Program and its budget. Control the program's approved resources.
- 3.2.7. Serves as Functional Authority for the Acquisition Program Management, Contracting, Scientific and Engineering career fields.
- 3.2.8. Plan, set policy, begins, and implements non-developmental acquisition and cooperative research and development with other nations.
- 3.2.9. Perform as the Source Selection Authority for ACAT I and selected programs unless otherwise directed by the Secretary of Defense or the SECAF.
- 3.2.10. Approve the acquisition plans (e.g., SAMP/LCMP) and Justification and Approvals when they exceed the thresholds established in the AFFARS.

3.2.11. Report all APB deviations to the DAE.

3.2.12. Serve as acceptance authority for program ESOH risks classified “High” as defined by the government and industry Standard Practice for System Safety in accordance with MIL-STD-882D, *DOD Standard Practice for System Safety*.

3.2.13. Approve all Test & Evaluation Master Plans (TEMP)s for all non-space ACAT I, IA, II and other programs on OSD T&E Oversight, and forward to DOT&E and USD(AT&L)/DS. Sign and approve all other TEMPs when designated as the MDA.

3.2.14. Ensure PEOs and PMs, as delegated, certify systems ready for dedicated operational testing according to AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Test and Evaluation*.

3.2.15. With regard to live fire test and evaluation (LFT&E), recommend candidate systems to OSD/DOT&E for compliance with LFT&E legislation. Approve agreed-upon LFT&E programs and allocate Air Force resources required to accomplish LFT&E plans. Approve and forward required LFT&E documentation and waivers (if appropriate) to OSD/DOT&E.

3.3. Under Secretary of the Air Force (SAF/US). The Under Secretary will:

3.3.1. For space and ICBM systems execute the CAE responsibilities assigned in the DOD series and *National Security Space (NSS) Acquisition Policy 03-01*. **NOTE:** The acquisition process in *NSS Acquisition Policy 03-01* is significantly different than the acquisition process in DOD 5000.2 and AFI 63-101.

3.4. Deputy Assistant Secretary for Acquisition Integration (SAF/AQX). The Deputy Assistant Secretary will:

3.4.1. Lead and integrate Air Force efforts to continually improve the DOD acquisition process through joint identification and implementation of new and innovative acquisition and sustainment initiatives. Maintain a close liaison with the other Services, other functionals, and agencies to facilitate the cross flow of information.

3.4.2. Identify and implement acquisition transformation with the AFMC senior leadership through the Acquisition Transformation Action Council (ATAC). The Council will transform the cultural and process elements of acquisition management and the acquisition workforce. The Council will launch initiatives, pilot projects and studies, and institutionalize processes to improve the speed and credibility of the AF acquisition process.

3.4.3. Lead, integrate, change, implement, and set acquisition policy, processes and programs across the Air Force to facilitate rapid delivery of intended capability, support and/or services to the operator.

3.4.4. Ensure communication of Air Force acquisition policies, directives and initiatives to the field that comes directly from SECAF, CSAF, or SAF/AQ.

3.4.5. Develop acquisition program reporting policy covering the Selected Acquisition Reports, Congressional (Nunn/McCurdy) reporting, Defense Acquisition Executive Summary, and the AF Monthly Acquisition Reports.

3.4.6. Chair the RDT&E Panel responsible for programming S&T, Test and Evaluation (T&E) infrastructure and Defense Wide Support activities.

- 3.4.7. Represent SAF/AQ on the AF Board and Group; focal point for SAF/AQ participation in the PPBE.
- 3.4.8. Identify and task organizations to participate with AF/XOR in Requirements Strategy Reviews (RSR)s, High Performance Teams (HPT)s, and other early requirements and acquisition activities. Ensure the participation of systems engineering subject matter experts in these activities.
- 3.4.9. Recommend a MDA to SAF/AQ prior to the Concept Decision point.
- 3.4.10. Authorize below-threshold investment appropriation reprogramming of programs within statutory restrictions
- 3.4.11. Establish a rapid response process to satisfy urgent and compelling operator needs according to AFI 63-114, *Acquisition Rapid Response Process*.
- 3.4.12. Lead acquisition professional development efforts, including the direction, coordination, and review of actions mandated by the Defense Acquisition Workforce Improvement Act (DAWIA) and associated DOD Directives. Serve as AF Liaison to OSD and the President, Defense Acquisition University on behalf of the AF Acquisition Executive and AF Acquisition Executive for Space and all AF acquisition, technology and logistics career field managers, covered by the Defense Acquisition Workforce Improvement Act.
- 3.4.13. Develop and integrate policy regarding the Air Force acquisition workforce, including both organic (AF civilians and military) and contracted resources.

3.5. HQ USAF, Operational Capability Requirements. HQ USAF/XOR will:

- 3.5.1. Collaboratively work with the acquirer, testers, and other key stakeholders in developing operational capabilities requirements documents and the associated COA.
- 3.5.2. Provide validated operational capabilities requirements documents to SAF/AQX to support COA development, concept decisions, and Milestone decisions.
- 3.5.3. Support ADM and PMD development.
- 3.5.4. Support SAF/AQ and MDA decisions, program reviews, and design reviews as requested.
- 3.5.5. Seek SAF/AQ support (e.g., manpower, expertise) for HPTs, RSR, Concept Analysis, AoA plan development and approval, Joint Staff FCB reviews, and supporting analyses.

3.6. HQ USAF, Intelligence Acquisition. HQ USAF/XOI will:

- 3.6.1. Provide policy guidance to MAJCOMs and Air Force Command and Control & Intelligence, Surveillance, and Reconnaissance Center (AFC2ISRC) on intelligence issues associated with force modernization-associated programs, activities, or initiatives.
- 3.6.2. Provide intelligence support to Air Force ISP policy and decision makers.
- 3.6.3. Staff and review all Air Force ISPs to ensure sufficiency of intelligence content. Disseminate HQ USAF/XOI review comments to Director, Information Dominance Programs, Assistant Secretary (Acquisition) (SAF/AQI); Director of C4ISR Integration, Warfighting Integration Directorate (HQ USAF/XII); AFC2ISRC Intelligence Directorate (AFC2ISRC/IN); implementing command SIOs; and operating command SIOs. Resolve disagreements between Air Force reviewers on ISP intelligence content issues.

- 3.6.4. Chair Intelligence Support Steering Groups.
- 3.6.5. Oversee completion of the intelligence portions of Air Force ISPs.
- 3.6.6. Advocate for resolution of derived deficiencies with the National Intelligence Community and for funding and resources in the corporate Air Staff planning and programming processes.
- 3.6.7. Publish applicable Intelligence in Force Modernization (IFM) guidance to MAJCOMs during programming cycles.
- 3.6.8. Ensure all requirements documents that support acquisition programs are reviewed for accurate assessment of threat and documentation of intelligence supportability and infrastructure requirements.
- 3.6.9. Provide requirements and acquisition customers with guidance on architectures, stock intelligence products (including information on databases, tools, foreign materiel exploitation issues, etc.), and other intelligence matters, as applicable.
- 3.6.10. Educate the Air Force intelligence force about significance of IFM to future war fighting success. Integrate acquisition intelligence into training courses, career development planning, and other education and training forums, as appropriate.
- 3.6.11. Ensure intelligence production processes are responsive to acquisition customers, according to AFI 14-201, *Intelligence Production and Applications*.
- 3.6.12. Monitor status of Air Force IFM initiatives and brief status to DOD and Headquarters Air Force senior leadership.
- 3.6.13. Manage intelligence threat support to Air Force acquisition programs, and Air Force-led, multi-Service acquisition programs. Ensure accuracy and timeliness of all intelligence input to acquisition documentation, according to Department of Defense Intelligence Production Program (DODIPP) and other national-level guidelines.
- 3.6.14. Manage the Intelligence Certification process according to CJCSI 3312.01, *Joint Military Intelligence Requirements Certification*. Review, validate, and forward requests for Intelligence Certification to the Defense Intelligence Agency for approval.

3.7. Capabilities Directors (CD). CDs will:

- 3.7.1. Support RSRs, HPTs, Combat Capability Documents (CCD)s, Concept Analyses, AoA Study Plan development and approval, PMD development, EMA coordination, Joint Staff FCB Reviews, and supporting analyses as requested.
- 3.7.2. Review MDAP TRA plans for Milestones B and C, to include the program office identification of critical technologies and technical experts to perform the TRA.
- 3.7.3. Review MDAP TRAs one month prior to scheduled Milestone decision date.
- 3.7.4. Review the initiation and coordination of the appropriate new start notification package (i.e., Letter of Notification/1415-1 Packages).
- 3.7.5. Generate, staff for coordination, and update as required PMD's and EMAs.
- 3.7.6. Air Force interface with OSD for ACAT 1D programs.
- 3.7.7. Serve as liaison to Congress for program acquisition issues.

3.7.8. Provide acquisition support to the Air Force Corporate budget process.

3.8. Director, HQ USAF Test and Evaluation. HQ USAF/TE will:

3.8.1. Develop Air Force T&E policy designed to implement the Seamless Verification concept and oversee Air Force T&E programs according to AFI 99-103.

3.8.2. Collaborate with requirements writers and system developers in developing and fielding better systems sooner and more cost effectively.

3.8.3. Act as the final review authority and signatory for TEMP's prior to Air Force CAE approval.

3.8.4. Adjudicate T&E issues between MAJCOMs, the Services, OSD, and Congress.

3.8.5. Support acquisition and sustainment community efforts to acquire and maintain operationally effective, suitable, and survivable systems.

3.8.6. Oversee the Air Force test infrastructure by ensuring adequate T&E facilities and expertise are available to support system acquisition activities.

3.8.7. Provide members to participate in the development of COAs and requirements documents as required.

3.9. Deputy Chief of Staff, Installations & Logistics. HQ USAF/IL will:

3.9.1. Ensure requirements and acquisition documents contain executable supportability and sustainment strategies for effective fielding.

3.9.2. Support acquisition events in concert with SAF/IE, throughout the life cycle of programs to ensure logistics and sustainment issues are addressed to provide long-term viability for capabilities.

3.10. Acquisition Centers of Excellence (ACE). HQ USAF and local ACE offices will:

3.10.1. Provide acquisition execution support (pre and post award) to the CAE, PEOs, PMs, and logistics center commanders, including removal of roadblocks to Agile Acquisition.

3.10.2. Participate in acquisition review and decision forums (e.g., ASPs) to provide objective inputs to acquisition decisions and processes.

3.10.3. Provide specific acquisition help, advice, and assistance as a "trusted agent" to the program execution leadership (MDA, CAE, PEO, and center commander).

3.10.4. Provide direct support to PEOs to assess risk and ensure executable program strategies.

3.10.5. Work as a force multiplier to program teams and the acquisition workforce to ensure the quality and timeliness of acquisition and sustainment products to the operator.

3.10.6. Represent the CAE on the OSD SE Forum.

3.10.7. Direct and monitor Lean Aerospace Initiative SE activities aimed at revitalizing SE within the AF, our industry partners, and academia in conjunction with SAF/AQR, AFMC/EN and field EN organizations.

3.10.8. Coordinate, as appropriate, with SAF/AQR, AFMC, and the Center for Systems Engineering (CSE) on SE, and software engineering issues (e.g., reviewing SEPs, technical reviews and non-IT/NSS standardization issues).

- 3.10.9. Support acquisition and sustainment programs in implementing the CAE's Agile Acquisition agenda that includes but is not limited to collaborative requirements, seamless verification, technology transition, SE, and EMA.
- 3.10.10. Identify and promote innovative initiatives.
- 3.10.11. Knock down barriers across functional areas in support of field activities. In conjunction with SAF/AQXA, SAF/AQC, HQ AFMC, and HQ AFSPC, support actions that remove barriers within the acquisition system.
- 3.10.12. Drive innovation and streamlined acquisition processes through the identification of execution process problems and the elimination of non-value added steps. Aid in the redesign of processes to enhance the delivery of capabilities to the operator.
- 3.10.13. Recommend changes regarding acquisition policy and processes based on lessons learned to SAF/AQX and other organizations as appropriate.
- 3.10.14. Provide periodic feedback to SAF/AQ, AFMC/CC, AFSPC/CC and the CSE concerning the implementation of initiatives, elimination of barriers to the acquisition process, and the need for training.
- 3.10.15. Work with industry to facilitate communication and development of new initiatives and foster industry partnerships.

3.11. Deputy Assistant Secretary, (Science, Technology and Engineering). SAF/AQR will:

- 3.11.1. Serve as USAF lead for SE policy, guidance, and oversight. This includes software engineering activities identified under the Air Force Software-Intensive Systems Improvement Program (AFS-SIP).
- 3.11.2. Support RSR and HPT reviews as requested.
- 3.11.3. Serve as final approval authority for system-related NEPA documentation as designated by the CAE.
- 3.11.4. Review proposed TDS for MDAP EA program prior to Milestones A, B and C and provide an assessment of technology risks to the AF CAE one month prior to milestone review.
- 3.11.5. Review MDAP TRA plans for Milestones B and C, to include the Program Office's identification of critical technologies and technical experts to perform the TRA.
- 3.11.6. Review and validate MDAP TRAs one month prior to scheduled Milestone decision date and forward endorsement to the CAE for Milestone B and C decisions. Additionally, transmit ACAT ID endorsements through the CAE to DUSD (S&T).
- 3.11.7. Serve as the focal point for the use of non-IT/NSS standards, to include materiel ISAs intended for use in acquisition.

3.12. Deputy Assistant Secretary, Contracting. SAF/AQC will:

- 3.12.1. Provide contracting and acquisition technical support to all Air Force MAJCOMS, PEO's, Direct Reporting Units (DRUs), and Field Operating Offices in the execution of their acquisition programs, privatization, competitive sourcing, service and support efforts. This includes review of program specific acquisition strategy and implementation decisions.

3.12.2. Provide a single entry point within SAF/AQ for reviewing, processing, facilitating, and acquiring Secretariat-level approval for acquisition documents such as acquisition plans, Justification and Approvals (J&As), Determination and Findings (D&Fs), source selection plans, waivers, deviations, lease arrangements, indemnification requests, and associated legal/business arrangements.

3.12.3. Provide advice in the execution of contractual and other related actions not requiring Secretariat-level approval.

3.12.4. Manage Air Force Industrial Labor Relations activities, including contractor work stoppages and the application of Federal labor statuses.

3.12.5. Serve as the Acquisition Strategy Panel (ASP) Secretariat.

3.12.6. Serve as the Air Force Competition Advocate General (AFFARS 5306.501).

3.12.7. Provides strategic sourcing/commodity council advice and supports contracting efforts related to strategic sourcing/commodity councils. Reference (AFFARS 5307.104-93), *Air Force Procedures for Commodity Councils*.

3.13. Air Force Chief Information Officer (CIO). The AF/CIO will:

3.13.1. Ensure effective and efficient IT management as required by congressional and DOD regulatory requirements such as the CCA and DOD 5000-series.

3.13.2. Serve as Air Force lead for net-centric operations implementation and is responsible for policies, program oversight, and resource allocation.

3.13.3. Support requirements strategy development and provide IT life cycle management expertise during HPTs.

3.14. Program Executive Officers (PEO). PEOs will:

3.14.1. Lead portfolios based on a solid business strategy designed to fulfill known capabilities needs, and secure necessary funding in time to meet those requirements.

3.14.2. Ensure programs work with appropriate stakeholders and MAJCOM representatives to develop capabilities based requirements, integrated test plans, technology transition plans, product support strategies, and evolutionary acquisition strategies throughout the entire acquisition cycle.

3.14.3. Maintain a continuous dialogue with the operational and implementing commands. Give early warning to the operator, CAE and acquisition staff of significant problems or issues.

3.14.4. Serve as designated officials for service acquisitions in their respective portfolio and comply with the Air Force Management and Oversight of Acquisition of Services Process (MOASP) and mandated reporting requirements IAW PL 107-107, OSD and Air Force Policy. The Program Executive Office for Combat and Mission Support has the responsibility for approving all supplemental MOASP plans.

3.14.5. Serve as acceptance authority for program ESOH risks classified "Serious" as defined by the government and industry Standard Practice for System Safety, MIL-STD-882D.

3.14.6. Chairs ASP for non-space related ACAT II and III programs.

3.14.7. Recommend PMs for ACAT I and selected programs to the CAE.

- 3.14.8. Direct PMs by emphasizing planning, reporting, and preparing for Milestone and other program reviews.
- 3.14.9. Use the SAF/ACE as an extended staff to review program strategy, ensure a solid program foundation has been set, and insert innovative agile acquisition concepts as opportunities arise.
- 3.14.10. Ensure use of mature technologies demonstrated in relevant environments at Milestone B and Milestone C.
- 3.14.11. Review Systems Engineering Plans and their implementation and evaluate the performance of each program's lead or chief systems engineer in conjunction with the program manager.
- 3.14.12. Ensure that COAs are prepared for newly identified capabilities requirements and the operators agree with the COAs.
- 3.14.13. Manage acquisition program costs and schedules to meet all performance requirements within approved baselines, program direction, and the acquisition strategy.
- 3.14.14. Work with AFMC to identify requirements for facilities, personnel, and resources for Program Offices, and validate infrastructure investment requirements identified by PMs.

3.15. Program Executive Officer, Combat and Mission Support. PEO/CM will:

- 3.15.1. Provide the program management and oversight responsibility for all acquisitions of services in excess of \$100M, all A-76 studies involving 300 or more Full Time Equivalents (FTE)s, and any services acquisitions designated as special interest by USD(AT&L), the CAE, or the PEO for Combat and Mission Support. PEO for Combat and Mission Support has authority to delegate as deemed appropriate.
- 3.15.2. Approve supplemental MOASPs for all USAF HCAs.
- 3.15.3. Conduct source selection and source selection training for those acquisitions specified in paragraph **3.15.1.** above.
- 3.15.4. Ensures all services acquisitions in paragraph **3.15.1.** contain outcome based objectives and appropriate metrics that ensure timely and accurate assessments of the contractor's performance.
- 3.15.5. Unless delegated, serves as the Source Selection Authority (SSA), the Acquisition Strategy Panel (ASP) chairman, and the Acquisition Plan Approval Authority
- 3.15.6. Conduct post-transition and annual reviews of service contracts and ensure cost, schedule, and other performance metrics are obtained or a corrective action plan is established.

3.16. Program Manager (PM) Responsibilities. PMs will:

- 3.16.1. Account for programs to the CAE through the PEO. Report directly to the PEO on all matters of program cost, schedule, and performance. PMs work only on programs assigned to their portfolio.
- 3.16.2. Develop the acquisition strategy and APB for approval. Execute program within the approved APB.
- 3.16.3. Participate in AoA process, development of COAs, and development of Technical Development Strategy.

- 3.16.4. Ensure SEP is developed and provides adequate insight into plans for Robust Systems Engineering.
- 3.16.5. Use mature technology demonstrated in operationally relevant environments for product development and production of each increment of capability. Coordinate plans prior to starting an objective assessment of critical technologies for MDAPs (DOD 5000.2, Enclosure 2 and §2430(a)(1)) with SAF/AQR six months prior to Milestones B and C to avoid schedule delays. Submit MDAP TDSs and TDSs for ACAT II programs for which the AF CAE has retained responsibility to SAF/AQR for review two months prior to the Milestone review date.
- 3.16.6. Assure OSS&E throughout the life cycle of systems delivered to the operator by working collaboratively with the operator and the tester.
- 3.16.7. Use the SISSU Checklist to identify derived security, interoperability, supportability, sustainability and usability requirements from requirements generation forward.
- 3.16.8. Follow intelligence analysis and coordination policies as defined in AFI 14-111, *Intelligence In Force Modernization*.
- 3.16.9. Develop and implement an iterative product support strategy in the LCMP to ensure all technology, acquisition, workload assignment, sustainment, and management transition decisions to minimize total ownership cost (TOC) and optimize the capabilities of the system or product.
- 3.16.10. Seek assistance from acquisition staff on programming and budgeting matters according to Air Force guidance, policies, procedures, and public law.
- 3.16.11. Serve as single point of accountability for accomplishing program objectives for life cycle system management. Program Managers are responsible for ensuring their programs have a process for continuously managing the program cost, schedule and performance expectations of the Operator. The PM will be responsible for documenting the process and communicating the roles and responsibilities to everyone involved.
- 3.16.12. Serve as Acceptance Authority for program ESOH risks classified “Medium” or “Low” as defined by the government and industry Standard Practice for System Safety, MIL-STD-882D. PMs are responsible for integrating and tracking ESOH risk management into their programs as described in paragraph [5.2.2.7.2](#).
- 3.16.13. Execute Foreign Military Sales (FMS) system acquisition programs in accordance with the Arms Export Control Act, DOD 5000-series; DOD 5105.38-M, *Security Assistance Management Manual*; the AFI 63-series acquisition AFIs; and the AFI 16-series operations support AFIs.
- 3.16.14. Prepare Program Protection Plans (PPPs) and submit the PPP to the Milestone Decision Authority (MDA) or designee for review. Refer to AFRPD 63-17, *Technology and Acquisition Systems Security Program Protection* for additional information.
- 3.16.15. Follow the policies with regard to test and evaluation in [AFI 99-103](#).
- 3.16.15.1. Establish and co-chair an ITT prior to Milestone A to ensure the acquisition, requirements, and T&E strategies are developed coordinated and fully integrated.
- 3.16.15.2. Develop and coordinate the program TEMP.

3.16.15.3. Implement an effective system certification process as early as practical to certify systems ready for dedicated operational test and evaluation according to AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Test and Evaluation*.

3.16.15.4. Establish a common T&E database open to all program stakeholders.

3.16.16. With regard to LFT&E, the PM will:

3.16.16.1. Ensure systems are screened and correctly designated as “covered systems” or “covered product improvement programs” if required by Title 10 §2366. Coordinate the proposed nomination with HQ USAF/TEP and the PEO or CD before forwarding to DOT&E.

3.16.16.2. Plan, program, and budget for LFT&E resources if the system is “covered,” to include test articles, facilities, manpower, instrumented threats, and realistic targets.

3.16.16.3. Identify critical LFT&E issues. Prepare and coordinate required LFT&E documentation to include the TEMP and LFT&E strategy, plans, and reports. Review briefings pertaining to the system under test before forwarding to HQ USAF and OSD.

3.16.16.4. Prepare LFT&E waiver requests and legislative relief requests if required, to include an alternative plan for evaluating system vulnerability or lethality.

3.17. Air Force Materiel Command (AFMC). AFMC will:

3.17.1. Assign weapon system/program acquisition and sustainment management responsibilities to the AFMC centers through the AFMC mission assignment process.

3.17.2. Advise and assist the CAE through formal and informal forums.

3.17.3. Form ad hoc assistance teams at the request of the CAE, PEO, CD, or PM.

3.17.4. Evaluate command-level policy and processes and eliminate or re-engineer those that slow down the PM’s ability to deliver capabilities rapidly to the operator.

3.17.5. Develop and provide command and center level acquisition training and management tools designed to assist programs in the execution of their mission.

3.17.6. Collaborate with SAF/AQ, AF/TE, AFOTEC, AF/XOR, AF/IL (Installation and Logistics), SAF/IE (Installations, Environment, and Logistics) and Air Force Space Command (AFSPC) to identify transformation initiative opportunities and facilitate their implementation.

3.17.7. Train and refocus our workforce to obtain a more innovative risk-management culture.

3.17.8. Promulgate lessons learned across AFMC and re-engineer processes to institutionalize best practices.

3.17.9. Knock down barriers across functional areas, assist in the processing of waivers, and work with SAF/AQ, AF/TE, AFOTEC, AF/XOR, AF/XOX, AF/IL, SAF/IE and AFSPC to remove barriers that hinder streamlining of the acquisition process.

3.17.10. Ensure AFRL responds to operator needs by structuring programs to meet near-term documented operational requirements, participating in the development of agreements and technology transition plans with Program Offices to enable rapid and successful transition from AFRL technology projects to military products.

- 3.17.11. Provide representatives to support development of program documentation according to AFI 99-103, AFI 10-601, and this AFI. Additional duties are specified in those respective AFIs.
- 3.17.12. Provide support in the development of COAs as requested.
- 3.17.13. Work collaboratively with the operator in developing requirements and ensure COAs are prepared for newly identified capabilities requirements, and for emerging requirements not yet assigned to a PEO.
- 3.17.14. Support all domestic, international, and FMS acquisition programs in which the USAF participates.
- 3.17.15. Account to the CAE for maintaining the acquisition infrastructure and to CSAF for sustaining all activities.
- 3.17.16. Implement military and civilian acquisition professional development programs according to policy established by the CAE.
- 3.17.17. Support the CAE, PEOs, and PMs by providing technical assistance, infrastructure, test capabilities, laboratory support, professional education, training and development, and all other aspects of support.
- 3.17.18. Chair the Intelligence Support Working Group (ISWG) for intelligence depended programs and activities. Assess and approve the intelligence content of ISPs, ICDs, CDDs, CPDs, LCMPs and TEMPAs for completeness, supportability, and impact on architecture planning and intelligence infrastructure requirements.
- 3.17.19. Support long-range priorities and systems support planning.
- 3.17.20. Help develop policy, processes, and implementation plans and procedures within CAE guidelines.
- 3.17.21. Participate in or lead process improvement teams in coordination with the CAE.
- 3.17.22. Provide expertise to the CAE, PEOs, and PMs by responding to individual requests or by reviewing SEPs, organizing ASPs, independent review teams, production readiness reviews, and logistics assistance teams.
- 3.17.23. Plan, implement and execute the S&T Program.

3.18. Operational Commands and Field Operating Agencies (FOA). Operational commands (i.e., Air Combat Command, Air Mobility Command, Air Force Special Operations Command, Air Education and Training Command, and AFSPC) and FOAs will:

- 3.18.1. Provide representatives to support development of program documentation according to AFI 99-103, AFI 10-601, and this AFI, as requested.
- 3.18.2. Develop and document requirements and accomplish analysis to ensure needs of operators are met, as required.
- 3.18.3. Participate with joint organizations to ensure weapon system requirements and concepts of operations (CONOPS) are in consonance with requirements, concepts, and directives.
- 3.18.4. Provide weapon system program advocacy and develop weapon system POM inputs.

- 3.18.5. Ensure documentation for developing new or modified weapon systems that enable Air Force CONOPS.
- 3.18.6. Work with the acquisition community and laboratories to help focus R&D on operator needs.
- 3.18.7. Work with the acquisition community to help evaluate cost-benefit trades.
- 3.18.8. Ensure weapon system operational requirements meet operational needs.
- 3.18.9. Develop weapon system operational architectures.
- 3.18.10. Coordinate with PM to keep EMAs current.

3.19. Air Education and Training Command (AETC). AETC will:

- 3.19.1. Ensure requirements and acquisition documents contain executable training strategies for effective fielding.
- 3.19.2. Support acquisition events in concert with SAF/IE, throughout the life cycle of programs to ensure training issues are addressed to provide long-term viability for capabilities.

3.20. Air Force Operational Test and Evaluation Center (AFOTEC). AFOTEC will:

- 3.20.1. Participate in the AoA process.
- 3.20.2. Participate in development of COAs by providing operational test inputs for each option.
- 3.20.3. Participate in development of the Technology Development Strategy (TDS), LCMP, ISP, and acquisition strategy, as required.
- 3.20.4. Provide operational test inputs to the T&E strategy, TEMP, and integrated test plan.
- 3.20.5. Develop the initial OT&E (IOT&E) entrance criteria for inclusion in the TEMP.
- 3.20.6. Plan and conduct OT&E for all programs on OSD T&E oversight that require full-rate production or fielding decisions.

3.21. Center for Systems Engineering (CSE). The CSE will:

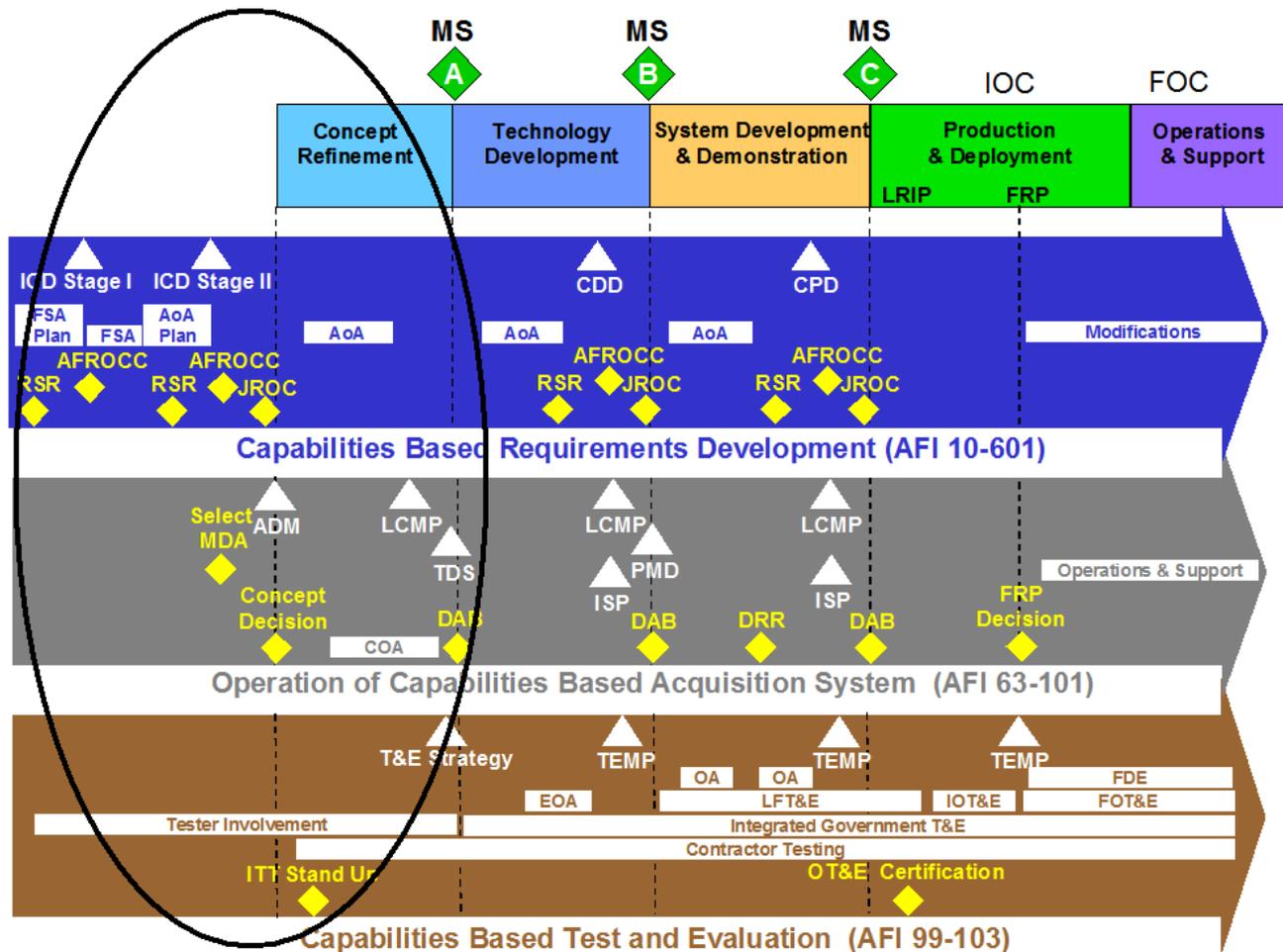
- 3.21.1. Work with policy-making offices throughout the Air Force and DoD to promote consistent application of sound SE principles.
- 3.21.2. Interact with SE customers across the Air Force, DOD, and industry to concentrate on the application of Systems Engineering.
- 3.21.3. Work within AFIT to provide Systems Engineering masters and continuing education.
- 3.21.4. Provide technical review and approval recommendation for SEPs.

Chapter 4

ACQUISITION ACTIVITIES SUPPORTING THE MILESTONE A DECISION

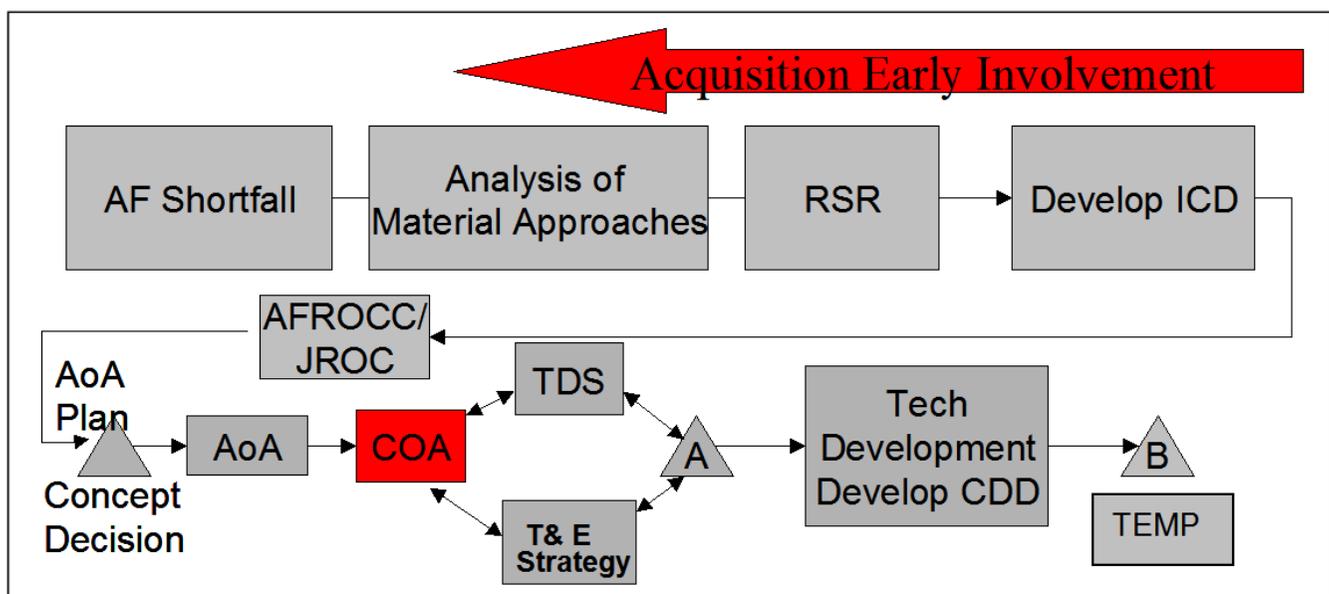
4.1. Purpose. The purpose of this chapter is to provide a high-level description of the activities and roles the acquisition community must be involved in and support prior to and during the Concept Refinement phase that supports a Milestone A decision (for additional details refer to DOD 5000.2). For more detailed information regarding requirements or test activities, refer to AFI 10-601 and AFI 99-103. Activities that take place during this phase include the actions necessary to develop an Initial Capabilities Document (ICD) in an evolutionary process, ICD Stage I and ICD Stage II. ICD Stage II builds upon ICD Stage I, and both directly support the Concept Refinement phase, AOA, development of the COA, the TDS, the Milestone A acquisition decision, and subsequent Technology Development activities. The oval in **Figure 4.1** encompasses the most important activities during this timeframe. For specific details on entrance and exit criteria for Milestone A, refer to DOD 5000.2.

Figure 4.1. Integration of Acquisition, T&E, and Requirements Events Prior to Milestone A.



4.2. Early Involvement in Pre-Concept Refinement Phase. Involvement of the acquisition community, especially systems engineering subject matter experts, starts with participation in the requirements process described in AFI 10-601, CJCSI 3170.01, CJCSM 3170.01, and CJCSI 6212.01, *Interoperability and Supportability of Information Technology and National Security Systems*. **Figure 4.1.** and **Figure 4.2.** depict collaborative efforts between the requirements, testing, and the acquisition communities that should occur and continue throughout the various events and activities of this phase. Briefly, members of the acquisition community must be involved in the collaborative work of developing the requirements strategy, the Analysis of Materiel Approaches (AMA)s, the AoA Study Plan and AoAs, the T&E Strategy and TDS, Concept Decision, and the development of COAs. As HPT members, the acquisition community supports development of the ICD.

Figure 4.2. Early Acquisition Community Involvement.



4.2.1. Air Force Shortfall. The first activity that occurs is the identification of capability shortfalls by the operator or other source, or the development of a new technology that has the potential for a new revolutionary war fighting capability.

4.2.2. Analysis of Materiel Approaches (AMA). The operational community, with the support of the acquisition community, develops the AMA. This is the last step of an assessment known as the Functional Solution Analysis (FSA). The AMA provides a preliminary assessment of candidate materiel approaches resulting in a prioritized list of materiel approaches (or combination of approaches) that will later be documented as part of the ICD. The AMA will consider joint solutions and will contain cost and risk associated with the needed operational capabilities. After different approaches have been evaluated, a “preferred” approach will be selected.

4.2.3. Requirements Strategy Review (RSR). HQ USAF/XOR will notify SAF/AQX of the planned RSR, and SAF/AQX will task the appropriate personnel to participate in the RSR and follow-on HPTs. These participants will recommend the appropriate level of involvement, as well as other appropriate organizations needed to be involved. At the RSR, the ICD sponsor must identify the

proposed Air Force funding strategy for the Concept Refinement and Technology Development phases. The final element of the RSR is Air Force approval to begin the development of the ICD.

4.2.4. Approval to Proceed with ICD Activities. SAF/AQX will submit a recommendation to SAF/AQ for the appointment of an MDA in preparation for the Concept Decision. Both the ICD and the AoA Plan (See www.oas.kirtland.af.mil for more details) must be presented to the MDA for entry into the Concept Refinement phase. By this point of the process, the acquirers should have a thorough understanding of the operators' desired capabilities, and operators should have a realistic understanding of what is technically possible. The testers should know how to test and evaluate to verify that capabilities have been met.

4.2.5. Completion of ICD. When the ICD is complete to include validation, the operator will forward a copy to the MDA. The MDA will appoint a PM who will have responsibility from Concept Refinement up until the effort is officially established as a program at Milestone B.

4.2.6. Information Assurance (IA) Strategy. Each program and system should be examined prior to MS A to determine whether an IA strategy is required IAW Chapter 7 of the Defense Acquisition Guidebook.

4.3. Concept Refinement Phase. During this phase several activities will take place in preparation for a Milestone A decision. These include the Analysis of Alternatives (AoA), the development of Courses of Action (COA), Test Strategy and Technology Development Strategy.

4.3.1. The Acquisition Decision Memorandum (ADM). The ADM officially starts the acquisition process and documents the results of the Concept Decision. Some of the items contained in the ADM are descriptions of the responsibilities of each organization, the funding source, and the actions necessary to prepare for Milestone A. The MDA will sign the ADM. The PM will help lead and fund early study and collaborative efforts. A copy of the ADM should be provided to HQ AFMC/XP who will assign acquisition and sustainment responsibilities to the AFMC product and logistics centers. Early AFMC involvement is important for the development and programming of AFMC center resource/infrastructure requirements for life cycle product support

4.3.2. Formation of the Integrated Test Team (ITT). An ITT is mandatory for all programs and will be formed during the Concept Refinement phase to create and manage the T&E strategy for the life of each program. The ITT must be formed sufficiently early to shape the requirements, acquisition, and T&E strategies. Testing should be conducted via a single, seamless, integrated testing process, which verifies both the design and its suitability and effectiveness for operational use. Formal direction for establishing the ITT will be in the new program's first ADM. The ITT works together as a cross-functional team to map out the grand strategy for testing and evaluating the system using integrated test concepts as described in AFI 99-103. Testers must be proactive in supporting ITT goals even though they may not be formally tasked before the initial ADM is signed. The ITT construct is central to carrying out seamless verification and replaces the old test planning working group (TPWG).

4.3.2.1. ITT Membership. The ITT is responsible to the PM. As soon as practical after the ADM is signed, representatives from the Program Office and the operational test community will co-chair the ITT. Prior to MS A, the Program Office will take the lead in forming an ITT of representatives from all needed disciplines. It is important to ensure testers who contributed to developing the AoA plan and Concept Decision form the nucleus of the initial ITT. Include

representatives from the Program Office, SAF/ACE, SAF/AQ or SAF/US, HQ USAF/TE, HQ USAF/XO, operational MAJCOMs, ALCs, product centers, contractor, developer, science and technology, responsible test organizations (RTO) & participating test organizations (PTO) - operational and developmental testers, OSD, requirements sponsors, test facilities, and other stakeholders as needed during various test program phases. Also include representatives from AFIWC, AFC2ISRC, and JITC if required.

4.3.2.2. Operational MAJCOM Tester Roles. Operational MAJCOM testers must participate in the ITT upon inception. They must assume the ITT co-chair position if AFOTEC is not involved in the program. As programs mature, AFOTEC OT&E leadership should smoothly transition to MAJCOM operational testers.

4.3.2.3. ITT Charter. A formal, signed ITT charter is required for all ITTs and will describe team membership, responsibilities, resources, and the products for which the ITT is responsible. Charters will be reviewed and updated after each major decision review to ensure testing will be integrated as much as possible within statutory and regulatory guidelines. Changes in membership should reflect the skills required for each phase of the program. HQ USAF/TE will review ITT charters for programs on OSD T&E Oversight.

4.3.3. Analysis of Alternatives (AoA). The operational MAJCOMs (or other sources) will direct the preparation of AoAs for ACAT I programs, and for ACAT II and III programs by direction only. In conjunction with the operating MAJCOM, MDAs will determine the appropriate level of effort for the AoA (AoAs are optional for ACAT II and below programs). An AoA is an analytical comparison of the operational effectiveness and cost of proposed materiel solutions to shortfalls in operational capabilities. These shortfalls are also known as mission needs. AoAs document the rationale for identifying a preferred solution or solutions to the shortfalls. Threat changes, deficiencies, advances in technology, or obsolescence of existing systems can trigger an AoA. This information is presented to decision-makers. See <http://www.oas.kirtland.af.mil/> for more details.

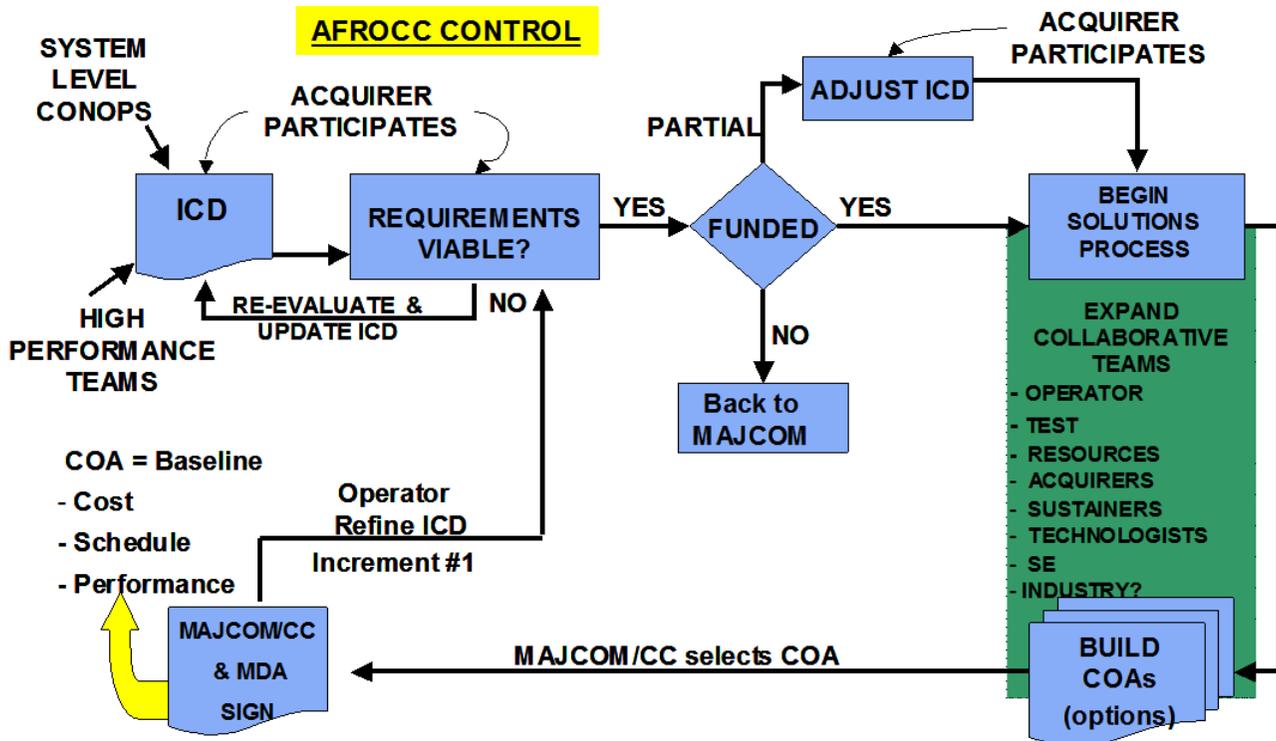
4.3.4. Courses of Action (COA). The purpose of the COA is to present the operational MAJCOM commander with acquisition strategy options for the selected materiel solution resulting from AoAs. The AoAs should clearly articulate performance, schedule, and cost expectations of the program to ensure expectations are known and agreed to up front. The COA will serve as the basis for the Acquisition Strategy, TDS, T&E Strategy, LCMP and EMA. Approval at the operational MAJCOM commander and MDA level for the selected COA will ensure agreement among leadership on program expectations and performance (or incremental performance) for specified cost and schedule goals.

4.3.4.1. COA Team Composition. The COA team, led by the acquisition community, is comprised of representatives from S&T, T&E, FM, PK, AFMC/XR, intelligence, sustainment, acquisition, and operator communities and others that are deemed necessary.

4.3.4.2. COA Development. The acquisition community (i.e., Program Office, AFMC/XR) will lead the development of the COA in conjunction with the operator to identify different acquisition strategy approaches for the selected materiel solution selected from both the AMA and the AoA. The acquisition strategy options may vary based upon the full or partial capabilities needed by the operator over time coupled with the type of approach recommended. A preliminary T&E strategy will also be developed for each COA to provide a complete picture for the decision maker. The important differences between past practices and this one are that the operator fully participates in the process, and the operational MAJCOM commander is presented with more than one approach.

While the TDS (discussed in DOD 5000.2) sequentially follows the COA, the COA cannot be created without an understanding of the technology and maturity levels needed to provide the new capabilities. After the MAJCOM selects a preferred COA, the TDS and T&E strategy become the plans for lowering technical risk during the Technology Development phase. **Figure 4.3.** relates the primary activities of the requirements and acquisition processes.

Figure 4.3. Collaborative Requirements and COA Process



4.3.4.3. COA Attributes. Joint Pub 5-00.2, *Joint Doctrine for Campaign Planning*, defines required COA attributes as: “A valid COA must be: 1) **Suitable:** accomplish the mission and support the commander’s guidance; 2) **Feasible:** accomplish the mission within the established time, space, and resource constraint; 3) **Acceptable:** balance cost with advantage gained by executing a particular COA; 4) **Distinguishable:** each COA must be significantly different from the others; and 5) **Complete:** must incorporate major operations and tasks to be accomplished, logistics concept, employment concept, time estimates for reaching objectives and desired end state.”

4.3.4.4. Preparing COAs. The COA has no specified format. Each COA should be only as long as necessary to briefly describe how the program will deliver the required capability to the operator and clearly state the cost, schedule, and performance objectives. The collaborative team (acquirer, operator, tester, sustainer, etc.) determines the specific content of the COA. The COA should clearly state which items might be at risk for delivery. A number of acquisition approaches exist. For example, one COA may state the first delivery will definitely yield objectives A, B, and C, objectives D and E may be included, and F, G, and H will definitely not be included. Another COA may state delivery of limited capabilities in 2 years (or longer) with additional capabilities added in subsequent increments. A third alternative may have all the capability requirements

delivered in seven years. The main point is various options may be available to deliver capability to the operator and various options should therefore be explored. The operational MAJCOM commander will select the preferred COA. The final COAs should clearly state when each capability will be delivered as well as a high fidelity cost estimate showing the funding requirements. Where the timing of particular capabilities are uncertain, the COAs should describe them as “might have” or objective capabilities rather than “will have.” Subjectively, the commitments in the COAs should be presented at the most realistic level possible. COAs can be updated as knowledge and assumptions change. Documentation must show what level of confidence was used for the COA’s associated assumptions regarding cost, schedule, capabilities delivered, etc. This information assures realistic expectations and provides a benchmark for accountability.

4.3.4.5. **Selecting a COA.**

4.3.4.5.1. **Submittal.** Once complete, the MDA will approve the PM’s COAs in writing and submit them to the lead operational MAJCOM.

4.3.4.5.2. **Selection.** The lead MAJCOM may then pick a COA or decide not to pursue the requirement. Should the MAJCOM choose a COA, it will serve as a formal agreement between the MDA and lead MAJCOM commander. The MAJCOM commander’s decision will function as a mission order and establish the mission objectives.

4.3.4.5.3. **Funding and Changes.** The selected COA will include the lead MAJCOM’s commitment to appropriately fund the development effort in accordance the governing POM. Any changes must be in writing with the mutual agreement of the MDA and the using MAJCOM.

4.3.4.5.4. **Documenting a COA.** The COA will serve as an agreement and will be reflected in the program’s acquisition documentation. The Acquisition Integration Directorate (SAF/AQX) owns the PM’s COA development. Help from SAF/ACE, either locally at the Product or Logistics Centers or at SAF/AQ, is available to assist PMs as they prepare the COAs. The COA can later be used as the starting point for the EMA.

4.3.5. **Technology Development Strategy (TDS).** The MDA determines who will prepare the TDS as defined in the DOD 5000-series. AFRL will support the development of phased capabilities requirements by helping Program Offices and operators assess the maturity and viability of technologies being considered for incorporation in EA programs and assist, when appropriate, in the preparation of a TDS for Milestone A, B, and C. This process should result in higher fidelity requirements that are time-phased to a more realistic schedule with more accurate cost estimates.

4.3.5.1. **AFRL Support.** To rapidly and successfully transition their technology projects into military products, AFRL will:

4.3.5.1.1. Help secure signed technology transition plans, to include prime contractors.

4.3.5.1.2. Help secure associate contractor agreements between the technology developer and the acquisition systems prime contractor, if required.

4.3.5.1.3. Co-locate laboratory personnel with the Program Office to support seamless communication and collaboration, and to assist in the incorporation of identified technologies.

4.3.5.1.4. Ensure incorporation of SE methodologies tailored for AFRL technology development done in support of EA programs.

4.3.5.1.5. Ensure enhanced management oversight (Program Office and AFRL) to quickly identify and resolve any issues that arise, and exploit additional collaborative opportunities.

4.3.5.1.6. Ensure coordination from stakeholders that the fielded technology is supportable within program cost and time constraints.

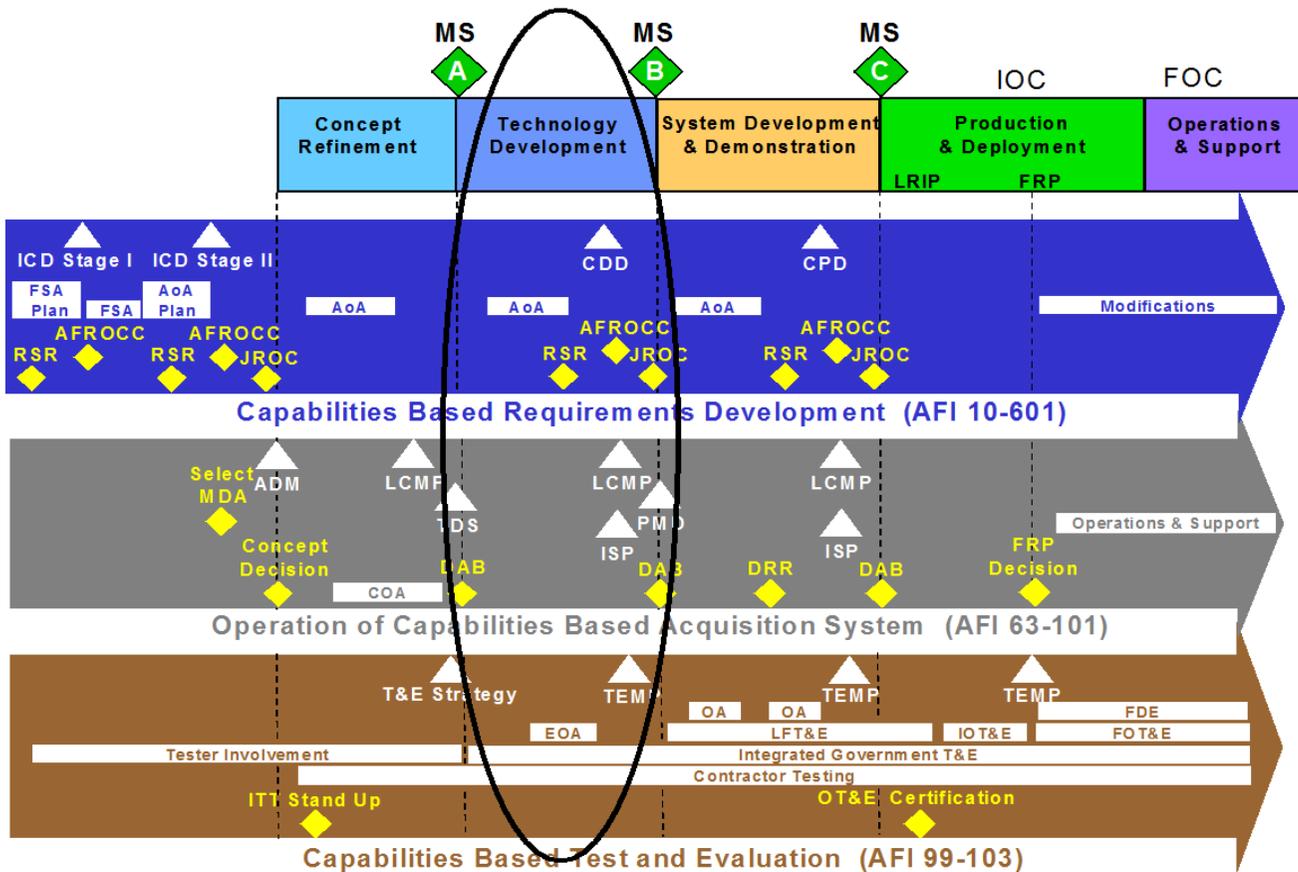
4.3.5.2. **Assessing Technology Readiness.** All acquisition programs must complete an objective technology readiness assessment (TRA) for MDA consideration at Milestones B and C. The assessment determines whether or not critical technologies are sufficiently mature for product development and low-rate initial production. A critical technology should have been demonstrated in an operationally-relevant environment (or, more preferably, in an operational environment) to be considered mature enough to use in systems integration during product development. SAF/AQR reviews MDAP TRAs and ACAT II TRAs for which the CAE has retained responsibility as the MDA one month prior to the Milestone review date, and forwards a recommendation to the CAE. TRAs for ACAT II and III programs are reviewed by the applicable MDA. TRAs should be accomplished in an efficient and timely manner to prevent a delay to a Milestone decision.

Chapter 5

ACQUISITION ACTIVITIES SUPPORTING THE MILESTONE B DECISION

5.1. Purpose. This chapter provides a high-level description of the activities and roles the acquisition community must be involved in and support prior to and during the Technology Development phase that supports a MS B acquisition decision (See DOD 5000.2 for further details). Highlighted activities in this phase include the requirements strategy development, RSR, and HPT activities leading to a Capability Development Document (CDD). The results of the AoA (if accomplished), technology development, and other analyses provide the basis for development of the CDD and the rationale for adopting either an evolutionary acquisition or a single-step-to-full-capability strategy (traditional acquisition strategy). An approved CDD is required at Milestone B. For more detailed information regarding requirements or test activities, refer to AFI 10-601 and AFI 99-103. For specific details on entrance and exit criteria for Milestone B, refer to DOD 5000.2. The oval in **Figure 5.1** encompasses the most important activities during this timeframe. **NOTE:** The timing of activities and documentation for space and missile acquisition programs is different because KDPs for these programs are phased earlier than typical DOD 5000-series programs as described in *NSS Acquisition Policy 03-01*.

Figure 5.1. Integration of Acquisition, T&E, and Requirements Events Prior to Milestone B.



5.2. Technology Development Phase. The Technology Development Phase should reduce technology risk and determine suitable technologies for incorporation into a system in the next phase. This phase requires close collaboration between the operator, testers, and the enabling system development stakeholders. Several activities that occurred during the Concept Refinement phase will require updates in the Technology Development phase. The MDA may authorize entry into the acquisition system at any point consistent with the phase-specific entrance criteria and statutory requirements. Refer to previous chapters for details regarding activities and documentation as appropriate. The key activities for this phase follow below.

5.2.1. Technology Development Strategy (TDS). The TDS created during the prior phase becomes the map for technology development efforts during this phase. For projects entering this phase for the first time, a TDS will need to be developed. The MDA will approve the TDS at Milestone A, which is subsumed into the **Acquisition Strategy** See [Chapter 2](#) for more details. The TDS shall be reviewed and updated at subsequent milestones and upon completion of each development increment. Each increment of an evolutionary acquisition program shall have an MDA-approved TDS.

5.2.2. Acquisition Strategies. Prior to MS B, the PM will increase the efforts for the identification and documentation necessary to support a MS B decision via the acquisition strategy. The PM will ensure the acquisition and sustainment strategies tie all acquisition activities together forming the basis for sound program management.

5.2.2.1. Acquisition Strategy. The MDA will approve the acquisition strategy. The PM and MDA may tailor the phases and decision points for a program to meet the specific needs of the program consistent with statutory and federal regulatory requirements. The strategy will define the entities, activities, and information requirements that will enable successful management and provide a program structure that will deliver timely and affordable capability to the users. This document will provide information requirements to support both decision-making, and provide a historical record of the program's maturation, management, and decision processes. The following items need to be updated or included in the acquisition strategy. (See the [Defense Acquisition Guidebook](#), Chapter 2 for more detail).

5.2.2.2. Capability Needs. As technology matures and the system enters the next phase, the operator will develop the next capabilities document, e.g., the Capability Development Document (CDD) or ICDs for projects just entering the acquisition process. The strategy should briefly discuss the status of these documents. Programs using an EA strategy should design the APB consistent with the sponsor's capability documents(s) and applicable approach. The APB will describe the program threshold and objective values for the minimum number of cost, schedule, and performance attributes that describe the program over its life cycle. An HPT, led by the operator, with involvement from the acquisition and T&E communities, will create the CDD. Each increment will have a CDD.

5.2.2.3. The Acquisition Decision Memorandum (ADM). An update to the ADM, or initial development of one, is necessary for a MS B decision. The ADM will document the results of the MS B decision, such as descriptions of the responsibilities of each organization, the funding source, and the actions necessary to prepare for Milestone C. The ICD sponsor and the MDA will jointly sign the ADM. The PM should help lead the collaborative efforts. A copy of the ADM should be provided to HQ AFMC/XP for initial assignment of management responsibilities to AFMC product and logistics centers or adjustment of previously assigned center responsibilities as necessary.

5.2.2.4. Program Support Concept, Sustainment Strategy, and Life Cycle Management Plan (LCMP). The PM will address all DOTMLPF considerations, maintenance planning, manpower and personnel, supply support, technical data, training and training support, computer resources support, facilities, packaging, handling, storage and transportation, and design interface. The PM, together with the operational MAJCOM, will decide whether technologies will be organically supported, contractor supported, or a combination thereof. The PM must work in collaboration with the right people to begin development of the program support concept and sustainment strategy outlined in [Chapter 2](#).

In addition, an LCMP is required for all ACAT I and II programs, and is optional for ACAT III programs. The PM must include all ITT members when preparing the T&E portions of the LCMP. Critical elements of the TEMP (Parts II, III, IV, and V) should be incorporated in the LCMP, or the entire TEMP included as a T&E annex. If program risks are high, the TEMP may remain the primary T&E management document. Two documents to assist the PM in understanding logistics support concepts are the Introduction to Defense Acquisition Management (https://acc.dau.mil/simplify/ev.php?ID=23003_201&ID2=DO_TOPIC) and the Acquisition Logistics Guide (<http://www.dau.mil/pubs/gdbks/acqulogguide.asp>) available at the Defense Acquisition University. At the end of MS B, the PM will ensure all Support Concept elements are fully identified with supporting documentation. Examination and evaluation of existing support concepts and preparation for the development of the new support systems will be key to posturing for the next phase.

5.2.2.5. Information Support Plan (ISP). All ACAT and non-ACAT programs and procurements must develop an ISP as part of the entry and exit criteria for MS B. The ISP shall be used to analyze interoperability and supportability requirements specified in the net-ready KPP (NRKPP). Refer to DODI 4630.8, *Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*, for more details.

5.2.2.6. Test and Evaluation Master Plan (TEMP). The PM, working through the ITT, is responsible for preparing a TEMP prior to MS B for ACAT I, IAM, ACAT II, and all OSD T&E Oversight programs. The TEMP integrates the requirements, acquisition, T&E, and sustainment strategies, along with all T&E schedules, funding, and resources, into an efficient continuum of integrated testing. TEMPs are **strongly encouraged** for all other programs.

5.2.2.6.1. The ITT will forward a TEMP final draft “in parallel” to all stakeholder organizations represented on the ITT for pre-coordination review. Following this pre-coordination period, the PM will sign the TEMP and staff in parallel to all required “concurrency signature” organizations below the Air Staff level. For all OSD T&E Oversight programs, the PEO or Capability Director will submit the TEMP to the PEM, who will coordinate through HQ USAF/TE and the CAE for formal Service-level approval signatures before final submission to OSD (i.e., USD(AT&L)/DS and DOT&E). For programs not requiring OSD approval, the MDA is the final Service approval authority. If the TEMP is going to OSD or another Service for any reason, HQ USAF/TE and CAE (or MDA if appropriate) signatures are required. See [AFI 99-103](#) for timeline and additional details regarding the TEMP.

5.2.2.6.2. **Testing COTS, NDI, and GFE.** PMs must not disregard T&E of commercial-off-the-shelf (COTS), non-developmental items (NDI), and government-furnished equipment (GFE). The operational effectiveness and suitability of these items and any military-unique applications must be tested and evaluated before a full-rate production (FRP)

or fielding decision. The ITT will plan to take maximum advantage of pre-existing T&E data to reduce the scope and cost of government testing.

5.2.2.7. System Requirements Document (SRD). An SRD will describe operational capability requirements, critical design specifications, and manufacturing requirements. ITT members will check that requirements are accurately described in Section 3 of the SRD, and T&E needs are identified in Section 4. The ITT will review the Contract Data Requirements List to ensure it describes the content, format, delivery instructions, and approval and acceptance criteria for all deliverable contract T&E data. The RFP and statement of work (SOW) will describe the contractor's support to government T&E.

5.2.2.7.1. Human Systems Integration (HSI). The PM should integrate manpower, personnel, training, human factors, safety and occupational health, personnel survivability, and habitability considerations into the acquisition process. In accordance with DOD 3216.2, *Protection of Human Subjects and Adherence to Ethical Standards in DOD-Supported Research*, if humans are used as subjects a documented determination of the level of risk (exempt, minimal risk, greater than minimal) to the human must be made and annotated/acted upon appropriately (Institutional Review Board if necessary). The acquisition strategy should identify HSI responsibilities, describe the technical and management approach for meeting HSI requirements, briefly summarize the planning for each of the above elements of HSI, define the division or roles and responsibilities with ESOH for the overlapping domains of safety and occupational health, and summarize major elements of the associated training system.

5.2.2.7.2. Environment, Safety, and Occupational Health (ESOH). The acquisition strategy must include a summary of the Programmatic ESOH Evaluation (PESHE) document, including ESOH risks, and a Compliance Schedule for National Environmental Policy Act (NEPA). The strategy for integrating across ESOH and into the SE process, using MIL-STD-882D, must be documented in the PESHE and the SEP, avoiding unnecessary duplication. The ESOH integration strategy should define the division of roles and responsibilities with HSI for the overlapping domains of safety and occupational health. See [Attachment 2](#) for link. The PM should try to eliminate ESOH hazards, where possible, and minimize ESOH risks where the hazards cannot be eliminated. The PM will include ESOH risk acceptance decisions in technical and program reviews. The PM shall also support AF ESOH asset management, as necessary.

5.2.2.7.3. Modular Open Systems Approach (MOSA). MOSA employs an integrated business and technical strategy to support identification of key modules and interfaces in a system's architecture. It allows assessment and use of widely supported commercial standards, and thereby facilitates rapid fielding, technology updates, and enhanced interoperability. The PM should incorporate MOSA principles into the acquisition strategy. The summary of the MOSA planning should describe: 1) how MOSA fits into a program's overall acquisition process and strategies for acquisition, technology development, and T&E; 2) what steps a program will take to analyze, develop, and implement a system or a system-of-systems architecture based on MOSA principles; and 3) how such programs intend to monitor and assess their MOSA implementation progress and ensure system openness.

5.2.2.8. Program Management Directive (PMD). The PMD provides official HQ USAF documentation and direction for Air Force programs (both acquisition and sustainment) and associated

T&E activities. ITT members will review PMDs to ensure government test organizations and their key responsibilities are correctly identified so as to ensure fully integrated testing.

5.2.2.9. **Systems Engineering Plan (SEP).** The SEP as described in [Chapter 2, paragraph 2.1.4.5.](#), must be initiated or updated depending on the program. The SEP will document a program's SE strategy early in the technical refinement phase and continue to be updated periodically as a program matures.

5.2.2.10. **Risk Management.** The acquisition strategy must address risk management. The PM has primary responsibility for risk management and will assess risks through all phases of the program. Some examples include but are not limited to:

5.2.2.10.1. **Cost and Schedule Risk.** Depends heavily upon the maturity of the chosen technology, as does schedule risk.

5.2.2.10.2. **Performance Risk.** Includes technical risk, e.g. basic technology risks, integrations risks, and manufacturing risks.

5.2.2.10.3. **Environment, Safety, and Occupational Health (ESOH) Risks.** ESOH risks include those resulting from routine system O&M and from mishaps, as well as risks to program cost, schedule, and performance from requirements to comply with ESOH laws and regulations.

5.2.2.11. **Resource Management.** The acquisition strategy must address the estimated program cost and the planned program funding, to include advance procurement. See DOD 7000.14-R, *Department of Defense Financial Management Regulation (FMRS) Vol 2A* for more details.

5.2.2.12. **Interoperability.** The acquisition strategy should identify IT/NSS requirements and system compatibility and interoperability constraints applicable to the program (e.g., treaties or international standardization agreements, standards required by the DOD IT Standards Registry (DISR) – [DISRonline](https://disronline.disa.mil/DISR/index.jsp) - <https://disronline.disa.mil/DISR/index.jsp> no non IT/NSS standards). See the [Defense Acquisition Guidebook](#), DOD 4120.24M, *Defense Standardization Program Policies and Processes*, and DODD 4630.5, *Interoperability and Supportability of Information Technology (IT) and (NSS)* for more details.

5.2.2.12.1. **Information Interoperability.** The PM should identify and assess the impact of technical, schedule, cost, and funding critical path issues (i.e., issues that could impact the PM's ability to execute the acquisition strategy) related to information interoperability. The PM should also identify any issues in related programs (i.e., a system that will exchange information with the PM's delivered system) and assess potential impacts.

5.2.2.12.2. **System Compatibility and Interoperability.** The PM should identify and assess the potential impacts on technical, schedule, cost, and funding critical path issues of meeting system compatibility and interoperability requirements for independent Air Force or joint operations. For programs delivering capabilities with potential use in allied and coalition operations, the identification and assessment should include the ISAs applicable to his system such as cross-servicing (with interchangeable fuels, lubricants, gases, and munitions), air transport and air drop, medical evacuation, combat search and rescue, crash/fire/rescue, and geospatial/intelligence. ISA applicability can be determined using the ASSIST Program Manager's Tool (PMT) at <https://pmt.daps.dla.mil>. Following approval of the acquisition strategy, the PM should notify AF/XOXX-ISO and SAF/AQRE of all applicable ISAs that are not included in

the SRD to allow agreement reservations to be registered with the appropriate multinational body (see AFI 60-106, *US Air Force International Military Standardization Program*, for further information).

5.2.2.13. **Research and Technology Protection.** The PM should identify the technical, schedule, cost, and funding issues associated with protecting critical program information and technologies, and the plans to resolve them. In addition, the PM should ensure the acquisition strategy is consistent with anti-tamper measures. The PM must plan and budget for post-production, anti-tamper validation of end items.

5.2.2.14. **Information Assurance (IA).** The PM should summarize the acquisition information assurance strategy required by DODI 8500.2, *Information Assurance (IA) Implementation*. For MAIS programs, the PM should also understand the CCA requirements associated with IA.

5.2.2.15. **Integrated Contract Performance Management.** The PM should obtain integrated cost and schedule performance data to monitor program execution.

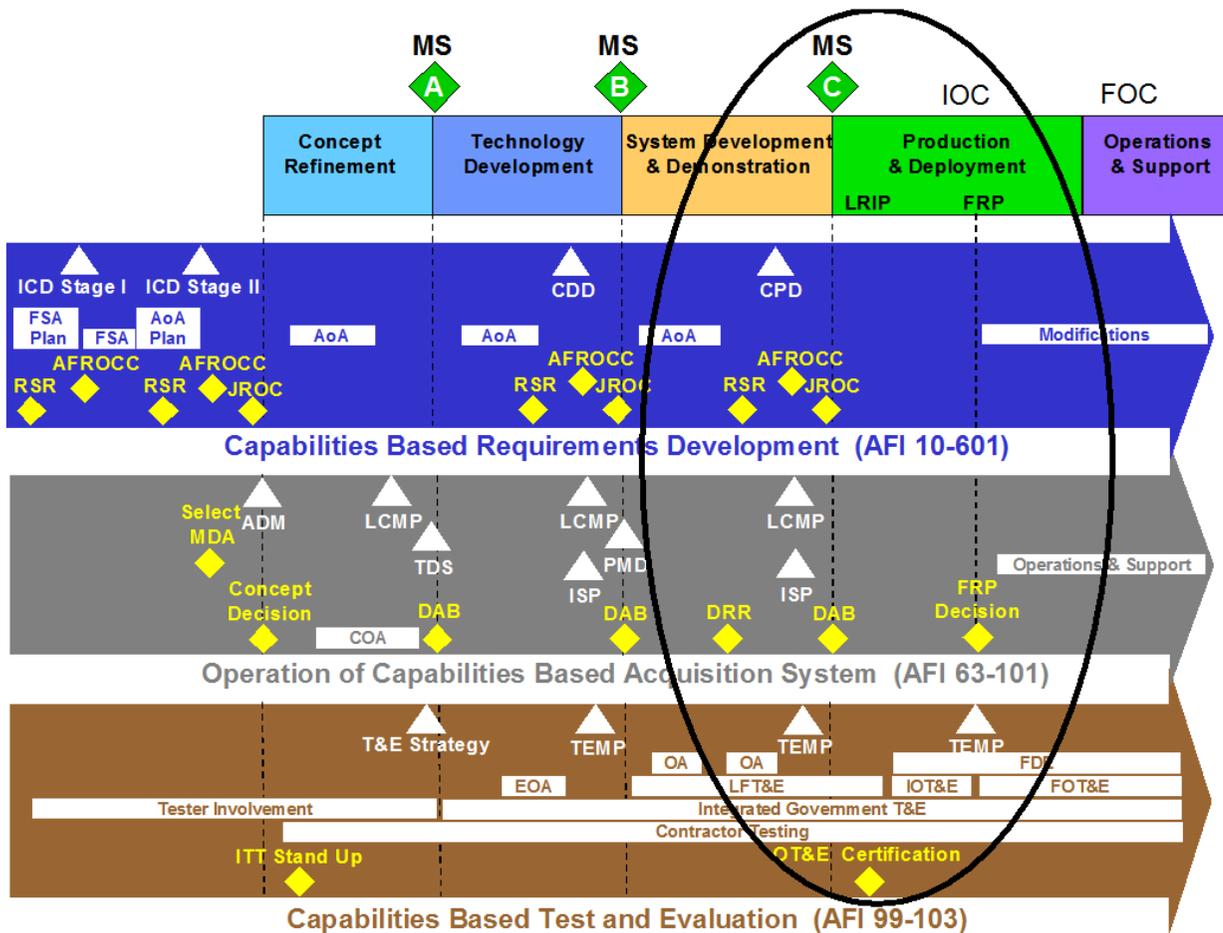
5.2.2.16. **Performance Based Logistics (PBL).** This is the preferred sustainment strategy for weapon system product support that employs the purchase of support as an integrated, affordable performance package designed to optimize system readiness. Application of PBL requirements must be implemented early in the acquisition process where the greatest opportunities exist to address sustainment objectives. The PM's responsibility for sustainment planning and assessment is addressed in AFI 63-107, *Integrated Product Support Planning and Assessment* and AFI 10-602, *Determining Mission Capability and Supportability Requirements* and is required throughout the life cycle of a weapon system.

Chapter 6

ACQUISITION ACTIVITIES IN SUPPORT OF THE MILESTONE C AND PRODUCTION DECISIONS

6.1. Purpose. The purpose of this chapter is to provide a high-level description of the activities and roles the acquisition community must be involved in and support prior to and during the System Development and Demonstration (SDD) phase that supports a Milestone C acquisition decision (refer to DOD 5000.2 for further details). SDD has two major efforts: Systems Integration and System Demonstration. As defined in DOD 5000.2, the purpose of the SDD phase is to develop a system or an increment of capability; reduce integration and manufacturing risk (technology risk reduction occurs during the Technology Development phase); ensure operational supportability with particular attention to reducing the logistics footprint; implement HSI; design for producibility; ensure affordability and the protection of critical program information by implementing appropriate techniques such as anti-tamper; and demonstrate systems integration, interoperability, safety, and utility. For more detailed information regarding requirements or test activities, refer to AFI 10-601 and AFI 99-103. For specific details on entrance and exit criteria for Milestone C, refer to DOD 5000.2. The MDA may authorize entry into the acquisition system at any point consistent with the phase-specific entrance criteria and statutory requirements. Refer to previous chapters for details regarding activities and documentation as appropriate.

Figure 6.1. Integration of Acquisition, T&E, and Requirements Events Prior to Milestone C.



6.2. System Integration. Systems integration in the traditional acquisition framework is described in DOD 5000.2. Evolutionary acquisition makes use of a spiral development or an incremental development approach to systems integration to deliver new technologies to operators earlier in the acquisition cycle than the traditional approach. In some cases where mature technologies are ready to transition from a laboratory or industry, MAJCOMs may choose to use fieldable prototypes to obtain a degree of increased capabilities. Support and assistance from the development community will generally be required since the prototype asset(s) will frequently lack some performance, training, or sustainment elements of the production-configured system. The aim of this effort is for the operator to gain experience with the new capabilities to assist in refining their requirements, and to provide real-time feedback of what they learn from using the prototype(s). Industry will also benefit from real-time feedback received from the operator.

6.3. System Demonstration. The purpose of this activity is to integrate proven capabilities, engineer for production, verify system performance, and demonstrate or verify supportability. Under normal circumstances, this activity would take place when an activity has transitioned to a low risk state, and can occur anytime before or after the development phase is complete. The objective of the SDD phase is that each increment should yield added capabilities to the operator in less than four years (preferably two to three years) with high confidence. If the timeline to deliver new capabilities is going to take longer than four years, more increments may be needed, and the “risky” capabilities may need to be deferred to a later increment, based on operator assessment of priorities.

If robust engineering was emphasized in the early phases, the first increment will contain growth provisions to facilitate incorporating added capabilities in future increments. The content of the future increments should be based on operators’ prioritized capabilities balanced against the maturity of technology (risk level), combined with results and feedback from both the operator’s experience using the fielded systems and T&E results. An important outcome of the demonstration phase will be the generation of the Capability Production Document (CPD). This will supersede the Capability Development Document (CDD) and document the required capabilities desired against which, operational testing will be performed. Testing will be conducted as described in AFI 99-103. At the end of this phase, the PM will ensure all Support Concept elements are in place prior to entry into the Production and Deployment phase.

6.4. Production and Deployment Phase. The MDA will approve criteria to enter low-rate initial production (LRIP) when a reasonable degree of confidence is attained that the system is operationally effective and suitable according to the operator’s capabilities documented in the CPD. Per DODI 4630.8, *Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*, all ACAT and non-ACAT acquisitions and procurement must develop ISPs for entry and exit criteria at Milestone C. A Systems Engineering Approach for this phase includes all of the technical activities required to support the Production and Deployment of the system. During initiation of Milestone C, if the program will be supported with organic staffing, the PM should provide all documentation necessary to support the program Support Concept outlined in **paragraph 5.1.** to the Air Logistics Center, when applicable.

6.5. Operations and Support Phase. A necessary part of a successful strategy is to ensure systems are supportable as they are fielded. A Systems Engineering Approach for this phase includes all of the technical activities required to support Operations and Support Phase of the system. Early sustainer involvement is required to help reduce the significantly higher support costs that directly result from supporting single or multiple configurations of a system. Performance Based Logistics (PBL) is the preferred sustainment

strategy for weapon system product support that employs the purchase of support as an integrated, affordable performance package designed to optimize system readiness. Application of PBL requirements must be implemented early in the acquisition process where the greatest opportunities exist to address sustainment objectives. The PM's responsibility for sustainment planning and assessment is addressed in AFIs 63-107, 10-602 and is required throughout the life cycle of a weapon system. In this phase, the PM is also responsible for assuring the Operational Safety, Suitability, and Effectiveness (OSS&E) of the system (AFI 63-1201, *Assurance of Operational Safety, Suitability, and Effectiveness*).

6.6. Program Transfer. This is the formal movement of program management responsibility from the acquisition phase to the sustainment phase. Programs will transfer from a Program Executive Officer (PEO) acquisition management portfolio to an Air Logistics Center (ALC) sustainment management portfolio. At Milestone C, program offices reporting through the PEO will plan for transferring program responsibility from the PEO to the appropriate sustainment authority.

Procedures for program transfer can be found at SAF/AQ website - [SAF/AQ - Policy Homepage](#). Criteria includes top level (initial and final) reviews of such areas as last production contract, funding line, percent system fielded, significant investment dollars, and interest level. Additionally, ten sustainment elements have been identified in AFI 63-107. These sustainment elements have been identified as the critical elements necessary for a program to be fully maintained for operational readiness. The combination of the top-level reviews along with the assessment of the ten-sustainment elements, determines the readiness of a system for program transfer.

The transfer status of all weapon systems and services programs in a PEO portfolio will be reviewed at a minimum during the annual reviews. When a program is determined ready and approved for Portfolio Transfer, PMs will execute planning for accomplishing this transfer. The delivering organization will be responsible for taking the lead drafting a plan and coordinating with the gaining center to ensure an orderly and executable program transition.

End Note. This AFI is not to be considered a stand-alone document or sole source of guidance. Instead it serves as one of the integral guides used to map acquisition and sustainment strategies for successfully executing capabilities based acquisition. Coupled with this AFI, the PM shall use the DOD 5000 series, [AFI 10-601](#), [AFI 99-103](#), [AFI 63-107](#), CJCSI 3170.01, assistance from the ACE's, and the plethora of references and supporting information sited in this document, to ensure the depth and breadth of necessary information necessary is acted upon to develop and implement a successful program strategy. The future of our Air Force depends on providing the warfighter the capabilities they need in a timely manner and with a higher degree of credibility. The adherence to this AFI in conjunction with the associated references sited will ensure the success of this objective.

//SIGNED, 20 June 05//

Michael L. Dominguez

Acting Secretary of the Air Force

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

Title 10, United States Code, *Armed Forces*, §139, §2366, §2399, §2400, §2350a(g)

Title 10, United States Code, §2330.a, (PL107-107) *Procurement of Services*

Title 10, United States Code, §2533.a, *Berry Amendment*

Title 10, United States Code, §2451-2457

Title 40, United States Code, §139, et. seq., *Clinger-Cohen Act of 1996*

32 Code of Federal Regulation Part 989.3(c)(3)

32 Code of Federal Regulation Part 219, *Protection of Human Subjects*

Committee on National Security Systems Policy (CNSSP) 11, *National Policy Governing the Acquisition of Information Assurance (IA) and IA Enabled IT Products*

Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*

Joint Pub 5-00.2, *Joint Doctrine for Campaign Planning*

CJCSI 3170.01, *Joint Capabilities Integration and Development System*

CJCSM 3170.01, *Operation of the Joint Capabilities Integration and Development System*

CJCSI 3312.01, *Joint Military Intelligence Requirements Certification*

CJCSI 6212.01, *Interoperability and Supportability of Information Technology (IT) and (NSS)*

DFARS SUBPART 225.70, *Authorization Acts, Appropriations Acts, and Other Statutory Restrictions on Foreign Acquisition*

DODD 2010.6, *Material Interoperability with Allies and Coalition Partners*

DODD 2060.1, *Implementation of, and Compliance With, Arms Control Agreements*

DOD 3216.2, *Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research*

DOD 4120.24M, *Defense Standardization Program Policies and Processes*

DOD 4140.1-R, *DoD Supply Chain Material Management Regulation*

DODD 4630.5, *Interoperability and Supportability of Information Technology (IT) and (NSS)*

DODI 4630.8, *Procedures for Interoperability and Supportability of Information Technology (IT) and (NSS)*

DODD 5000.1, *The Defense Acquisition System*

DODI 5000.2, *Operation of the Defense Acquisition System*

DOD 5105.38-M, *Security Assistance Management Manual (SAMM)*

DODD 5200.1, *DoD Information Security Program*

DODD 5200.39, *Security, Intelligence, and Counterintelligence Support to Acquisition Program Protection*

DODI 5200.40, *DoD Information Technology Security Certification and Accreditation Process (DITSCAP)*

DOD 7000.14-R, *Department of Defense Financial Management Regulation (FMRS)*

DODD 8500.1, *Information Assurance*

DODI 8500.2, *Information Assurance (IA) Implementation National Security Space (NSS) Acquisition Policy 03-01*

MIL-STD-882D, *DoD Standard Practice for System Safety*

AFFARS 5307.104-93, *Air Force Procedures for Commodity Councils*

AFDD 1-2, *Air Force Glossary*

AFPD 10-6, *Mission Needs and Operational Requirements*

AFI 10-601, *Capabilities Based Requirements Development*

AFI 10-602, *Determining Mission Capability and Supportability Requirements*

AFI 11-301, Vol I, *Aircrew Life Support (ALS) Program*

AFI 14-111, *Intelligence in Force Modernization*

AFI 14-201, *Intelligence Production and Applications*

AFI 14-206, *Modeling and Simulation*

AFPD 16-2, *Disclosure of Military Information to Foreign Governments and International Organizations*

AFPD 16-10, *Modeling and Simulation (M&S) Management*

AFI 16-601, *Implementation of, and Compliance With, Arms Control Agreements*

AFI 16-1002, *Modeling and Simulation (M&S) Support to Acquisition*

AFI 21-101, *Aerospace Equipment Maintenance Management*

AFPD 23-1, *Requirements and Stockage of Material*

AFI 23-205, *Managing the Procurement Materiel Programs*

AFI 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning*

AFI 32-7086, *Hazardous Materials Management*

AFPD 33-2, *Information Protection*

AFI 33-118, *Radio Frequency Spectrum Management*

AFI 33-124, *Enterprise Information Technology Architectures*

AFI 33-202, Vol 1, *Network and Computer Security*

AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*

AFI 36-2251, *Management of Air Force Training Systems*

AFPD 37-1, *Air Force Information Management*

AFMAN 37-123, *Management of Records*

AFPAM 38-102, *Headquarters United States Air Force Organization and Functions (Chartbook)*

AFPD 51-12, *Alternative Dispute Resolution*
AFI 51-402, *Weapons Review*
AFI 60-101, *Operations and Resources*
AFI 60-106, *US Air Force International Military Standardization Program*
AFPD 61-1, *Management of Science and Technology*
AFI 61-105, *Planning for Science and Technology*
AFI 61-204, *Disseminating Scientific and Technical Information*
AFPD 63-1, *Capability-Based Acquisition System*
AFPD 63-11, *Modification System*
AFPD 63-12, *Assurance of Operational Safety, Suitability, and Effectiveness*
AFPD 63-17, *Technology and Acquisition Systems Security Program Protection*
AFI 63-107, *Integrated Product Support Planning and Assessment*
AFI 63-114, *Rapid Response Process*
AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Test and Evaluation*
AFI 63-1101, *Modification Management*
AFI 63-1201, *Assurance of Operational Safety, Suitability, and Effectiveness*
AFI 65-601, Vol 1, *Budget Guidance and Procedures*
AFPD 90-11, *Planning System*
AFI 90-901, *Operational Risk Management*
AFMAN 91-201, *Explosives Safety Standards*
AFI 91-202, *US Air Force Mishap Prevention Program*
AFPD 99-1, *Test and Evaluation Process*
AFI 99-103, *Capabilities Based Test and Evaluation*
HOI 63-1, *Headquarters Air Force Guidance for Preparing Program Management Directives (PMD)*
Center for Systems Engineering's Systems Engineering Plan (SEP) Guide, 10 Jan 2005
CSWS Users Guide Version 4.14, Jun 03
Defense Acquisition Guidebook
DOD Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook
DOD Handbook SD-2, Buying Commercial and Nondevelopmental Items: A Handbook, Apr 1996
Guidance for the use of Robust Engineering in Air Force Acquisition Programs
Life Cycle Management Plan Guide, 4 Mar 2005
OSD(AT&L), IBR Handbook, The Program Manager's Guide to the Integrated Baseline Review Process, Apr 2003
OSD Systems Engineering Plan Preparation Guide, 22 Dec 2004

Glossary, Defense Acquisition Acronyms and Terms

Abbreviations and Acronyms

ACAT—Acquisition Category

ACE—Acquisition Center of Excellence

ACPD—Acquisition Career Professional Development

ACPINS—Automated Computer Program Identification Number System

ACTD—Advanced Concept Technology Demonstration

ADM—Acquisition Decision Memorandum

ADR—Alternative Dispute Resolution

AETC—Air Education and Training Command

AFC2ISRC—Air Force Command and Control & Intelligence, Surveillance, and Reconnaissance Center

AFDD—Air Force Doctrine Document

AFFARS—Air Force Federal Acquisition Regulation Supplement

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFMD—Air Force Mission Directive

AFMSRR—Air Force Modeling and Simulation Resource Repository

AFOSH—Air Force Occupational and Environmental Safety, Fire Protection and Health

AFOTEC—Air Force Operational Test and Evaluation Center

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFRL—Air Force Research Laboratory

AFROCC—Air Force Requirements for Operational Capabilities Council

AFSPC—Air Force Space Command

ALC—Air Logistics Center

AMA—Analysis of Materiel Approaches

AoA—Analysis of Alternatives

APB—Acquisition Program Baseline

APDP—Acquisition Professional Development Program

ASAF(A)—Assistant Secretary of the Air Force (Acquisition)

ASD/NII—Assistant Secretary of Defense for Network and Information Integration

ASP—Acquisition Strategy Panel
ATAC—Acquisition Transformation Action Council
ATD—Advanced Technology Demonstration
C2—Command and Control
C4I—Command, Control, Communications, Computers, and Intelligence
CAE—Component Acquisition Executive
CCA—Clinger-Cohen Act
CCD—Combat Capability Document
CD—Capability Director
CDD—Capability Development Document
CIO—Chief Information Officer
CJCSI—Chairman of the Joint Chiefs of Staff Instruction
CJCSM—Chairman of the Joint Chiefs of Staff Manual
COA—Course of Action
CONOPS—Concept of Operations
CoP—Community of Practice
COTS—Commercial-Off-The-Shelf
CPD—Capability Production Document
CPI—Critical Program Information
CSAF—Chief of Staff of the Air Force
CSCI—Computer Software Configuration Items
CSO—Commodity Strategy Official
CSWS—Contractor Supported Weapon System
D&F—Determination and Findings
DAB—Defense Acquisition Board
DAE—Defense Acquisition Executive
DAU—Defense Acquisition University
DISR—Defense Information Technology Standards Registry
DMSMS—Diminishing Manufacturing Sources/Material Shortages
DOD—Department of Defense
DODD—Department of Defense Directive
DODI—Department of Defense Instruction

DODIPP—Department of Defense Intelligence Production Program

DOT&E—Director, Operational Test and Evaluation

DRR—Design Readiness Review

DS&TI—Designated Science & Technology Information

DT&E—Developmental Test and Evaluation

EA—Evolutionary Acquisition

e.g.—for example

EMA—Expectations Management Agreement

ESOH—Environment, Safety, and Occupational Health

et seq—and the following ones

FAR—Federal Acquisition Regulation

FCB—Functional Capabilities Board

FM—Financial Management

FMS—Foreign Military Sales

FOA—Field Operating Agency

FOC—Full Operational Capability

FOT&E—Follow-on Operational Test and Evaluation

FRP—Full-Rate Production

FSA—Functional Solution Analysis

FTE—Full Time Equivalent

GIG—Global Information Grid

GFE—Government Furnished Equipment

HPT—High Performance Team

HQ—Headquarters

HPT—High Performance Team

IA—Information Assurance

IBR—Integrated Baseline Review

ICD—Initial Capabilities Document

i.e.—that is

IFM—Intelligence In Force Modernization

IMP—Integrated Master Plan

IMS—Integrated Master Schedule

IOC—Initial Operational Capability
IOT&E—Initial Operational Test and Evaluation
IPS—Integrated Program Summary
ISA—International Standardization Agreement
ISP—Information Support Plan
ISR—Intelligence, Surveillance, and Reconnaissance
ISWG—Intelligence Support Working Group
IT—Information Technology
ITC—Integrated Test Concept
ITP—Integrated Test Plan
ITT—Integrated Test Team
J&A—Justification and Approvals
JCIDS—Joint Capabilities Integration and Development System
JP—Joint Publication
JROC—Joint Requirements Oversight Council
KDP—Key Decision Point
KPP—Key Performance Parameter
LCMP—Life Cycle Management Plan
LFT&E—Live Fire Test and Evaluation
LRIP—Low-Rate Initial Production
M&S—Modeling and Simulation
MAIS—Major Automated Information System
MAJCOM—Major Command
MDA—Milestone Decision Authority
MDAP—Major Defense Acquisition Program
MOA—Memorandum of Agreement
MOSA—Modular Open Systems Approach
MPS—Master Program Schedule
MS—Milestone
NDI—Non-Developmental Item
NEPA—National Environmental Policy Act
NR-KPP—Net-Ready Key Performance Parameter

NSS—National Security System *or* National Security Space

OA—Operational Assessment

OPR—Office of Primary Responsibility

OPLAN—Operations Plan

OSD—Office of the Secretary of Defense

OSS&E—Operational Safety, Suitability, and Effectiveness

OUSD—Office of the Under Secretary of Defense

OT&E—Operational Test and Evaluation

OTA—Operational Test Agency

PBL—Performance Based Logistics

PEM—Program Element Monitor

PEO—Program Executive Officer

PGM—Product Group Manager

PMT—Program Manager’s Tool

PESHE—Programmatic Environment, Safety, and Occupational Health Evaluation

P.L.—Public Law

PM—Program Manager

PMB—Performance Measurement Baseline

PMD—Program Management Directive

POC—Point of Contact

POM—Program Objective Memorandum

PPP—Program Protection Plan

PSMP—Product Support Management Plan

R&D—Research and Development

RDT&E—Research, Development, Test, and Evaluation

RFP—Request for Proposal

RSR—Requirement Strategy Review

RTO—Responsible Test Organization

SAE—Service Acquisition Executive

SAMP—Single Acquisition Management Plan

SBIR—Small Business Innovation Research

SDD—System Development and Demonstration

SE—Systems Engineering
SECAF—Secretary of the Air Force
SECDEF—Secretary of Defense
SISSU—Security, Interoperability, Supportability, Sustainability, and Usability
SMART—System Metric and Reporting Tool
SORAP—Source of Repair Assignment Process
SOW—Statement of Work
T&E—Test and Evaluation
TD—Technology Director
TDS—Technology Development Strategy
TEMP—Test and Evaluation Master Plan
TOC—Total Ownership Cost
TPP—Technology Protection Plan
T/PPP—Technology and Program Protection Plan
TPWG—Test Planning Working Group (discontinued)
TRA—Technology Readiness Assessment
U.S.—United States
USAF—United States Air Force
www—World Wide Web

Terms

NOTES:

See [AFI 10-601](#) and AFI 99-103 for definitions of terms relating to the requirements and T&E processes.

A common understanding of terms is essential to effectively implement this instruction. In some cases, definitions from multiple sources are offered where they may be of value. Italicized words and notes in brackets are not part of the formal definition and are offered only for clarity.

For additional terms and definitions not listed below, See Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, and Air Force Doctrine Document (AFDD) 1-2, *Air Force Glossary*, which contain standardized terms and definitions for DOD and Air Force use.

Acquisition Category (ACAT)—Acquisition categories determine the level of review, decision authority, and applicable T&E policies and procedures. They facilitate decentralized decision making and execution, and compliance with statutorily imposed requirements. ([DOD 5000.2](#), Enclosure 2)

Acquisition Center of Excellence (ACE)—Established by the Air Force to serve as the transformation agent for delivering capabilities to the operator by instilling radical changes to the acquisition process and removing obstacles that inhibit that transformation. All actions of the ACE will be directed towards

speeding the delivery of required, affordable, capable products that enable the transformation and increase credibility in program promises.

Acquisition Program Baseline (APB)—Prescribes the key cost, schedule, and cost constraints in the phase succeeding the milestone for which it was developed. (CJCSI 3170.01) Also See Key Performance Parameter (KPP).

Advanced Concept Technology Demonstration—A demonstration of the military utility of a significant new technology and an assessment to clearly establish operational utility and system integrity. (CJCSI 3170.01)

Air Force Component Acquisition Executive (CAE)—The Assistant Secretary of the Air Force (Acquisition), ASAF(A), is designated by the Secretary of the Air Force Order 101.1, Authority and Responsibilities of the Assistant Secretary of the Air Force (Acquisition), June 5, 1999, as the CAE and is accountable to the Secretary of the Air Force (SECAF) for all domestic and international Air Force acquisition functions, including Foreign Military Sales programs, sometimes referred to as the Service Acquisition Executive (SAE).

Capability Based Testing—A mission-focused methodology of verifying that a capabilities solution will enable operations at an acceptable level of risk. Capabilities-oriented evaluations are emphasized throughout system testing in addition to traditional evaluations of system performance measured against specification-like requirements. It requires understanding Concept of Operations and involves developing T&E strategies and plans to determine whether a capability solution option merits fielding.

Commander's Intent—A method designed to help subordinates understand the larger context of their actions. The purpose of providing intent is to allow subordinates to exercise judgment and initiative—to depart from the original plan when the unforeseen occurs -- in a way that is consistent with higher commanders' aims. A commander's clear, concise articulation of the purpose(s) behind tasks assigned to a subordinate.

Commercial and Nondevelopmental Items (CaNDI)—The Federal Acquisition Regulation (FAR) 2.101 (abridged) defines a commercial item as any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and has been sold, leased, or licensed to the general public. A Non-Developmental item is defined as: (1) any previously developed item of supply used exclusively for governmental purposes by a government entity; or (2) any item described in (1) that requires only minor modifications or modifications of a type customarily available in the commercial marketplace. See DOD Handbook SD-2, *Buying Commercial and Non-Developmental Items: A Handbook*.

Commodity Council—A commodity council focuses on developing strategic acquisition strategies for a specific type of product or service. Councils include representatives from all affected major commands, functional areas, and the Air Staff. These councils develop and implement strategies to pool procurement requirements and resources in order to leverage combined buying power for volume discounts. These actions reduce overall costs and result in more favorable contract terms and conditions. Reference (AFFARS 5307.104-93), *Air Force Procedures for Commodity Councils*.

Component Acquisition Executive (CAE)—The official responsible for systems acquisitions within a DOD component. The Assistant Secretary of the Air Force (Acquisition) ASAF (A) is the CAE for non-space related programs. The Undersecretary of the Air Force is the CAE for ICBM programs and Air Force managed DOD Space Acquisition Programs (programs named in the Space virtual Major Force Program (vMFP))

Course of Action (COA)—The COA is a planning and decision process that culminates in a MAJCOM decision. The COA includes a series of alternative program choices developed by the MDA or his designate, presented to a MAJCOM commander and that once a specific COA is selected, becomes a formal agreement between the MDA and the operator (MAJCOM commander) that clearly articulates the performance, schedule, and cost expectations of the program. The COA provides the basis for the Acquisition Strategy, TDS during the Technology Development Phase. The COA becomes the basis for the LCMP.

Critical Program Information (CPI)—In an acquisition program, may be classified information or controlled unclassified information about technologies, processes, applications, or end items that if disclosed or compromised, would degrade system combat effectiveness, compromise the program or system capabilities, shorten the expected combat effective life of the system, significantly alter program direction, or require additional research, development, test, and evaluation resources to counter the impact of the compromise

Designated Science & Technology Information (DS&TI)—Is research and technology classified information and research and technology controlled unclassified information identified by RDT&E site directors to receive specialized CI and security support

Evaluation Criteria—Standards by which the accomplishment of required technical and operational effectiveness and/or suitability characteristics, or resolution of operational issues, may be addressed. (Defense Acquisition Guidebook)

Evolutionary Acquisition (EA)—Evolutionary acquisition is the preferred DOD strategy for rapid acquisition of mature technology for the user. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. The objective is to balance needs and available capability with resources, and to put capability into the hands of the user quickly. The success of the strategy depends on consistent and continuous definition of requirements, and the maturation of technologies that lead to disciplined development and production of systems that provide increasing capability towards a materiel concept. The approaches to achieve evolutionary acquisition require close collaboration between the user, tester, and developer. (DOD 5000.2)

Execution Chain—As used in this directive, the execution chain is: PM → PEO →MDA/CAE. Functions as the chain-of-command for program (mission) execution.

Fielding—The decision to acquire and/or release a system to operators in the field.

Increment—A militarily useful and supportable operational capability that can be effectively developed, produced or acquired, deployed, and sustained. Each increment of capability will have its own set of threshold and objective values set by the user. (CJCSI 3170.01 and AFI 10-601) **NOTE:** An increment may contain multiple spirals. Generally, only increments are fielded according to DOD 5000.2, CJCSI 3170.01, and AFI 99-103).

Incremental Development—In this Evolutionary Acquisition process, a desired capability is identified, an end-state requirement is known, and that requirement is met over time by developing several increments, each dependent on available mature technology. (DOD 5000.2)

Information Support Plan (ISP)—The identification and documentation of information needs, infrastructure support, IT and NSS interface requirements and dependencies focusing on net-centric, interoperability, supportability and sufficiency concerns. (DODI 4630.8)

Initial Operational Test and Evaluation (IOT&E)—See Operational Test and Evaluation.

Integrated Test Team (ITT)—A cross-functional team of empowered representatives from multiple disciplines and organizations and co-chaired by operational testers and the program manager. The ITT is responsible for developing the T&E strategy and TEMP, assisting the acquisition community with T&E matters, and guiding the development of integrated test plans. There is one ITT for each acquisition program. (AFI 99-103)

Key Performance Parameters (KPPs)—Those minimum attributes or characteristics considered most essential for an effective military capability. KPPs are validated by the Joint Requirements Oversight Council (JROC) for JROC Interest documents, by the Functional Capabilities Board (FCB) for Joint Impact documents, and by the DoD Component for Joint Integration or Independent documents. The Capability Development Document (CDD) and the Capability Production Document (CPD) KPPs are included verbatim in the Acquisition Program Baseline (APB). See CJCSI 3170.01 for details.

Life Cycle Management Plan (LCMP)—The LCMP is the PM's plan detailing the management approach and acquisition strategy for acquiring a system.

Live Fire Test and Evaluation (LFT&E)—The firing of actual weapons (or surrogates if actual weapons are not available) at components, subsystems, sub-assemblies, and/or full-up, system-level targets or systems to examine personnel casualties, system vulnerabilities, or system lethality; and the evaluation of the results of such testing. (Defense Acquisition Guidebook, Appendix 3)

Logistics Supportability—The degree to which the planned logistics support allows the system to meet its availability and wartime usage requirements. Planned logistics support includes the following: test, measurement, and diagnostic equipment; spare and repair parts; technical data; support facilities; transportation requirements; training; manpower; and software. (Defense Acquisition Guidebook)

Logistics Support Elements—A composite of all support considerations necessary to ensure the effective and economical support of a system for its life cycle. It is an integral part of all other aspects of system acquisition and operation. (JP 1-02) **NOTE:** The ten sustainment elements are: manpower, personnel, maintenance, supportability, systems engineering, data management, supply, transportation, configuration management and training. (AFI 63-107, *Integrated Product Support Planning and Assessment*)

Low-Rate Initial Production (LRIP)—Production of the system in the minimum quantity necessary (1) to provide production-configured or representative articles for operational tests pursuant to §2399; (2) to establish an initial production base for the system; and (3) to permit an orderly increase in the production rate for the system sufficient to lead to full-rate production upon the successful completion of operational testing. **NOTE:** The LRIP quantity should not exceed 10 percent of the total number of articles to be produced as determined at the Milestone B decision. (Title 10 §2400)

Maintainability—The capability of an item to be retained in or restored to a specified condition when maintenance is performed by personnel having specified skill levels, using prescribed procedures and routines, at each prescribed level of maintenance and repair. (Defense Acquisition Guidebook)

Multi-Service—Involving two or more military Services or DOD components.

Objective—An operationally significant increment above the threshold. An objective value may be the same as the threshold when an operationally significant increment above the threshold is not significant or useful. For certain parameters (e.g., weight, radar cross-section, mean time to repair, etc.) the objective may be a negative increment (i.e., below threshold value). (AFI 10-601)

Operational Assessment (OA)—An analysis of potential operational effectiveness and suitability made

by an independent operational test activity, with operator support as required, on other than production systems. The focus of an operational assessment is on significant trends noted in development efforts, programmatic voids, areas of risk, adequacy of requirements, and the ability of the program to support adequate operational testing. Operational assessments may be made at any time using technology demonstrators, prototypes, mockups, engineering development models, or simulations, but will not substitute for the dedicated OT&E [sic] necessary to support full production decisions. (Defense Acquisition Guidebook)

Operational Effectiveness—Measure of the overall ability to accomplish a mission when used by representative personnel in the environment planned or expected for operational employment of the system considering organization, doctrine, tactics, supportability, survivability, vulnerability and threat. (CJCSI 3170.01)

Operational Suitability—The degree to which a system can be placed and sustained satisfactorily in field use with consideration given to availability, compatibility, transportability, interoperability, reliability, wartime usage rates, maintainability, safety, human factors, habitability, manpower, logistics, supportability, logistics supportability, natural environmental effects and impacts, documentation, and training requirements. (CJCSI 3170.01)

Operational Test and Evaluation (OT&E)—**1.** The field test, under realistic combat conditions, of any item of (or key component of) weapons, equipment, or munitions for the purpose of determining the effectiveness and suitability of the weapons, equipment, or munitions for use in combat by typical military users; and the evaluation of the results of such test. (Title 10 §139(a)(2)) **2.** Testing and evaluation conducted in as realistic an operational environment as possible to estimate the prospective system's operational effectiveness and operational suitability. In addition, OT&E provides information on organization, personnel requirements, doctrine, and tactics. It may also provide data to support or verify material in operating instructions, publications, and handbooks.

Operational Testing—A generic term describing the test and evaluation options and levels of effort available to an operational test organization. (AFI 99-103)

Operator—Refers to the operating command which is the primary command operating a system, subsystem, or item of equipment. Generally applies to those operational commands or organizations designated by Headquarters, US Air Force to conduct or participate in operations or operational testing, interchangeable with the term "using command" or "user." In other forums the term "warfighter" or "customer" is often used. (AFI 10-601)

Oversight—Senior executive-level monitoring and review of programs to ensure compliance with policy and attainment of broad program goals.

Oversight Program—A program on the OSD T&E Oversight List for DT&E, LFT&E, and/or OT&E. The list includes all ACAT I (MDAP) programs, ACAT II (major system) programs, and any other programs selected for OSD T&E Oversight. These programs require additional documentation and have additional review, reporting, and approval requirements. (AFI 99-103)

Performance Based Contracting—Performance-based contracting means structuring all aspects of an acquisition around the purpose of the work to be performed with the contract requirements set forth, in clear, specific, and objective terms with measurable outcomes as opposed to either the manner by which the work is to be performed or broad and imprecise statements of work. (FAR 2.101)

Performance Based Logistics—Product support strategy where PM develops and implements

performance-based logistics strategies that optimize total system availability while minimizing cost and logistics footprint. Trade-off decisions involving cost, useful service, and effectiveness shall consider corrosion prevention and mitigation. Sustainment strategies shall include the best use of public and private sector capabilities through government/industry partnering initiatives, in accordance with statutory requirements. (DOD 5000.1 – also see AFI 63-107)

Product Group Manager (PGM)—The single manager who is charged with all cost, schedule, and performance aspects of a product group which is a compilation of several specific products and is in direct support of one or more weapon system or military systems.

Program Manager (PM)—1. The designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs. The PM shall be accountable for credible cost, schedule, and performance reporting to the MDA. (DOD 5000.1) 2. For this AFI, applies collectively to, product group managers, single managers, acquisition program managers, and weapon system managers. Operating as the single manager, the PM has total life cycle system management authority. **NOTE:** This AFI uses the term “PM” for any designated person in charge of acquisition activities prior to MS A (i.e., before a technology project is officially designated an acquisition program).

Programmatic Environment, Safety, and Occupational Health (ESOH) Evaluation (PESHE)— A required program office document that describes the PM's strategy for integrating across the ESOH disciplines and into systems engineering using MIL-STD-882D System Safety methodology; provides a repository for ESOH risk data; provides a method for tracking progress, and includes a compliance schedule for NEPA (42 U.S.C. 4321-4370d and Executive Order 12114, references (x) and (az)). The PESHE is developed for MS B, and updated for MS C, for the Full-Rate Production Decision Review, and as required throughout the life of the program.

Program Protection Planning (PPP)—An acquisition and logistics managed program process that identifies a system's critical program elements, threats, and vulnerabilities throughout the system's life cycle. Program Protection Planning is a comprehensive effort that encompasses all security, technology transfer, intelligence, and counterintelligence processes through the integration of embedded system security processes, security manpower, equipment, and facilities.

Prototype—1. A model suitable for evaluation of design, performance, and production potential. (JP 1-02) **NOTE:** The Air Force uses prototypes during development of a technology or acquisition program for verification or demonstration of technical feasibility. Prototypes may not be representative of the final production item.

Reliability—The capability of a system and its parts to perform its mission without failure, degradation, or demand on the support system. (Defense Acquisition Guidebook)

Research, Development, Test and Evaluation (RDT&E)—The type of funding appropriation (3600) intended for research, development, test and evaluation efforts. (DOD 7000.14-R, Vol 2A, and AFI 65-601, Vol I) **NOTE:** The term “research and development” (R&D) broadly covers the work performed by a government agency or the private sector. “Research” is the systematic study directed toward gaining scientific knowledge or understanding of a subject area. “Development” is the systematic use of the knowledge and understanding gained from research for the production of useful materials, devices, systems, or methods. RDT&E includes all supporting test and evaluation activities.

Responsible Test Organization (RTO)—The lead government developmental test organization on the ITT that is qualified to conduct and responsible for overseeing DT&E. (AFI 99-103)

Risk—**1.** A measurable probability of consequence associated with a set of conditions or actions. (*Glossary, Defense Acquisition Acronyms and Terms*) **2.** Probability and severity of loss linked to hazards. (JP 1-02) **3.** A subjective assessment made regarding the likelihood or probability of not achieving a specific objective by the time established with the resources provided or requested. It also refers to overall program risk. (Defense Acquisition Guidebook)

Seamless Verification—A concept for structuring test and evaluation (T&E) to more effectively support the requirements and acquisition processes so new capabilities are brought to operators more quickly. Seamless verification promotes using integrated testing procedures coupled with tester collaboration in early requirements definition and system development activities. It shifts T&E away from the traditional "pass-fail" model to one of providing continuous feedback and objective evaluations of system capabilities and limitations throughout system development. (AFI 99-103)

Specification—A document intended primarily for use in procurement which clearly and accurately describes the essential technical requirements for items, materials, or services, including the procedures by which it will be determined that the requirements have been met. Specifications may be prepared to cover a group of products, services, or materials, or a single product, service, or material, and are general or detail specifications. (*Glossary, Defense Acquisition Acronyms and Terms*)

Spiral—One subset or iteration of a development program within an increment. Multiple spirals may overlap or occur sequentially within an increment. **NOTE:** Generally, spirals are not fielded according to DOD 5000.2, CJCSI 3170.01, and (AFI 99-103).

Spiral Development—In this Evolutionary Acquisition process, a desired capability is identified, but the end-state requirements are not known at program initiation. Those requirements are refined through demonstration and risk management; there is continuous user feedback; and each increment provides the user the best possible capability. The requirements for future increments depend on feedback from users and technology maturation. (DOD 5000.2)

Stakeholders—Key players in the acquisition process as determined by the operator, PM, and MDA.

Sustainment—**1.** The provision of personnel, logistic, and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective. (JP 1-02) **2.** The Service's ability to maintain operations once forces are engaged. (AFDD 1-2) **3.** Activities that sustain systems during the operations and support phases of the system life cycle. Such activities include any investigative test and evaluation that extends the useful military life of systems, or expands the current performance envelope or capabilities of fielded systems. Sustainment activities also include T&E for modifications and upgrade programs, and may disclose system or product deficiencies and enhancements that make further acquisitions necessary.

Technology Director (TD)—The Air Force Research Laboratory (AFRL) is one laboratory made up of multiple technology directorates. Each technology directorate is led by a single "Director," who is responsible for the S&T programs that occur at their particular directorate including their geographically separated units.

Technology Development Strategy (TDS)—Focuses specifically on the activities of the Technology Development Phase. Where feasible, (TDS) should also discuss activities associated with the post-program-initiation phases of the planned acquisition. The (TDS) precedes the formal Acquisition Strategy and is required for Milestone A. It should be updated at subsequent milestones and subsumed into the Acquisition Strategy.

Technology Protection Plan (TPP)—A TPP is developed by research organizations that identify S&T programs requiring increased protection. The TPP identifies AFRL directorate-level Designated Science & Technology Information (DS&TI) and provides a management plan, outlining the measures necessary to protect the effectiveness of that technology while within TD control.

Technology Readiness Assessment (TRA)—An objective assessment of the maturity and readiness of critical technologies. A technology is considered critical if the technology or its application is either new or novel and the system being acquired depends upon the technology to meet operational requirements in development, production, or operation.

Testable—The attribute of being measurable with available test instrumentation and resources. **NOTE:** Testability is a broader concept indicating whether T&E infrastructure capabilities are available and capable of *measuring* the parameter. The difference between testable and measurable may indicate a test limitation. Some requirements may be *measurable* but not *testable* due to T&E infrastructure shortfalls, insufficient funding, safety, or statutory or regulatory prohibitions.

Test and Evaluation (T&E)—The act of generating empirical data during the research, development or sustainment of systems, and the creation of information through analysis that is useful to technical personnel and decision makers for reducing design and acquisition risks. The process by which systems are measured against requirements and specifications, and the results analyzed so as to gauge progress and provide feedback.

Test and Evaluation Master Plan (TEMP)—Documents the overall structure and objectives of the T&E program. It provides a framework within which to generate detailed T&E plans and it documents schedule and resource implications associated with the T&E program. The TEMP identifies the necessary developmental, operational, and live-fire test activities. It relates program schedule, test management strategy and structure, and required resources to: COIs; critical technical parameters; objectives and thresholds documented in the requirements document; and Milestone decision points. (DAU's *Test and Evaluation Management Guide*) **NOTE:** Where the word TEMP appears in this AFI, the SAMP/LCMP T&E annex is also implied. The TEMP may be included in a SAMP/LCMP as a T&E annex.

Test and Evaluation Strategy—The overarching integrated T&E plan for the entire acquisition program that describes how operational capability requirements will be tested and evaluated in support of the acquisition strategy. Developed prior to Milestone A, the T&E strategy addresses modeling and simulation, risk and risk mitigation, development of support equipment, and identifies how system concepts will be evaluated against mission requirements, among other things. The T&E strategy is a precursor to the test and evaluation master plan. (AFI 99-103)

Threshold—A minimum acceptable operational value below which the utility of the system becomes questionable. For certain parameters (e.g., weight, radar cross-section, mean time to repair, etc.) it is a maximum value above which systems performance or utility diminishes.

User—See Operator.

Verification, Validation, and Accreditation (VV&A)—VV&A is a continuous process in the life cycle of a model or simulation as it gets upgraded or is used for different applications. (AFI 16-1002)

— **Verification:** Process of determining that M&S accurately represent the developer's conceptual description and specifications.

— **Validation:** Rigorous and structured process of determining the extent to which M&S accurately represents the intended real world phenomena from the perspective of the intended M&S use.

— **Accreditation:** The official determination that a model or simulation is acceptable for use for a specific purpose.

Vulnerability—The characteristic of a system that causes it to suffer a definite degradation (loss or reduction of capability to perform its designated mission) as a result of having been subjected to a certain (defined) level of effects in an unnatural (man-made) hostile environment. Vulnerability is considered a subset of survivability. (Defense Acquisition Guidebook, Appendix 3)

Waiver—A decision not to conduct OT&E required by statute or policy.

Attachment 2

SPECIAL INTEREST AREAS

Copies of the following documents can be found at: <http://www.e-publishing.af.mil/pubs/maj-com.asp?org=AF>

Doc No.	Title
	DoD – Related
DOD Directives	
<u>DoDD 2060.1</u> http://www.dtic.mil/whs/directives/corres/html/20601.htm	<i>Implementation of, and Compliance with, Arms Control Agreements</i>
<u>DoD 4140.1-R</u> http://www.dtic.mil/whs/directives/corres/html/41401r.htm	<i>DoD Material Management Regulation</i>
<u>DoDI 4630.8</u> http://www.dtic.mil/whs/directives/corres/html/46308.htm	<i>Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)</i>
<u>DoDD 5000.1</u> http://www.dtic.mil/whs/directives/corres/html/50001.htm	<i>The Defense Acquisition System</i>
<u>DoDI 5000.2</u> http://www.dtic.mil/whs/directives/corres/html/50002.htm	<i>Operation of the Defense Acquisition System</i>
<u>DoDD 5200.39</u> http://www.dtic.mil/whs/directives/corres/html/520039.htm	<i>Security Intelligence, and Counterintelligence Support to Acquisition Program Protection</i>
<u>DoDD 8500.1</u> http://www.dtic.mil/whs/directives/corres/html/85001.htm	<i>Information Assurance</i>
<u>DoDI 8500.2</u> http://www.dtic.mil/whs/directives/corres/html/85002.htm	<i>Information Assurance (IA) Implementation</i>
CJCSI Directives	
CJCSI 3170.01 http://www.dtic.mil/cjcs_directives/cdata/unlimit/3170_01.pdf	<i>Joint Capabilities Integration and Development System</i>
CJCSI 6212.01 http://www.dtic.mil/cjcs_directives/cdata/unlimit/6212_01.pdf	<i>Interoperability and Supportability of Information Technology and National Security Systems</i>
SAF/AQ - Policy Homepage	
http://www.safaq.hq.af.mil/mil/policy/	
Life Cycle Management Guide (LCMP) http://www.safaq.hq.af.mil/contracting/affars/5307/info-guidance	
AF ASP Secretariat http://www.safaq.hq.af.mil/contracting/toolkit/asp/index.html	<i>AF Acquisition Strategy Panel Secretariat</i>

Doc No.	Title
	DoD – Related
Air Force Systems Engineering Plan Guide, 10 January 2005 http://cse.afit.edu	
Defense Acquisition Guidebook http://akss.dau.mil/dag/DoD5000.asp?view=document	
DOD Handbook SD-2	<i>Commercial and Non-Developmental Items Handbook</i>
Contractor Supported Weapon System User Guide https://www.il.hq.af.mil/ilg/ilgp/csws/default.htm	
Earned Value http://www.acq.osd.mil/pm/	<i>Earned Value</i>
Joint Technical Architecture https://disonline.disa.mil/DISR/index.jsp	<i>Joint Technical Architecture</i>
OSD(AT&L) IBR handbook http://www.acq.osd.mil/pm/curentpolicy/IBR_Guide_April_2003.doc	<i>The Program Managers' Guide to the Integrated Baseline Review Process</i>
OSD Systems Engineering Plan Preparation Guide, 22 Dec 2004 http://www.acq.osd.mil/ds/se/publications.htm	
10 - Operations	
AFPD 10-6 http://www.e-publishing.af.mil/pubfiles/af/10/afpd10-6/afpd10-6.pdf	<i>Mission Needs & Operational Requirements</i>
AFI 10-601 http://www.e-publishing.af.mil/pubfiles/af/10/afi10-601/afi10-601.pdf	<i>Capabilities Based Requirements Development</i>
11 – Flying Operations	
AFI 11-301, Vol 1 http://www.e-publishing.af.mil/pubs/publist.asp?puborg=AF&series=11	<i>Aircrew Life Support (ALS) Program</i>
16 - Operations and Support	
AFI 16-601 http://www.e-publishing.af.mil/pubfiles/af/16/afi16-601/afi16-601.pdf	<i>Implementation of, and Compliance With, Arms Control Agreements</i>
AFPD 16-10 http://www.e-publishing.af.mil/pubfiles/af/16/afpd16-10/afpd16-10.pdf	<i>Modeling & Simulation (M&S) Management</i>

Doc No.	Title
	DoD – Related
<u>AFI 16-1002</u> http://www.e-publishing.af.mil/pubfiles/af/16/afi16-1002/afi16-1002.pdf	<i>Modeling & Simulation (M&S) Support To Acquisition</i>
21 - Maintenance	
<u>AFI 21-101</u> http://www.e-publishing.af.mil/pubs/publist.asp?puborg=AF&series=21	<i>Aerospace Equipment Maintenance Management</i>
32 - Civil Engineering	
<u>AFI 32-7086</u> http://www.e-publishing.af.mil/pubfiles/af/32/afi32-7086/afi32-7086.pdf	<i>Hazardous Materials Management</i>
33 - Series	
<u>AFI 33-118</u> http://www.e-publishing.af.mil/pubfiles/af/33/afi33-118/afi33-118.pdf	<i>Radio Frequency Spectrum Management</i>
<u>AFPD 33-2</u> http://www.e-publishing.af.mil/pubfiles/af/33/afpd33-2/afpd33-2.pdf	<i>Information Protection</i>
<u>AFI 33-202</u> http://www.e-publishing.af.mil/pubfiles/af/33/afi33-202v1/afi33-202v1.pdf	<i>Network and Computer Security</i>
36- Series	
<u>AFI 36-2251</u> http://www.e-publishing.af.mil/pubfiles/af/36/afi36-2251/afi36-2251.pdf	<i>Management of Air Force Training Systems</i>
51 - Law	
<u>AFPD 51-12</u> http://www.e-publishing.af.mil/pubfiles/af/51/afpd51-12/afpd51-12.pdf	<i>Alternative Dispute Resolution [ADR], and Air Force ADR Reference Book</i>
<u>AFI 51-402</u> http://www.e-publishing.af.mil/pubfiles/af/51/afi51-402/afi51-402.pdf	<i>Weapons Review</i>
61 - Scientific Research & Development	
<u>AFPD 61-1</u> http://www.e-publishing.af.mil/pubfiles/af/61/afpd61-1/afpd61-1.pdf	<i>Management of Science and Technology</i>

Doc No.	Title
	DoD – Related
<u>AFI 61-105</u> http://www.e-publishing.af.mil/pubfiles/af/61/afi61-105/afi61-105.pdf	<i>Planning for Science and Technology</i>
63 - Capabilities Based Acquisition System	
<u>AFPD 63-1</u> http://www.e-publishing.af.mil/pubfiles/af/63/afpd63-1/afpd63-1.pdf	<i>Capability-Based Acquisition System</i>
<u>AFMAN 63-119</u> http://www.e-publishing.af.mil/pubfiles/af/63/afman63-119/afman63-119.pdf	<i>Certification of System Readiness for Dedicated Operational Test and Evaluation</i>
<u>AFPD 63-11 and AFI 63-1101</u> http://www.e-publishing.af.mil/pubfiles/af/63/afpd63-11/afpd63-11.pdf http://www.e-publishing.af.mil/pubfiles/af/63/afi63-1101/afi63-1101.pdf	<i>Modification System and Modification Management</i>
<u>AFPD 63-12 & AFI 63-1201</u> http://www.e-publishing.af.mil/pubfiles/af/63/afpd63-12/afpd63-12.pdf http://www.e-publishing.af.mil/pubfiles/af/63/afi63-1201/afi63-1201.pdf	<i>Assurance of Operational Safety, Suitability & Effectiveness, and Assurance of Operational Safety, Suitability & Effectiveness</i>
<u>AFPD 63-17</u> http://www.e-publishing.af.mil/pubfiles/af/63/afpd63-17/afpd63-17.pdf	<i>Technology and Acquisition Systems Security Program Protection</i>
<u>AFI 63-107</u> http://www.e-publishing.af.mil/pubfiles/af/63/afi63-107/afi63-107.pdf	<i>Integrated Product Support Planning</i>
<u>AFI 63-111</u> http://www.e-publishing.af.mil/pubfiles/af/63/afi63-111/afi63-111.pdf	<i>Contract Support for Systems and Equipment</i>
90 - Command Policy	
<u>AFPD 90-11</u> http://www.e-publishing.af.mil/pubfiles/af/90/afpd90-11/afpd90-11.pdf	<i>Planning System</i>
<u>AFI 90-901</u> http://www.e-publishing.af.mil/pubfiles/af/90/afi90-901/afi90-901.pdf	<i>Operational Risk Management</i>
91 - Safety	

Doc No.	Title
	DoD – Related
<u>AFMAN 91-201</u> http://www.e-publishing.af.mil/pubfiles/af/91/afman91-201/afman91-201.pdf	<i>Explosives Safety Standards</i>
<u>AFI 91-202</u> http://www.e-publishing.af.mil/pubfiles/af/91/afi91-202/afi91-202.pdf	<i>US Air Force Mishap Prevention Program</i>
MIL-STD-882D, <i>DOD Standard Practice for System Safety</i> https://safety.army.mil/pages/guidance/882D.pdf	MIL-STD-882D, <i>DOD Standard Practice for System Safety</i>
99 - Test and Evaluation	
<u>AFPD 99-1</u> http://www.e-publishing.af.mil/pubfiles/af/99/afpd99-1/afpd99-1.pdf	<i>Test and Evaluation</i>
<u>AFI 99-103</u> http://www.e-publishing.af.mil/pubfiles/af/99/afi99-103/afi99-103.pdf	<i>Capabilities Based Test and Evaluation</i>

SPACE	
<u>National Space Security (NSS) 03-01</u> http://www.safus.hq.af.mil/usa/usap/space/documents/nss_acq_policy03-01%2027%20Dec_signed_update.pdf	<i>National Security Space (NSS) Acquisition Policy 03-01</i>

Attachment 3

FORMAT FOR NEW START VALIDATION

In accordance with AFI 63-101, I have reviewed AFI 65-601 & DoD FMR Vol III Chap 6 and confirmed the following prior to approving this action (one of the following must be answered yes and acknowledged (signed-off) by the Program Manager and Program's Chief Financial Officer (CFO) or Program Control Chief): If not a single item can be checked off as YES, then the Program Office shall contact their respective PEM/CD at the HAF as delineated in CH 2, Par 2.3.1 of this AFI in order to being/coordinate New Start Notification package

- | | | |
|---|-----|----|
| 1. <u>Program is budgeted and appropriated.</u> Effort was budgeted in the President's Budget Submission and is consistent with program direction provided by Defense Appropriations Conference language and/or marks. Fiscal year of President's Budget Submission must match fiscal year of funds being used. <i>(If conditions delineated above are satisfied, then this effort is not a new start and as such requires no additional Congressional notification/approval. Mark Yes in the column to the right and sign off at bottom of sheet as required).</i> | YES | NO |
| 2. <u>Program is a Congressional Add.</u> Effort was not requested in the President's Budget Submission, but funds were appropriated by the Defense Appropriations Conference and effort is consistent with program direction provided by Defense Appropriations Conference language and/or marks. Fiscal year of marks must match fiscal year of funds being used. <i>(If conditions delineated above are satisfied, then this effort is not a new start and requires no additional Congressional notification/approval. Mark Yes in the column to the right and attach SAF/AQX or AF/ILS Program Authorization (PA) and sign-off at bottom of sheet as required).</i> | YES | NO |
| 3. <u>Program is an out-of-cycle New Start.</u> Effort is an out-of-cycle new start for which Congressional notification/approval has been accomplished as reflected on the Secretary of the Air Force funds release document. <i>(If conditions delineated above have been verified, mark Yes in the column to the right and attach SAF/AQX or AF/ILS Program Authorization (PA) supporting this action).</i> | YES | NO |
| 4. SAF/HAF has advised this Program Office that a new start notification is not required <i>(Mark Yes in the column to the right and attach supporting documentation from SAF/AQX or AF/FMB).</i> | YES | NO |

 Program Manager (Name/Grade)

 Signature & Date

 CFO/Program Control Chief (Name/Grade)

 Signature and Date

Department of Defense Appropriations Act 2000, Public Law 106-79 Sec. 8096. None of the funds in this Act may be used to compensate a DoD employee who initiates a New Start program without notification to OSD and the Congressional Defense Committees, as required by DoD financial management regulations.