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ACQUISITION AND SUSTAINMENT LIFE CYCLE MANAGEMENT

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This publication implements Air Force Policy Directive (AFPD) 63-1/20-1, *Acquisition and Sustainment Life Cycle Management*. It establishes the Integrated Life Cycle Management (ILCM) guidelines, policies and procedures for Air Force (AF) personnel who develop, review, approve, or manage systems, subsystems, end-items and services (referred to as programs throughout this document) procured under DOD Instruction (DODI) 5000.02, *Operation of the Defense Acquisition System.* Additionally, this AF Instruction (AFI) implements the policies in Department of Defense Directive (DODD) 5000.01, *The Defense Acquisition System*, DODI 5000.02, (collectively called the DOD 5000 acquisition series), Office of Management and Budget (OMB) Circular A-11, *Preparation, Submission, and Execution of the Budget* , DODI 2010.4, *U.S. Participation in Certain NATO Groups Relating to Research, Development*

Production, and Logistics Support of Military Equipment, DODI 3020.41, *Contractor Personnel Authorized to Accompany the U. S. Armed Forces*, DODI 3100.8, *The Technical Cooperation Program (TTCP)*, DODI 4151.19, *Serialize Item Management (SIM) for Material Maintenances*, DODI 4151.20, *Depot Maintenance Core Capabilities Determination Process*, DODI 4151.21, *Public-Private Partnerships for Depot Level Maintenance*, DODI 4151.22, *Condition Based Maintenance Plus (CBM+)*, DODD 4650.1, *Policy for Management and Use of the Electromagnetic Spectrum*, DODD 3020.49, *Orchestrating, Synchronizing, and Integrating Program Management of Contingency Acquisition Planning and Its Operational Execution*, DODD 3222.3, *DOD Electromagnetic Environmental Effects (E3) Program*, DODD 5000.52, *Acquisition, Technology, and Logistics Workforce Education, Training, and Career Development Program*, DODI 5000.66, *Operation of the Defense Acquisition, Technology, and Logistics Workforce Education, Training, and Career Development Program*, DODI 5000.67, *Prevention and Mitigation of Corrosion on DOD Military Equipment and Infrastructure (as applicable to non-facilities)*, DODD 5250.01, *Management of Signature Support Within the Department of Defense*, DODI 8320.04, *Item Unique Identification (IUID) Standards for Tangible Personal Property*, 10 USC §2330 - *Procurement of Services*, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01, *Joint Capabilities Integration and Development System*, and Chairman of the Joint Chiefs of Staff Manual (CJCSM) 3170.01, *Operation of the Joint Capabilities Integration and Development System*, and CJCSI 3312.01, *Joint Military Intelligence Requirements Certification*.

This AFI must be used in conjunction with AFI 10-601, *Capabilities-Based Requirements Development*, AFI 63-1201, *Life Cycle Systems Engineering*, AFI 99-103, *Capabilities-Based Test and Evaluation* and AFI 20-101, *Logistics Strategic Planning Procedures.*

Statutory law, Federal, DOD or Joint Staff (JS) directives take precedence. If there is any conflicting guidance between this AFI and DOD 5000-series, CJCSI 3170.01, CJCSM 3170.01, the latter (DOD 5000-series, or CJCSI/M 3170.01) shall take precedence.

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This publication applies to all military and civilian Air Force personnel including major commands (MAJCOMS), direct reporting units (DRU) and field operating agencies (FOA); other individuals or organizations as required by binding agreement or obligation with the Department of the Air Force (DAF). This publication applies to Air Force Reserve Command (AFRC) Units. This publication applies to the Air National Guard (ANG). **For nuclear systems or related components ensure the appropriate nuclear regulations are applied. Nuclear components governed by joint Department of Defense-Department of Energy agreements are not covered by this instruction.**

SUMMARY OF CHANGES

Interim Change (IC) #1 removes reference to National Security Space (NSS) Acquisition Policy 03-01 and Key Decision Points. This change updates or provides additional guidance on life cycle risk management, Materiel Development Decisions (MDD), milestone certification, Depot Source of Repair (DSOR), Expectation Management Agreements (EMA), acquisition of services, corrosion prevention, networks and information integration requirements, and acquisition corps requirements. It also updates guidance concerning considerations for logistics sustainability decisions based on DODI 3020.41, *Contractor Personnel Authorized to Accompany the U. S. Armed Forces* and implements DODD 3020.49. This change includes multiple administrative changes to correct format issues, correct typographical errors, and update organization name changes. A margin bar indicates newly revised material.

Chapter 1—ACQUISITION AND SUSTAINMENT LIFE CYCLE MANAGEMENT **10**

1.1. Purpose of AFI 63-101, Acquisition and Sustainment Life Cycle Management. .. 10

1.2. Applicability. 10

1.3. The Integrated Life Cycle Management (ILCM) Framework. 10

Figure 1.1. Integrated Life Cycle Management Framework. 11

1.4. The ILCM Tenets. 11

1.5. Acquisition and Sustainment Life Cycle Framework. 12

Figure 1.2. Integrated Life Cycle Execution Framework (Acronyms in Atch 1) 14

1.6. Acquisition and Sustainment Organizations. 16

1.7. Integrated Life Cycle Management Chain of Authority. 16

Chapter 2—ROLES AND RESPONSIBILITIES **21**

2.1. Purpose. 21

2.2. Assistant Secretary of the Air Force for Acquisition (SAF/AQ) will: 21

2.3. Under Secretary of the AF (SAF/US) will: 24

2.4. Deputy Assistant Secretary, Contracting (SAF/AQC) will: 25

2.5. Deputy Assistant Secretary (Science, Technology and Engineering), (SAF/AQR) will: 26

2.6. Deputy Assistant Secretary for Acquisition Integration (SAF/AQX) will: 26

2.7. SAF/AQ Capability Directors (CD) will: 27

2.8. Assistant Secretary of the AF, Financial Management and Comptroller (SAF/FM) will: 28

2.9. Deputy Under Secretary of the AF for International Affairs (SAF/IA) will: 28

2.10. Assistant Secretary of the AF for Installations, Environment and Logistics (SAF/IE) will: 29

2.11. Director, Space Acquisition (SAF/USA) will: 29

2.12. HQ AF, Director of Test and Evaluation (AF/TE) will: 30

2.13. DCS, Manpower and Personnel (AF/A1) will: 30
2.14. DCS, Intelligence, Surveillance and Reconnaissance (AF/A2) will: 30
2.15. DCS, Operations, Plans and Requirements (HQ AF/A3/5) will: 30
2.16. DCS, Logistics, Installations and Mission Support (HQ AF/A4/7) will: 31
2.17. HQ AF, Strategic Plans and Programs (HQ AF/A8) will: 32
2.18. Chief of Warfighting Integration and Chief Information Officer (CIO) (SAF/XC and AF/A6) will: 32
2.19. Commander, AF Materiel Command (AFMC/CC) will: 33
2.20. Commander, AF Research Laboratory (AFRL/CC) will: 36
2.21. Commander, AF Space Command (AFSPC/CC) will: 37
2.22. Operational Commands and Field Operating Agencies (FOA). 39
2.23. Commander, Air Education and Training Command (AETC/CC) will: 40
2.24. Commander, AF Operational Test and Evaluation Center (AFOTEC/CC) will: .. 40
2.25. AF Human Systems Integration Office (AFHSIO) will: 40
2.26. Program Executive Officers (PEO) will: 41
2.27. Program Executive Officer, Combat and Mission Support (AFPEO/CM) will: ... 42
2.28. Designated Acquisition Officials (DAO) will: 42
2.29. Program Managers (PM), including System Program Managers (SPM), will: 44
2.30. Acquisition Centers of Excellence (ACE) will: 47
2.31. HQ AF, Chief of Safety (AF/SE) will: 48

Chapter 3—ACQUISITION AND SUSTAINMENT LIFE CYCLE READINESS 49

Section 3A—Acquisition and Sustainment Processes 49
3.1. Acquisition and Sustainment Processes Overview. 49
3.2. Milestone Decision Authority (MDA) Decisions, Certifications, and Reviews. ... 49
3.3. Capability Based Requirements Development. 53
3.4. Mission Assignment. 54
3.5. Evolutionary Acquisition (EA). 54
Figure 3.1. Evolutionary Acquisition Approach. 55
3.6. Management of System of Systems (SoS)/Family of System (FoS). 56
3.7. Air Force Review Boards (AFRB)/Acquisition Strategy Panels (ASP). 56
3.8. Configuration Steering Board (CSB). 57
3.9. Design Reviews (Preliminary Design Review (PDR)/Critical Design Review (CDR)) Reports and Assessments. 57

3.10. AF Non-Space Acquisition Program Master List (APML). 57
3.11. Sustainment Program Master List (SPML). 57
3.12. Request for Reclassification of Acquisition Programs Categorization. 58
3.13. Life Cycle Acquisition and Sustainment Reporting. 58
3.14. Life Cycle Expectation Management. 59
3.15. Total Ownership Costs (TOC). 59
3.16. Risk-Based Program Management and Decision Making. 60
3.17. Earned Value Management (EVM). 64
3.18. Performance Based Contracting. 65
3.19. Selection of Contractors for Subsystems and Components. 65
3.20. New Start Notification. 66
3.21. Modification Management. 67
3.22. Program Terminations. 68
3.23. Materiel Fielding. 68
3.24. Post Implementation Review (PIR). 69
3.25. System/Program Transfer. 70
3.26. Portfolio Transfer. 71
3.27. Urgent Operational Needs. 71
3.28. Warfighter Rapid Acquisition Process. 71
3.29. Joint Capability Technology Demonstration. 71
3.30. Intelligence Supportability Requirements. 72
3.31. Independent Assessments. 73
3.32. Nuclear Weapon Related Acquisition. 74

Section 3B—Acquisition Programmatic Requirements 74

3.33. Acquisition Programmatic Requirements Overview. 74
3.34. Documentation. 74
3.35. Materiel Development Decision (MDD). 75
3.36. Courses of Action (COA). 79
3.37. Program Management Directive (PMD). 80
3.38. Product Support Considerations and Strategic Sourcing Determination. 80
3.39. Life Cycle Management Plan (LCMP). 80
3.40. The Acquisition Decision Memorandum (ADM). 85
3.41. Acquisition Program Baseline (APB). 85

3.42. Program Management Agreement (PMA)/Expectations Management Agreement (EMA). 86
3.43. Technology Development Strategy (TDS). 87
3.44. Test and Evaluation (T&E) Strategy. 88
3.45. Test and Evaluation Master Plan (TEMP). 89
3.46. Integrated Master Plans (IMP) and Integrated Master Schedules (IMS). 89
3.47. Reliability, Availability, Maintainability, and Supportability (RAMS) Analysis and Documentation. 89
3.48. Risk Management Plans. 91
Table 3.1. Translation of MIL-STD-882D Risk Matrix to the OSD Risk Management Guide Matrix. 93
3.49. Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE). 93
3.50. Modeling and Simulation (M&S). 94
3.51. Contractor Incentives. 94
3.52. Lead Systems Integrator (LSI) Limitations. 94
3.53. Inherently Governmental Functions Determinations. 95
3.54. Commercial Item Purchase. 95
3.55. Buy American Act (BAA). 95
3.56. Berry Amendment and 10 USC §2533b Compliance. 95
3.57. Leasing. 96
3.58. Serialized Item Management (SIM). 96
3.59. Military Equipment Valuation (MEV). 98
3.60. Government Cost Estimates. 99
3.61. Cost Realism. 99
3.62. Budget Stability. 100
3.63. Management Information Systems and Program Control Metrics. 100
3.64. Unliquidated Obligations (ULO). 100
3.65. Use of Specifications and Standards. 101
3.66. Program Protection Planning. 101
3.67. Information Support Plans (ISP). 103
3.68. Corrosion Prevention and Control Planning. 105
3.69. System Survivability. 105
3.70. Arms Control Compliance. 106
3.71. Foreign Military Sales (FMS) and Security Assistance (SA). 107

3.72. Management of AF Training Systems. 107
3.73. End Use Certificates. 108
Section 3C—Life Cycle Systems Engineering Requirements 111
3.74. Life Cycle Systems Engineering (SE). 111
3.75. AF SE Management Responsibilities. 111
3.76. Systems Engineering Plan (SEP). 111
3.77. Environment, Safety, and Occupational Health (ESOH). 112
3.78. Operational Safety, Suitability, and Effectiveness (OSS&E)/Mission Assurance . 112
3.79. Human Systems Integration (HSI). 112
3.80. Maintenance Engineering/Sustaining Engineering (ME/SE). 112
3.81. Configuration Management (CM). 112
3.82. Product and System Integrity. 112
3.83. Aircraft Information Program. 113
3.84. Software Engineering. 114
3.85. Value Engineering (VE). 114
3.86. Systems Engineering in Integrated Master Plan (IMP) and Integrated Master Schedule (IMS) 114
3.87. System Compatibility and Interoperability. 114
Section 3D—Sustainment Planning Requirements 115
3.88. Product Support/Sustainment Planning Overview. 115
3.89. Depot Source of Repair (DSOR). 116
3.90. Data Rights. 121
3.91. Engineering Data. 122
3.92. Technical Orders (TO). 124
3.93. Packaging, Handling, Storage, and Transportation (PHS&T). 129
3.94. Contractor Logistics Support. 129
3.95. Industrial Base Constraints. 133
3.96. Support Equipment/Automated Test Systems (SE/ATS). 133
3.97. Weapon System Support Program (WSSP). 135
3.98. Air Force Global Logistics Support Center (AFGLSC). 135
3.99. Depot Maintenance / Sustainment Cost Reporting (50/50). 135
3.100. Public-Private Partnerships. 136
Table 3.2. Depot Maintenance Partnership Authorities. 137

3.101. Centralized Asset Management (CAM). 138
3.102. Provisioning. 139
3.103. Performance Based Logistics (PBL). 139
Figure 3.2. Performance Based Logistics Relationships. 140
Figure 3.3. PBL Levels 141
3.104. Demilitarization, Disposal, Reclamation, and Migration. 144
Section 3E—Networks and Information Integration Requirements. 145
3.105. Networks and Information Integration Requirements Overview. 145
3.106. Clinger-Cohen Act (CCA). 145
3.107. Information Technology Systems Registration and Support of AF IT Portfolio Management Process. 146
3.108. Management of Defense Business Systems. 146
3.109. Directed Use of Joint Integrated Architectures. 147
3.110. The Global Information Grid (GIG) Integrated Architecture. 147
3.111. Internet Protocol Version 6 (IPv6). 148
3.112. Interoperability of IT and NSS. 148
3.113. Net-Ready Key Performance Parameter (NR-KPP). 148
3.114. Integrated Architecture Data. 149
3.115. Information Assurance (IA). 150
3.116. Information Technology Lean and SISSU Processes. 150
3.117. Certification and Accreditation. 151
3.118. Spectrum Management. 152
3.119. Joint Tactical Radio System (JTRS) Waivers/Notifications. 153
3.120. AF IT Standards Waiver Process. 153
3.121. AF Automated Computer Program Identification Number System. 153
3.122. Privacy. 154
3.123. Cyberspace Infrastructure Planning System (CIPS). 154
3.124. Section 508. 154
Chapter 4—ACQUISITION OF SERVICES 155
4.1. Purpose. 155
4.2. Acquisition of Services Objectives. 155
4.3. Acquisition of Services Applicability. 155
4.4. Acquisition of Services Responsibilities. 156

Table 4.1. Services Acquisitions within the US Air Force. 157
4.5. Services Requirements Determination and Approval: 158
Table 4.2. Requirements for Services within the US Air Force. 158
4.6. Services Acquisition Review and Approval 159
4.7. Data Collection. 160
4.8. AFPEO/CM A 160
4.9. Initial Contract Performance Review. 161
4.10. Annual Execution Reviews. 161
4.11. Acquisition of Services Definitions. 162
4.12. Points of contact for additional information: 163

Chapter 5—ACQUISITION WORKFORCE MANAGEMENT AND PROFESSIONAL DEVELOPMENT 164

5.1. Purpose. 164
5.2. Acquisition Workforce. 164
5.3. Responsibilities and Authorities. 164
5.4. Acquisition Workforce Management. 165
5.5. AF Acquisition Professional Development Program (APDP). 166

Chapter 6—POLICY COORDINATION, REVIEW, AND WAIVERS 171

6.1. Integrated Life Cycle Management Publication Coordination. 171
6.2. Waivers. 171
6.3. Changes. 171
6.4. Information Collection, Records, and Forms. 171

Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING DOCUMENTATION 173

Attachment 2—TITLE 10, UNITED STATES CODE, ARMED FORCES 218

Attachment 3—FORMAT FOR NEW START VALIDATION 221

Attachment 4—DESCRIPTIONS OF ENGINEERING DATA SERVICE CENTER (EDSC) CATEGORIES 222

Attachment 5—INDEX 223

Chapter 1

ACQUISITION AND SUSTAINMENT LIFE CYCLE MANAGEMENT

1.1. Purpose of AFI 63-101, Acquisition and Sustainment Life Cycle Management. The purpose of this instruction is to implement direction from the Secretary of the Air Force (SECAF) as outlined in Air Force Policy Directive (AFPD) 63-1/20-1, Acquisition and Sustainment Life Cycle Management. The primary mission of the Integrated Life Cycle Management (ILCM) Enterprise is to provide seamless governance, transparency and integration of all aspects of weapons systems acquisition and sustainment management. This instruction must be used in conjunction with Air Force Instruction (AFI) 10-601, *Capabilities-Based Requirements Development*, AFI 99-103, *Capabilities Based Test and Evaluation*, AFI 63-1201, *Life Cycle Systems Engineering*, and AFI 20-101, *Logistics Strategic Planning Procedures*, to provide an integrated framework for the implementation of ILCM.

1.2. Applicability. This instruction applies to the management of all programs identified on the Acquisition Program Master List (APML) and Sustainment Program Master List (SPML), space programs, designated weapon systems cited in AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems*, and systems, activities, and projects that support warfighter capability planning and validated needs.

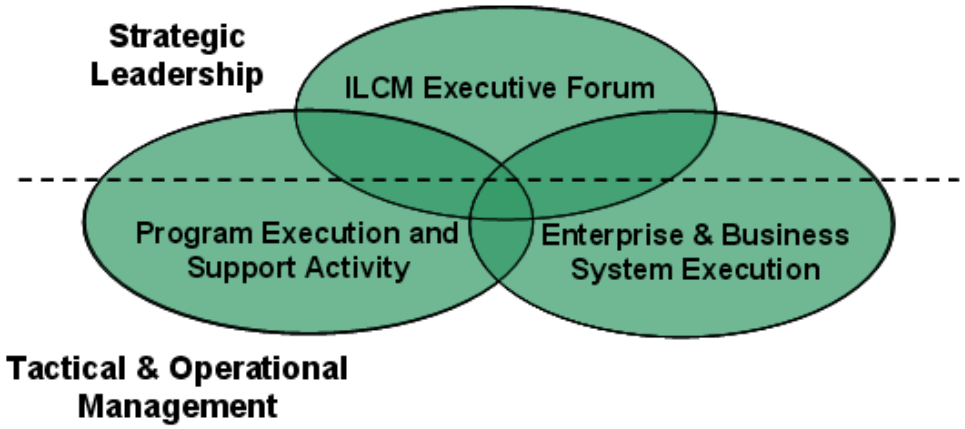
1.2.1. Unless otherwise specified, for the purpose of this document, the term Program will be used to identify any program on the APML or SPML, space systems, designated product groups, and other specified system or subsystem activities including Special Access Programs unless otherwise excluded. Due to their unique nature requiring additional security measures, Special Access Programs shall follow guidance regarding reporting, coordination, and use of specified tools, systems, and databases only to the extent practicable and as coordinated with Assistant Secretary of the AF (Acquisition), Directorate of Special Programs (SAF/AQL) and approved by the Milestone Decision Authority (MDA).

1.2.2. Unless otherwise specified, for the purpose of this document, the term Program Manager (PM) will be synonymous with System Program Manager (SPM), or Product Group Manager (PGM) as applicable to a program.

1.3. The Integrated Life Cycle Management (ILCM) Framework. ILCM is the overarching system of concepts, methods, and practices used by the Air Force to effectively manage systems from need identification through final disposal and shall be applied to Air Force acquisition and sustainment activities. ILCM shall be composed of seamless and transparent governance, core and enabling processes to acquire and sustain systems, subsystems, end-items, and services to satisfy validated needs. The goals of ILCM are to recapitalize Air Force capabilities through maximum acquisition cycle time efficiency, provide agile support that will optimize fielded capabilities and the supply chain, minimize the logistics footprint, and reduce total ownership cost. The ILCM framework as illustrated in **Figure 1.1** consists of: 1) an ILCM Executive Forum; 2) enterprise and business system execution; and 3) program execution and support. The framework provides an overarching management structure that integrates across systems, portfolios, and management levels in order to effectively influence and execute life cycle decisions in response to capability shortfalls. The six ILCM tenets outlined below provide the governing management principles necessary for the execution of the ILCM Framework. These

tenets as applied to the framework are primary contributors to satisfying the Air Force Strategic Objective "Recapitalizing and modernizing our aging aircraft, satellites, and equipment … to optimize the military utility of our systems to better meet 21st Century challenges." *(Air Force Strategic Plan, 2006-2008, page 7)*

Figure 1.1. Integrated Life Cycle Management Framework.



1.4. The ILCM Tenets. The six tenets of ILCM are life cycle planning and integration; expectation management; collaborative and continuous requirements management; life cycle systems engineering; technology planning and insertion; and continual, integrated testing. Enabling principles necessary for successful application of the ILCM tenets are listed below and detailed in AFPAM 63-128, *Guide to Acquisition and Sustainment Life Cycle Management [when published]*.

1.4.1. **Life Cycle Planning and Integration.** ILCM ensures the program is actively managed throughout its entire lifespan, from conception and requirements generation, to technology and product development and testing, and throughout manufacturing and field operations until the system or product is retired and disposed. Three major parallel management and execution structures support life cycle planning and integration: Capabilities Based Requirements Development, System Acquisition and Sustainment and Capabilities Based Test and Evaluation. This execution framework provides a roadmap for the ILCM stakeholders and process owners to use in the integrated management of programs across their entire life cycle.

1.4.2. **Expectation Management.** Expectation management establishes program credibility and accountability through formal, recurring communication among stakeholders and is the cornerstone of the ILCM process. Significant reasons to actively manage expectations are 1) developers, users, and sustainers often interpret requirements differently, 2) program changes occur throughout development and are not always documented which impacts cost, schedule, performance, and risk which affect end-item deliverables, 3) different users may have different views of probability of success, and 4) expectations can drift apart over time through leadership/personnel changes.

1.4.3. **Collaborative and Continuous Requirements Management.** Collaborative requirements development requires the user, acquirer, enterprise architect, developer, tester, and sustainer to operate as one team. Continuous management is monitoring and controlling

the weapon system requirements baseline throughout the program life cycle. While the user is responsible for identifying the required capability, this must be accomplished in a collaborative environment with all stakeholders in order to understand and communicate the "art of the possible." The Joint Capabilities Integration and Development System (JCIDS) process identified in CJCSI 3170.01, *Joint Capabilities Integration and Development System*, is closely integrated with the acquisition process and exists to identify, develop, and validate defense-related requirements.

1.4.4. **Life Cycle Systems Engineering.** Life cycle systems engineering is the overarching process governing the transition from a stated capability need to an operationally effective and suitable system. Systems engineering addresses architecture, requirements development and management, design, technical management and control, and test and evaluation (T&E) / verification and validation (V&V). It is the integrating mechanism for balanced solutions. The systems engineering process begins early in concept definition and covers all efforts across all life cycle phases, to include sustainment and disposal.

1.4.5. **Technology Planning and Insertion.** Technology planning and insertion is the timely maturation and incorporation of relevant technology throughout the program life cycle to ensure an operationally effective and suitable system. Technology planning and the assessment of technology readiness levels include consideration of such factors as reliability, producibility, testability, sustainability and operational performance. Successful technology planning and insertion as part of program life cycle management results in higher fidelity time phased requirements with a more realistic schedule and improved cost estimates.

1.4.6. **Continual, Integrated Testing.** Continual, integrated testing structures T&E to reduce the time it takes to field effective and suitable systems by providing qualitative and quantitative information to decision makers throughout the program's life cycle. Integrated testing minimizes the distinction 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 and fielding with a high probability of success.

1.5. Acquisition and Sustainment Life Cycle Framework. This section summarizes the key acquisition and sustainment activities that occur in each phase of the ILCM framework. A multi-functional collaborative effort between the requirements, acquisition and sustainment, and test communities is necessary for weapon system life cycle management; as illustrated in Figure 1.2. This section provides an overview of key acquisition and sustainment activities throughout the life cycle management phases. Details on key acquisition and sustainment activities can be found in the body of this document and other supporting documentation. For more information regarding requirements, test and evaluation, systems engineering and logistics activities, refer to AFI 10-601, *Capabilities-Based Requirements Development*, AFI 99-103, *Capabilities Based Test and Evaluation*, AFI 63-1201, *Life Cycle Systems Engineering*, and AFI 20-101, *Logistics Strategic Planning Procedures*. For more information regarding information technology management and compliance refer to the applicable 33 series documents describing information technology (IT) acquisition and Chief Information Officer (CIO) compliance requirements.

1.5.1. User Needs and Technology Opportunities. The purpose of this timeframe is to identify and validate mission needs and to examine promising technology concepts.

Involvement of the acquisition and sustainment community, especially systems engineering subject matter experts, starts with participation in the requirements development process and pre-materiel solution analysis phase activities described in AFI 10-601, CJCSI 3170.01 *Joint Capabilities Integration and Development System*, the JCIDS Manual, and CJCSI 6212.01, *Interoperability and Supportability of Information Technology and National Security Systems*. Key activities include conducting capabilities based assessments (CBA), identifying capability gaps and shortfalls, developing the Analysis of Alternatives (AoA) Study Plan, and the

1.5.1.1. Identifying Capability Gaps and Shortfalls. The user, with support from the acquisition and sustainment community, identifies capability shortfalls or the need to develop a new technology that will enhance war fighting capability. The process used to identify shortfalls is governed by CJCSI 3170.01, the JCIDS Manual, and AFI 10-604, *Capabilities-Based Planning*.

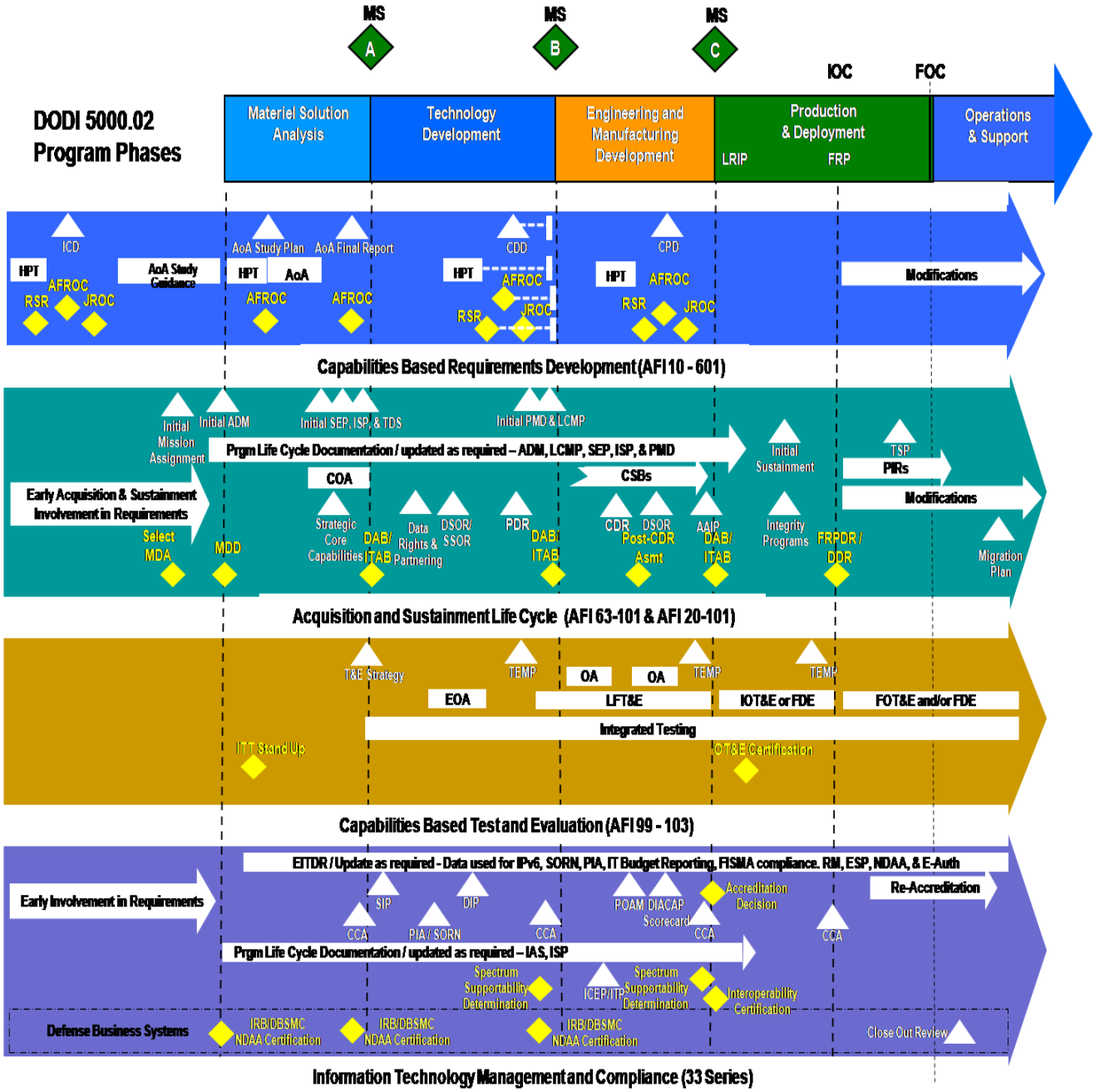
1.5.1.2. Technology Concepts. Promising technologies are identified from all foreign and domestic sources, including government laboratories and centers, academia, and the commercial sector. Initial science and technology investments support the maturation of concepts allowing for introduction of materiel solutions into the weapon system life cycle.

1.5.1.3. DELETED.

1.5.1.4. Analysis of Alternatives (AoA) Study Guidance. The AoA Study Guidance, developed by the Lead Operational MAJCOM or other sponsoring office and supported by the Office of Aerospace Studies (OAS), describes how materiel alternative solutions will be analyzed during the Materiel Solution Analysis phase.

1.5.1.5. **Initial Capabilities Document (ICD) Development.** Acquisition and sustainment personnel participate in the development of the requirements strategy through the requirements development High Performance Team (HPT) process. At the Requirements Strategy Review (RSR), the ICD sponsor must identify the proposed AF funding strategy for the Materiel Solution Analysis and Technology Development Phases.

Figure 1.2. Integrated Life Cycle Execution Framework (Acronyms in Atch 1)



1.5.1.6. Both the ICD and the AoA Study Guidance must be presented to the MDA for entry into the Materiel Solution Analysis Phase. By this point in the process, acquisition and sustainment personnel should have a thorough understanding of the users' desired capabilities, and users should have a realistic understanding of what is technically possible. The sustainment community, in collaboration with the user, needs to address reliability, availability and maintainability to ensure life cycle mission capability and supportability.

1.5.1.7. When the ICD is completed and validated, the user will forward a copy to the MDA and HQ AFMC (for non-space programs). The MDA, working with appropriate stakeholders, determines if there is sufficient information to proceed with a Materiel Development Decision (MDD) and entry into Materiel Solution Analysis.

1.5.1.8. Mission assignment usually takes place at this point, including identification of a PM who will have responsibility from issuance of the Materiel Development Decision until the effort is officially established as a program at Milestone (MS) B.

1.5.1.9. The MDA decision to begin Materiel Solution Analysis DOES NOT mean that a new acquisition program has been initiated.

1.5.2. Materiel Solution Analysis Phase. The purpose of this phase is to assess potential materiel solutions and to satisfy the phase-specific entry criteria for the next program milestone designated by the MDA. This phase begins with the Materiel Development Decision. Entrance into this phase depends upon an approved ICD resulting from the analysis of current mission performance and an analysis of potential concepts. Activities during this phase are in preparation for a MS-A decision.

1.5.2.1. Analysis of Alternatives (AoA). AoAs document the rationale for identifying a preferred solution or solutions to the capability shortfalls. The MDA approves the AoA study guidance, but the operational Major Command (MAJCOMs) (or other sources) are responsible for AoA execution. The AoAs should clearly articulate performance, schedule, and cost expectations as well as initial risk assessment of the program to ensure expectations are known and agreed to up front.

1.5.3. Technology Development The Technology Development starts at MS-A when the MDA has approved the TDS. The purpose of this phase is to reduce technology risk, determine the appropriate set of technologies to be integrated into a full system, demonstrate critical technology elements (CTE) on prototypes, and complete a preliminary design. Activities during this phase are in preparation for a MS-B decision.

1.5.3.1. Assessing Technology Readiness. Technology is required to be demonstrated in a relevant environment to be considered mature enough to use for product development after MS-B. The analysis to show this is documented in a Technology Readiness Assessment (TRA).

1.5.3.2. DELETED.

1.5.4. Engineering and Manufacturing Development (EMD). The EMD starts after approval of MS-B. The purpose of the EMD is to develop an increment of capability; complete system integration; validate producibility and manufacturing processes; posture for life cycle sustainment; ensure affordability; and demonstrate system integration, interoperability, safety, and utility. Activities during these phases are in preparation for a MS-C decision.

1.5.4.1. Integrated System Design. Guided by the CDD and SEP, this effort defines system and system-of-systems functionality and interfaces, completes hardware and software detailed design, reduces system-level risk and establishes product baselines for all configuration items. This effort culminates in the system-level Critical Design Review (CDR). Successful completion of the CDR ends Integrated System Design and

continues the EMD phase into System Capability and Manufacturing Process Demonstration.

1.5.4.2. Final Depot Source of Repair (DSOR). An important outcome of the demonstration phase will be the generation of the final DSOR. A DSOR decision for all depot-level maintenance for hardware and software, with special attention to Title 10 USC §2464 (Core Capability) and Title 10 USC §2466 (50/50 Requirements), is essential to the life cycle sustainment strategy. DSOR decisions and programmed resources are required prior to MS-C for new depot capabilities.

1.5.4.3. Capability Production Document (CPD) Development. The CPD provides firm, measurable, and testable requirements necessary to support production and sustainment of an increment of capability. The ICD, AoA/ Courses of Action (COA), CDD, testing results, and critical design reviews guide CPD development.

1.5.5. Production and Deployment. The Production and Deployment starts after approval of MS-C. The purpose of the Production and Deployment phase is to demonstrate operational effectiveness and suitability and to achieve an operational capability. During this phase several key decisions and activities will take place in preparation for the Full Rate Production (FRP) decision and subsequent entry into the Operations and Support Phase.

1.5.5.1. Materiel Fielding. The materiel fielding process integrates asset production and support activities conducted by the program office with asset acceptance/beddown, deployment, operation, and sustainment planning activities conducted by the user. The PM leads this process, with significant support from the user and sustainment communities for field and depot support. The objective is to ensure an orderly transition of assets from the production line to the user's operating location(s).

1.5.6. Post Implementation Review (PIR). The purpose of the PIR is to compare actual system performance to program expectations and mission realities based upon the operational environment and Concept of Operation (CONOPS). PIR activities may be accomplished in the context of typical program acquisition activities or system operational processes. The initial PIR is held after IOC but prior to Full Operational Capability (FOC).

1.5.6.1. Full Sustainment. Full sustainment is achieved when all the requirements of the sustainment strategy are in place to satisfy the established mission requirements for full operational capability (FOC) of the fielded system in accordance with (IAW) the LCMP. The PM in collaboration with the Lead Command and AFMC documents the full sustainment criteria in the LCMP and/or Materiel Fielding Plan (MFP).

1.6. Acquisition and Sustainment Organizations. Various organizations facilitate the acquisition and sustainment of weapon systems through their life cycle. **Figure 1.3** identifies the relationships of primary Air Force organizations involved in ILCM acquisition and sustainment activities. While the acquisition and "command" lines of authority are distinct, they often reside simultaneously with the same individuals. It is the responsibility of each commander/director to ensure separate authority lines are kept clean and processes are streamlined. (**NOTE: Figure 1.3** only indicates organizational relationships and is NOT a formal command or organization structure diagram.)

1.7. Integrated Life Cycle Management Chain of Authority. All Air Force (AF) programs shall have a clear and unambiguous governance chain of authority. The management structure

shall be streamlined and characterized by short, clearly defined lines of responsibility, authority, and accountability. Acquisition management responsibility for all Acquisition Category (ACAT) programs flows from the Service Acquisition Executive to the Program Executive Officer or Designated Acquisition Official to the accountable Program Manager. In no case shall there be more than two levels of review between the Program Manager and the Milestone Decision Authority (MDA) in accordance with DODD 5000.01, DODI 5000.02, and AFPD 63-1/20-1. Organizational leaders that are between the accountable Program Manager and the MDA/Program Executive Officers (PEO)/Designated Acquisition Official (DAO) need to stay informed, but must not hinder direct and open access.

1.7.1. To support ILCM execution, all programs must establish clear lines of program execution authority within the management organizational structures (program execution and organizational command.) There are two primary programmatic execution chains in which the majority of AF programs are managed – one for programs primarily in acquisition and one for programs primarily in sustainment as shown in Figure 1.4. As part of program planning, documentation and reporting, the specific lines of programmatic execution authority for each program shall be established and documented in the LCMP.

1.7.2. Milestone Decision Authority (MDA). The MDA is the DODD 5000.01 designated individual with overall responsibility for a program. The MDA shall have the authority to approve entry of a program into the next phase of the life cycle process, shall certify MS criteria (for Major Defense Acquisition Programs (MDAP)), and shall be accountable for cost, schedule, and performance reporting to higher authority, including Congressional reporting. The MDA shall ensure that programs are structured to 1) provide the needed capability to the warfighter in the shortest practical time, 2) balance risk, 3) ensure affordability and supportability, and 4) provide adequate information for decision making. In order to provide the appropriate level of command review, the MDA shall be the Defense Acquisition Executive, the Service Acquisition Executive (SAE) or be a general officer (GO) or member of the Senior Executive Service (SES) with qualifications equivalent to those outlined for a PEO in the Defense Acquisition Workforce Improvement Act (DAWIA) and Chapter 5 of this instruction.

1.7.2.1. Milestone Decision Authority (MDA). The MDA is the DODD 5000.01 designated individual with overall responsibility for a program. The MDA shall have the authority to approve entry of a program into the next phase of the life cycle process and shall be accountable for cost, schedule, and performance reporting to higher authority, including Congressional reporting. The MDA shall ensure that programs are structured to 1) provide the needed capability to the warfighter in the shortest practical time, 2) balance risk, 3) ensure affordability and supportability, and 4) provide adequate information for decision making. In order to provide the appropriate level of command review, the MDA shall be the Defense Acquisition Executive, the Service Acquisition Executive (SAE) or be a general officer (GO) or member of the Senior Executive Service (SES) with qualifications equivalent to those outlined for a PEO in the Defense Acquisition Workforce Improvement Act (DAWIA) and Chapter 5 of this instruction.
1.7.2.1.1. The Defense Acquisition Executive (DAE) shall act as the MDA and have overall authority and responsibility for the management of all Major Defense Acquisition Program (MDAP) and Major Automated Information System (MAIS) programs identified as Acquisition Category (ACAT) ID and ACAT IAM.

1.7.2.1.2. The SAE shall have overall authority and responsibility for the management of AF acquisition programs, including all programs and pre-Milestone B (MS B) activities.

1.7.2.1.3. The SAE shall act as the MDA for programs identified as ACAT IC, ACAT IAC and ACAT II or special interest programs

1.7.2.1.4. At the SAE's discretion, MDA responsibilities for ACAT II and ACAT III programs may be delegated to a Program Executive Officer (PEO). The PEO may further delegate MDA responsibilities for ACAT III programs as indicated in Paragraph 1.7.2.3.3 below.

1.7.2.2. The Commander, Air Force Materiel Command (AFMC/CC) shall have overall authority and responsibility for the management of non-space programs identified on the SPML. The Commander, Air Force Space Command (AFSPC/CC) shall have overall authority and responsibility for the management of space sustainment activities.

1.7.2.3. Program Executive Officers (PEO), Designated Acquisition Officials (DAO), and Air Logistic Centers Commanders (ALC/CC) are responsible for total life cycle management of their assigned portfolios and shall ensure collaboration across the ILCM framework. They are responsible for, and have authority to accomplish assigned portfolio/program objectives for development, production, and sustainment to meet warfighters' operational needs.

1.7.2.4. Program Executive Officers (PEO) shall provide dedicated executive program management of assigned, delegated programs.

1.7.2.4.1. The PEO shall not have other command responsibilities unless waived by Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L). The PEO may be dual-hatted as a product center commander when the provisions of DODI 5000.02, Paragraph E10.3.c are waived by USD (AT&L). However, the primary responsibility of a dual-hatted product center commander shall remain PEO program execution management.

1.7.2.4.2. All personnel assigned as a PEO shall meet the Key Leadership Position (KLP) qualifications and tenure requirements identified in Chapter 5 of this instruction.

1.7.2.4.3. PEOs may delegate ACAT III MDA responsibilities to an appropriately qualified Deputy for Acquisition. PEOs shall notify the AFMC/CC or AFSPC/CC and the SAE of all such delegations. The SAE shall have the authority to rescind such delegations. No further delegation is allowed.

1.7.2.4.4. Unless waived or specifically directed by the SAE, the delegated MDAs shall comply with the same PEO position requirements, and execute the same authorities and responsibilities of a MDA.

1.7.2.5 Designated Acquisition Officials (DAO) shall provide dedicated executive program management of assigned, non-space, delegated ACAT II and ACAT III programs at ALCs expending investment dollars

1.7.2.5.1. DAOs shall have overall responsibility for a program as MDA and perform the associated responsibilities for an MDA. Executive management and MDA responsibilities for the DAO are under SAE oversight

1.7.2.5.2. All personnel assigned as a DAO shall meet the DAWIA requirements of a PEO including Key Leadership Position (KLP) qualifications and tenure requirements identified in Chapter 5 of this instruction

1.7.2.5.3. DAOs selection is approved by the SAE in coordination with AFMC/CC. The ALC/CC will be designated as the DAO if the ALC/CC meets the DAWIA requirements of a PEO. If the ALC/CC does not meet the DAWIA PEO position qualification requirements, the SAE will confer with AFMC/CC and determine if the DAO authorities/responsibilities for that

ALC should be delegated to an appropriate senior officer or civilian at the ALC who meets the DAWIA requirements of a PEO, or transferred to the appropriate product center PEO(s). Under exceptional conditions, the SAE will consider a waiver to the DAWIA requirements.

1.7.2.6. All programs on the APML and SPML, space systems, and AFPD 10-9, Lead Command Designation and Responsibilities for Weapon Systems, designated weapon systems shall be assigned only one program manager (SPM or PM) as defined in AFPD 63-1/20-1.

1.7.2.6.1. All ACAT programs shall be assigned to a PEO or DAO.

1.7.2.6.2. Each weapon system designated in AFPD 10-9 shall be assigned to a SPM located at a product center or logistics center. Other systems not designated as AFPD 10-9 weapon systems may have a SPM at the discretion of the SAE, AFSPC/CC or AFMC/CC.

1.7.2.6.3. Programs on the APML or SPML and space programs that are not assigned an SPM will be assigned a PM.

1.7.2.6.4. PMs for programs on the APML or SPML and space programs which directly support a system managed by an SPM shall support and take guidance from the SPM to meet overall system and Air Force objectives

1.7.2.7. System Program Manager/Program Manager (SPM/PM). The SPM or PM is the DODD 5000.01 designated individual with the responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user‘s operational needs. ACAT I, ACAT IA, and non-delegated ACAT II SPMs and PMs shall be chartered by the SAE and the PEO. Delegated ACAT II and III SPMs or PMs shall be chartered by the PEO or DAO. Additional guidance and examples of PM charters can be found in AFPAM 63-128

1.7.2.7.1. The SPM or PM shall be accountable for credible cost, schedule, and performance reporting to the MDA and have total life cycle management responsibilities for and authority to accomplish objectives as chartered. The single, accountable SPM or PM of record should be clearly identified in data reporting systems such as the System Metrics and Reporting Tool (SMART).

1.7.2.7.2. The SPM or PM shall have an ILCM reporting chain of command based on Figure 1.4. The chain shall be documented in the LCMP at time of program initiation and updated as required.

1.7.2.8. Product Group Manager (PGM). The PGM is assigned when directed through a Headquarters Air Force (HAF) issuance or at the discretion of the AFMC/CC or AFSPC/CC for specified product groups. PGMs shall have overall management responsibilities of specified product groups and support overall AF, system, and program objectives as managed by a SPM or PM.

1.7.2.9. Staff Organizations. Staffs at all levels exist to advise ILCM leadership/management and assist them with their responsibilities. Councils, committees, advisory groups, panels, and staffs provide advice and recommendations to the PM, PGM, SPM, DAO, PEO, MDA, SAE and/or DAE who are accountable for the overall program results. These staff elements will provide objective inputs to the program decision process but will not exercise decision-making authority on programmatic matters.

1.7.2.10. Functional Support. The PM leads the program organization in executing the mission. Each functional representative within the program, irrespective of location or

whether that person supports the program on a full-time or part-time basis, should report to and take program direction through the PM. Functional staffs external to the program office are not accountable for program execution; they are responsible for providing trained human resources and advice to the PM. When applicable, the PM shall include the following positions when documenting the execution chain of authority. Other functional positions may be included at the PM‘s discretion.

1.7.2.10.1. System Sustainment Manager (SSM). The SSM is an individual with functional responsibility for the sustainment portion of a system‘s life cycle and in support of a PM. SSM responsibilities may include product support integration. Product support integration consists of integrating the activities of the product support providers as well as intra-system and inter-system integration with supporting systems, subsystems, end-items, components and facilities.

1.7.2.10.2. Development System Manager (DSM). The DSM is an individual with functional responsibility for the development portion of a system‘s life cycle and in support of a PM.

1.7.2.10.3. Chief/Lead Engineer. The Chief/Lead Engineer is the PM‘s designated technical authority in the disciplined execution of the Systems Engineering (SE) process, including development of the Systems Engineering Plan (SEP). The Chief/Lead Engineer is responsible to the PM to establish, implement, manage, and control SE activities necessary to develop and field robust products and systems that exhibit attributes of system security, Operational Safety, Suitability, and Effectiveness (OSS&E), and Mission Assurance.

1.7.2.10.4. Other Functional Support. Other functional support consists of individuals performing program execution activities in support of a PM. This includes, but is not limited to, engineering, financial management, contracting, legal review and analysis, logistics, sustainment, intelligence, test, and project management.

1.7.2.11. In all programs, supported and supporting command relationships will be developed to best facilitate management of each weapon system at all points in the life cycle.

Chapter 2

ROLES AND RESPONSIBILITIES

2.1. Purpose. This chapter defines the roles and responsibilities for organizations responsible for managing and executing the acquisition and sustainment life cycle. Additional complementary functional and organizational roles and the details to execute the roles and responsibilities may be found throughout this document, in AFI 99-103, AFI 10-601, AFI 63-1201, AFI 20-101, and other publications referenced in Attachment 1. For more information regarding information technology management and compliance refer to the applicable 33 series documents describing IT acquisition and CIO compliance requirements.

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

2.2.1. Serve as the Service Acquisition Executive (SAE) as delegated for non-space AF programs and execute responsibilities as the senior corporate operating official for non-space acquisition. Execute SAE responsibilities outlined in the DOD 5000-series for execution of non-space AF acquisitions. For purposes of defining SAE responsibilities, this includes lifecycle acquisition of non-space systems and services processes from pre-Milestone A to weapon system retirement. This includes research, development, test, evaluation, production, and delivery of new systems, or significant modifications to existing systems. Management responsibility flows directly, without intervention, from the SAE and Milestone Decision Authority to the Program Executive Officers (PEOs) to the System Program Managers (SPMs).

2.2.2. Serve and execute the responsibilities as the AF Senior Procurement Executive overseeing all AF acquisition activities.

2.2.3. Provide direction for acquisition transformation across the AF.

2.2.4. Approve programs for listing on the Acquisition Program Master List (APML).

2.2.5. Approve the selection of personnel to fill non-space Key Leadership Positions (KLP) including Program Executive Officers (PEO) Program Managers (PM), and Deputy Program Managers for acquisition category (ACAT) I, and ACAT IA programs, and Program Managers for ACAT II and selected programs.

2.2.6. Approve, in coordination with the AFMC/CC, the selection of nominated Designated Acquisition Officials (DAO).

2.2.7. Charter all non-space PEOs, ACAT I, ACAT IA, and non-delegated ACAT II PMs.

2.2.8. Hold non-space PEOs accountable for program execution and implementation of transformation initiatives within their programs.

2.2.9. Chair an annual program execution review with non-space PEOs and MAJCOM commanders.

2.2.10. Manage and assess program health using an automated toolset such as the System Metrics and Reporting Tool (SMART).

2.2.11. Sign all non-space ACAT ID and ACAT IAM Acquisition Program Baselines (APBs) and forward them for Office of the Secretary of Defense (OSD) Milestone Decision Authority (MDA) approval.

2.2.12. Sign and approve initial APBs and any subsequent changes constituting a re-baseline for all non-space ACAT IC, ACAT IAC, non-delegated ACAT II, and selected programs. Ensure that MDAs for delegated ACAT II and ACAT III programs approve initial APBs as well as re-baselined documents.

2.2.13. Chair Acquisition Strategy Panels (ASP) for non-space related ACAT I, ACAT IA, non-delegated ACAT II, and selected programs.

2.2.14. Chair Air Force Review Boards (AFRB) for non-space related ACAT I, ACAT IA, non-delegated ACAT II, and selected programs.

2.2.15. Manage the Science and Technology (S&T) Program and its budget. Control the program's approved fiscal resources.

2.2.16. Serve as Functional Authority for the Acquisition Program Management, Contracting, Scientist and Engineer career fields.

2.2.17. Plan and implement non-developmental acquisition and cooperative research and development with other nations; set policy for those activities.

2.2.18. Perform as the Source Selection Authority (SSA) for ACAT I, ACAT IA, and selected programs unless otherwise directed by the SECAF.

2.2.19. Approve the acquisition plans and justification and approvals as established in the AF Federal Acquisition Regulation Supplement (AFFARS).

2.2.20. Notify the SECAF that a Major Defense Acquisition Program (MDAP) has exceeded its original baseline or current baseline unit cost threshold, to facilitate SECAF congressional notification.

2.2.21. Notify the defense committees of Major Automated Information System (MAIS) significant program changes.

2.2.22. Report all MDAP and MAIS APB deviations to the Defense Acquisition Executive (DAE).

2.2.23. Serve as acceptance authority for non-space program Environment, Safety, and Occupational Health (ESOH) risks classified "High" as defined by the government and industry in accordance with Military-Standard (MIL-STD)-882D, *DOD Standard Practice for System Safety*. The user representative shall be part of this process throughout the life cycle and shall provide formal concurrence prior to all high risk acceptance decisions.

2.2.24. Approve all Test and Evaluation Master Plans (TEMP) for all non-space ACAT I, IA, II and other programs on Office of the Secretary of Defense (OSD) T&E Oversight List, and forward to Director, Operational Test and Evaluation (DOT&E) and Director, Developmental Test and Evaluation (DDT&E). Sign and approve all other TEMPs when designated as the MDA.

2.2.25. Certify systems ready for dedicated operational testing according to AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Test and Evaluation*. This responsibility can be delegated as appropriate.

2.2.26. Recommend candidate systems to OSD/DOT&E for compliance with live fire test and evaluation (LFT&E) legislation. Approve agreed-upon LFT&E programs and allocate AF resources required to accomplish LFT&E plans. Approve and forward required LFT&E documentation and waivers (if appropriate) to OSD/DOT&E.

2.2.27. Support system survivability requirements policy and direct the research, development, and acquisition of non-space survivable systems.

2.2.28. Chair the Integrated Life Cycle Management (ILCM) Executive Forum.

2.2.29. Assign a Chief for the ILCM Forum Secretariat.

2.2.30. Establish a Configuration Steering Board (CSB) with broad executive membership including senior representatives from USD (AT&L) and the Joint Staff.

2.2.31. Establish policy and provide Component oversight for AF acquisition workforce management and professional development.

2.2.32. Appoint the AF Director, Acquisition Career Management (DACM) to develop, review, and coordinate policy regarding the AF acquisition workforce, including both organic (AF civilians and military) and contracted resources and manage the execution and oversight of the Acquisition Professional Development Program (APDP) on behalf of the SAE, both for non-space and space programs.

2.2.33. Designate the Air Force Office for Primary Responsibility (OPR) for Anti-Tamper Planning. SAF/AQL is currently the OPR and Executive Agent for Anti-Tamper Planning.

2.2.34. Exercise additional Acquisition of Services roles as identified in Chapter 4 of this document.

2.2.35. As MDA, approve the Life Cycle Management Plan (LCMP) for all non-space ACAT I, ACAT IA, and non-delegated ACAT II programs.

2.2.36. Support Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50) AF enterprise assessments and planning. Ensure implementation across non-space acquisition programs for compliance with Core and 50/50 requirements.

2.2.37. Assess each concept in Analysis of Alternatives (AoA) Study Plans in terms of its technical pedigree (*i.e.,* the process by which it was developed and matured). Recommend only those concepts with sufficient evidence of robust systems thinking and technical planning for consideration in the AoA. This activity can be delegated to SAF/AQR.

2.2.38. With the AFMC/CC or AFSPC/CC, certify to the SECAF the requirements as described in the CDD for ACAT I, ACAT IA, and non-delegated ACAT II programs can be translated for evaluation in a source selection in a clear and unambiguous way; are prioritized (if appropriate); and are organized into feasible increments of capability. The certification will occur concurrent with document presentation to the Air Force Requirements Oversight Council (AFROC).

2.2.39. Appoint the Air Force Review Board (AFRB) process owner and secretariat. The Air Force Office of Program Management and Acquisition Excellence (AF PM&AE) is currently the AFRB process owner and secretariat.

2.2.40. Appoint the SAE-level ASP process owner and secretariat for all ACAT I/IA and non-delegated ACAT II programs. AF PM&AE is currently the process owner and secretariat for all ACAT I/IA and non-delegated ACAT II programs.

2.3. Under Secretary of the AF (SAF/US) will:

2.3.1. Serve as the Service Acquisition Executive (SAE) as delegated for AF space programs and as the senior corporate operating official for space system acquisition. Execute SAE responsibilities outlined in the DOD 5000 acquisition series for execution of AF space system acquisitions. For purposes of defining SAE responsibilities, this includes lifecycle acquisition of space systems and services processes from pre-Milestone A to weapon system retirement. This includes research, development, test, evaluation, production, and delivery of new systems, or significant modifications to existing systems. Management responsibility flows directly, without intervention, from the SAE and Milestone Decision Authority to the Program Executive Officers (PEOs) to the System Program Managers (SPMs).

2.3.2. As MDA, approve the Life Cycle Management Plan (LCMP) for ACAT IC, ACAT IAC, and non-delegated ACAT II space programs. SAF/US will coordinate all space ACAT 1D LCMPs and forward to the MDA for approval.

2.3.3. Serve as a member of the ILCM Executive Forum.

2.3.4. Provide direction for space acquisition transformation across the AF.

2.3.5. Approve the selection of personnel to fill KLPs including PEOs, PMs, and Deputy PMs for space ACAT I and ACAT IA programs, and PMs for ACAT II and selected programs.

2.3.6. Hold space PEOs accountable for program execution and implementation of transformation initiatives within their programs.

2.3.7. Chair an annual program execution review with space PEOs and MAJCOM commanders.

2.3.8. Sign all space ACAT ID APBs and forward them for DAE approval. Sign and approve initial APBs and any subsequent changes that constitute a re-baseline for all ACAT IC, II, and selected programs.

2.3.9. Chair ASPs for space related ACAT I and ACAT IA programs.

2.3.10. Plan, set policy, and implement non-developmental acquisition and cooperative research and development with other nations for space systems.

2.3.11. Perform as the SSA for space ACAT I, ACAT IA, and selected programs unless otherwise directed by the SECAF.

2.3.12. Approve the acquisition plans for space programs as established in the AFFARS.

2.3.13. Report all space program APB deviations to the DAE.

2.3.14. Serve as acceptance authority for space program Environment, Safety, and Occupational Health (ESOH) risks classified "High" as defined by the government and industry in accordance with Military-Standard (MIL-STD)-882D, *DOD Standard Practice for System Safety*. The user representative shall be part of this process throughout the life cycle and shall provide formal concurrence prior to all high risk acceptance decisions.

2.3.15. Approve all TEMPs for all 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.

2.3.16. Provide space system support in the development of HAF functional policy. Appoint US(D) as a Member of the ILCM Executive Forum. Assign a representative to the ILCM Executive Forum Secretariat.

2.3.17. Support Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50) AF enterprise assessments and planning. Ensure implementation across space acquisition programs for compliance with Core and 50/50 requirements.

2.3.18. Certify systems ready for dedicated operational testing according to AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Test and Evaluation*. This responsibility can be delegated as appropriate.

2.3.19. With AFMC/CC or AFSPC/CC, certify to the SECAF that space systems requirements as described in the CDD for ACAT I, ACAT IA, and non-delegated ACAT II programs can be translated for evaluation in a source selection in a clear and unambiguous way; are prioritized (if appropriate); and are organized into feasible increments of capability. The certification will occur concurrent with document presentation to the AFROC.

2.4. Deputy Assistant Secretary, Contracting (SAF/AQC) will:

2.4.1. Exercise and further delegate (1) the authority to enter into, approve, terminate, and take all appropriate actions with respect to contracts and agreements (grants, cooperative agreements, and other transactions), and (2) the authority to issue, modify, or rescind Air Force contracting regulations under the system of the Federal Acquisition Regulations (FAR).

2.4.2. Provide contracting technical support to all AF MAJCOMS, PEOs, Direct Reporting Units (DRU), and Field Operating Agencies (FOA) 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.

2.4.3. Provide a single entry point for reviewing, processing, facilitating, and acquiring contract-related acquisition documents requiring Secretariat-level approval such as Justification and Approvals (J&A), Determination and Findings (D&F), source selection plans, waivers, deviations, lease arrangements, indemnification requests, and associated legal/business arrangements.

2.4.4. Provide advice in the execution of contractual and other related actions.

2.4.5. Manage AF Industrial Labor Relations activities, including contractor work stoppages and the application of Federal labor statutes.

2.4.6. Serve as the AF Competition Advocate General (reference AFFARS 5306.501, *Competition Advocates Requirement*).

2.4.7. Provide strategic sourcing/commodity council advice and support contracting efforts related to strategic sourcing/commodity councils (reference AFFARS 5307.104-93, *Air Force Procedures for Commodity Councils).*

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

2.5.1. Serve as AF lead for Systems Engineering (SE) policy, guidance, and oversight. This includes policy and guidance for software engineering activities.

2.5.2. Support Requirements Strategy Reviews (RSRs) and High Performance Teams (HPTs) as requested.

2.5.3. Serve as final approval authority for system-related National Environmental Policy Act (NEPA) documentation as designated by the SAE.

2.5.4. Review and approve space and non-space SEPs for the SAE as delegated.

2.5.5. Review proposed Technology Development Strategy (TDS) for MDAP programs prior to Milestone (MS) A and provide an assessment of technology risks to the SAE one month prior to milestone review.

2.5.6. Serve as AF lead for Manufacturing Readiness Assessment (MRA), Program Support Review (PSR), and Technology Readiness Assessments (TRA) policy, guidance, and oversight.

2.5.6.1. Direct and support TRAs for Major Defense Acquisition Programs (MDAP) and other DAE/SAE programs to support MS B and C decisions. Appoint independent review panels to conduct program TRAs to ensure an objective assessment. Review and endorse the completed TRAs to the SAE or DUSD(S&T), as appropriate, for DAE/SAE programs no later than one month prior to the milestone review. Endorse the completed TRAs to the SAE for SAE programs no later than one month prior to the milestone review. Transmit endorsements for ACAT ID and other DAE program TRAs through the SAE to Deputy Under Secretary of Defense for Science and Technology (DUSD(S&T)).

2.5.6.2. Direct and endorse MRAs required for DAE and SAE programs.

2.5.7. Serve as the focal point for the use of non-Information Technology (IT)/National Security System (NSS) standards, to include materiel International Standardization Agreements (ISAs) intended for use in acquisition.

2.5.8. Serve as the SAE representative on the OSD Systems and Software Engineering Forum.

2.5.9. Serve as Air Force focal point for Joint Capability Technology Demonstrations (JCTD) to include the Air Force JCTD selection process and Air Force JCTD policy and oversight.

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

2.6.1. Lead, integrate, change, implement, and set acquisition policy and processes across the ILCM Enterprise to facilitate rapid delivery of intended capability, support, and/or services to the user.

2.6.2. Ensure SECAF, Chief of Staff of the Air Force (CSAF), or SAF/AQ directed ILCM acquisition policies, directives, and initiatives and other functional policies as requested are communicated to the field.

2.6.3. Serve as the AF lead for acquisition program reporting policy, guidance and oversight. This includes but is not limited to Selected Acquisition Reports, Major Automated Information System (MAIS) Annual Reports, APB breach reporting, MDAP (Nunn/McCurdy) / MAIS Congressional APB breach reporting, MAIS Quarterly Reports, Defense Acquisition Executive Summary and the Monthly Acquisition Reports.

2.6.4. Chair the Research, Development, Test, and Evaluation (RDT&E) Panel responsible for programming Science and Technology (S&T), T&E infrastructure, and Defense-wide support activities.

2.6.5. Represent SAF/AQ on the AF Board and Group; serve as focal point for SAF/AQ participation in the Defense Planning, Programming, Budgeting, and Execution (PPBE) process.

2.6.6. Recommend a MDA to SAF/AQ prior to the Materiel Development Decision point.

2.6.7. Authorize, via issuance of Program Authorization documents, execution-year adjustments to program funding, to include release/withhold of funds, below-threshold reprogramming actions, and subprogram level funding realignments. Coordinate on all investment New Start and Above Threshold Reprogramming actions prior to submittal to the Assistant Secretary of the Air Force (Financial Management) (SAF/FM) and Assistant Secretary of the Air Force (Legislative Liaison) (SAF/LL).

2.6.8. Lead acquisition professional development efforts, including the direction, coordination, and review of actions mandated by the DAWIA and associated DOD Directives. Serve as AF Liaison to OSD and to the President, Defense Acquisition University (DAU), on behalf of the SAE for non-space, the SAE for space and all AF acquisition, technology and logistics career field managers covered by DAWIA.

2.6.9. Develop and integrate policy regarding the AF acquisition workforce, including both organic (AF civilians and military) and contracted resources.

2.6.10. Serve as the focal point for AF Earned Value Management (EVM) policy and guidance and the EVM focal point representative to OSD.

2.6.11. DELETED.

2.6.12. DELETED.

2.6.13. Develop and maintain the non-space APML.

2.6.14. Collaborate with AF A4/7 Program Element Monitors on budgeting and execution of funds for investment equipment and vehicles.

2.7. SAF/AQ Capability Directors (CD) will:

2.7.1. Identify and task SAF/AQ organizations to participate with AF/A5R in Requirements Strategy Reviews (RSR), High Performance Teams (HPT), and other early requirements and acquisition activities.

2.7.2. Support and provide resources for MRAs, PSRs, and TRAs.

2.7.3. Serve as focal point for staffing and coordination of acquisition program documentation at the Air Staff.

2.7.4. Initiate, review, and staff for coordination New Start packages (Letters of Notification for New Starts under prior approval thresholds, and DD Form 1415-1, *Reprogramming Action Form*, prior-approval packages for New Starts exceeding thresholds).

2.7.5. Generate, staff for coordination, and update as required Program Management Directive (PMD) development.

2.7.6. Serve as AF interface with OSD for non-space ACAT ID and ACAT IAM programs.

2.7.7. Communicate key non-space program acquisition issues to Congress.

2.7.8. Review requests for execution-year funding adjustments and forward to SAF/AQX for approval.

2.7.9. Provide support to the AF corporate budget process.

2.7.10. Support the JCIDS process through active collaboration in HPTs and Requirements Strategy Reviews RSRs. Support Combat Capability Documents (CCD), Concept Analyses, AoA Study Plan development and approval, Joint Staff Functional Capabilities Board (FCB) Reviews and supporting analyses. Review and coordinate on applicable JCIDS documents via the Information and Resource Support System (IRSS) process to provide early acquisition involvement in the requirements process in order to gain understanding and communicate the limits of what is possible.

2.7.11. Ensure that assigned Program Element Monitors (PEMs) understand their role as the primary focal point for communicating their program's requirements, funding, health, status and impact to the fight through constant interaction with the MAJCOM(s), the Program Office (or depot), Congressional Staffers, the appropriate offices within OSD, their counterparts in requirements (A5) and sustainment (A4), and others with a stake or interest in their assigned program.

2.8. Assistant Secretary of the AF, Financial Management and Comptroller (SAF/FM) will:

2.8.1. Develop and provide financial policy.

2.8.2. Develop Business Case Analysis (BCA) policy, procedures and guidance as outlined in AFI 65-501, *Economic Analysis* (and AFI 65-509, *Business Case Analysis*, when published).

2.8.3. Support SAF/AQX in developing AF EVM policy and guidance.

2.9. Deputy Under Secretary of the AF for International Affairs (SAF/IA) will:

2.9.1. Provide projected Security Assistance (SA) and International Armaments Cooperation (IAC) requirements related data to AFMC for analysis and planning.

2.9.2. Develop/provide policy for implementation of SA requirements that are to be executed by AF organizations.

2.9.3. Provide the most current SA requirements to appropriate PMs to support development of annual migration plans.

2.9.4. Support PMs in their preparation and execution of Foreign Military Sales (FMS) strategies.

2.9.5. Manage the Foreign Comparative Testing (FCT) program to provide foreign technologies and systems that PMs can acquire to meet AF requirements.

2.10. Assistant Secretary of the AF for Installations, Environment and Logistics (SAF/IE) will:

2.10.1. Provide strategic logistics oversight for life cycle support; develop strategic level logistics, installations, and environmental policy for life cycle support; and provide vertical and horizontal integration of ILCM policies to provide for standardization and compliance mechanisms across the Enterprise. Ensure functional policies as requested are communicated to the field.

2.10.2. Serve as a Member of the ILCM Executive Forum. Assign a representative to the ILCM Executive Forum Secretariat.

2.10.3. Plan and assess Air Force enterprise Core and 50/50 requirements. Document results and provide to the ILCM Executive Forum annually.

2.10.4. In collaboration with AF A4/7, AFMC/A4, and AFSPC/A4, assess the health of organic product support workforce competencies.

2.10.5. Validate compliance of the Air Force enterprise with Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50) and act as the Air Force single focal point for reporting final Service 50/50 and Core workload distribution figures to other DOD agencies. Sign and forward the 50/50 report and Core report to the Office of Secretary of Defense (OSD).

2.10.6. Develop Air Force policy and guidance related to 50/50 depot-level maintenance management to include the establishment of the management reserve threshold.

2.11. Director, Space Acquisition (SAF/USA) will:

2.11.1. Lead, integrate, change, implement, and set acquisition policy, processes and programs for space programs across the ILCM to facilitate rapid delivery of intended capability, support and/or services to the user.

2.11.2. Ensure all direct communication from SECAF, CSAF, or SAF/AQ, acquisition policies, directives, and initiatives pertaining to space programs reach the field.

2.11.3. Develop acquisition program reporting policy for space programs covering the AF MARs.

2.11.4. Attend the RDT&E Panel responsible for programming S&T, T&E infrastructure, and Defense-wide support activities.

2.11.5. Represent SAF/US on the AF Board and Group; focal point for SAF/US participation in the Defense PPBE process.

2.11.6. Recommend a MDA to SAF/US prior to the Concept Studies point.

2.11.7. Authorize below-threshold investment appropriation reprogramming of programs within statutory restrictions.

2.11.8. Be the AF interface with OSD for space ACAT 1D programs.

2.11.9. Serve as liaison to Congress for space program acquisition issues

2.12. HQ AF, Director of Test and Evaluation (AF/TE) will:

2.12.1. Develop AF T&E policy designed to implement integrated testing and oversee AF T&E programs according to AFI 99-103, *Capabilities Based Test and Evaluation*.

2.12.2. Act as the final T&E review authority and signatory for TEMPs requiring SAE approval; review other TEMPs as requested.

2.12.3. Adjudicate T&E issues between MAJCOMs, operational test agencies, the Services, OSD, and Congress.

2.12.4. Support integrated life cycle management efforts to acquire and sustain operationally effective, suitable, safe, and survivable systems.

2.12.5. Oversee the AF test infrastructure by ensuring adequate T&E facilities, resources, and expertise are available to support system life cycle T&E activities.

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

2.12.7. Oversee the testing and evaluation of system survivability.

2.12.8. Review the requirement for an End Use Certificate (EUC) identified by the test centers and request SAF/AQ approval.

2.12.9. Participate as an Advisor in the ILCM Executive Forum when test related issues are addressed.

2.13. DCS, Manpower and Personnel (AF/A1) will:

2.13.1. Determine and advise PMs of inherently governmental and/or military essentiality of function before competitive sourcing actions are initiated.

2.14. DCS, Intelligence, Surveillance and Reconnaissance (AF/A2) will:

2.14.1. Develop intelligence, surveillance and reconnaissance (ISR) policy to support acquisition and sustainment life cycle management.

2.14.2. Review acquisition documents as required for ISR applicability and sufficiency; resolve disagreements between AF reviewers on intelligence content issues.

2.14.3. Provide guidance on architectures, ISR production and other ISR matters, as applicable to ISR support to acquisition.

2.14.4. Ensure ISR production processes are responsive to acquisition customers, according to AFI 14-201, *Intelligence Production and Applications* and AFI 14-205, *Geospatial Information and Services.*

2.14.5. Manage ISR threat support to AF programs, and AF-led, multi-Service programs according to Department Intelligence Analysis Program and other national-level guidelines.

2.15. DCS, Operations, Plans and Requirements (HQ AF/A3/5) will:

2.15.1. Provide oversight for AF planning and requirements development processes and procedures.

2.15.2. Collaboratively work with the acquirer, tester, sustainer and other key stakeholders in developing operational capabilities requirements documents and the associated COA.

2.15.3. Provide approved operational capabilities requirements documents to SAF/AQX, AFMC and other stakeholders to support COA development, materiel development decisions, and milestone decisions.

2.15.4. Support Acquisition Decision Memorandum (ADM) and PMD development as requested.

2.15.5. Support SAF/AQ, SAF/US, and MDA decisions, program reviews, and design reviews as requested.

2.15.6. Review LCMPs as required or requested.

2.15.7. Advocate weapon system requirements during the PPBE process.

2.15.8. Implement system survivability requirements policy in accordance with CJCS 3170 Series documents.

2.15.9. Ensure operational capability requirements documents address systems survivability.

2.15.10. Validate operational issues concerning system survivability and validate operational survivability requirements.

2.15.11. Notify SAF/AQX of a planned RSR.

2.15.12. Participate as an Advisor in the ILCM Executive Forum when issues regarding phasing or adjustments to requirements are addressed.

2.16. DCS, Logistics, Installations and Mission Support (HQ AF/A4/7) will:

2.16.1. Develop policy and issue AF implementation guidance for logistics support capabilities to ensure weapon system readiness for the user consistent with statutes, executive orders, and DOD issuances. Ensure functional policies as requested are communicated to the field.

2.16.2. Advocate logistics requirements to corporate AF, OSD, and Congressional entities.

2.16.3. Serve as a Member of the ILCM Executive Forum. Assign a representative to the ILCM Executive Forum Secretariat.

2.16.4. Assess sustainment enterprise capabilities and performance outcomes in support of AF mission and warfighting needs.

2.16.5. Develop and support logistics information gathering and data monitoring systems to support measurement of logistics performance and supportability status of weapon systems.

2.16.6. Ensure Condition Based Maintenance Plus (CBM+) concepts and functions are developed and implemented as applicable.

2.16.7. Support activities throughout a system's life cycle to ensure logistics and sustainment issues are addressed for long-term system viability.

2.16.8. Develop and implement Serialized Item Management (SIM) concepts and functions.

2.16.9. Support Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50) Air Force enterprise assessments and planning.

2.17. HQ AF, Strategic Plans and Programs (HQ AF/A8) will:

2.17.1. Review LCMPs as required or requested to ensure that they accurately reflect programmed force levels.

2.17.2. Provide projected force structure programming changes to using commands and AFMC.

2.17.3. Provide the most current force structure/management data to the appropriate PMs to support development of annual migration plans.

2.18. Chief of Warfighting Integration and Chief Information Officer (CIO) (SAF/XC and AF/A6) will:

2.18.1. Develop and sustain the Air Force Information Assurance (IA) program according to AFPD 33-2, *Information Assurance (IA) Program*.

2.18.2. Establish the Air Force provisioned portion of the Global Information Grid (AF-GIG) acceptable baseline risk level and IA controls, and provide guidance to implementing organizations to mitigate threats commensurate with that risk level.

2.18.3. Designate a Senior Information Assurance Official (SIAO) to provide oversight and responsibility for the AF IA policy and procedures. The SIAO will oversee IA requirements planning, programming, budgeting, and execution in the AF budget process and advocate for IA funding with the OSD. The SIAO will function as the AF IA Certifying Authority for all IT and applicable National Security System certification and accreditation and delegate this authority as appropriate. The SIAO will oversee development of the Air Force Plan of Action and Milestones (POA&M) template used to assist the PM in applying IA by identifying, assessing, prioritizing, and monitoring the progress of corrective efforts for security weaknesses.

2.18.4. Establish and enforce processes, roles, and responsibilities for IA certification and accreditation. Review and approve certification and accreditation thresholds and milestones.

2.18.5. The SIAO will carry out Federal Information Security Management Act (FISMA) related CIO responsibilities.

2.18.6. Create the enterprise level architecture for the Air Force.

2.18.7. Review and ensure requirements and planning documents address system architectures consistent with the IA enterprise architecture.

2.18.8. Ensure AF spectrum certification compliance for all applicable systems that require spectrum access and allocation.

2.18.9. Establish policy for modeling and simulation (M&S) efforts to include those performed in support of capabilities based requirements development and simulation based activities throughout the system life cycle.

2.18.10. Ensure effective and efficient IT management as required by Congressional statutory and DOD regulatory requirements (e.g., the Clinger-Cohen Act and DOD 5000-series).

2.18.11. Provide AF policy and guidance on ensuring approved IA strategies are addressed in capabilities based requirements development.

2.18.12. Serve as AF lead for implementation of net-centric operations through policies.

2.18.13. When SAF/XC is the designated PEM, provide for program oversight and resource allocation.

2.18.14. Support requirements strategy development and participate in HPTs to ensure Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) requirements are architecture-based, net-centric compliant, and horizontally integrated.

2.18.15. Provide IT life cycle management expertise.

2.18.16. Develop policy and guidance for the Security, Interoperability, Supportability, Sustainability, and Usability (SISSU) and IT Lean processes.

2.18.17. Review LCMPs and ISPs as required or requested.

2.18.18. Establish policy to achieve and maintain operational electromagnetic compatibility (EMC) for all systems, equipment, and wireless devices that utilize the electromagnetic spectrum and are developed, acquired, and operated by the AF.

2.18.19. Review JCIDS documents (e.g., ICD, CDD, CPD, and supporting architectures) and Information Support Plans (ISP) to ensure planned implementation of the Net-Ready Key Performance Parameter (NR-KPP) is sound. This includes a review of the architecture, alignment with DOD's Net-Centric Operations and Warfare Reference Model, review of the IA plan, and review of the Key Interface Profiles in accordance with CJCSI 6212.01, *Interoperability and Supportability of Information Technology and National Security Systems*.

2.18.20. Participate as an Advisor in the ILCM Executive Forum when CIO related issues are addressed.

2.19. Commander, AF Materiel Command (AFMC/CC) will:

2.19.1. Support the SAE, PEOs, and PMs by providing technical assistance, infrastructure, test capabilities, laboratory support, professional education, training and development, management tools, and all other aspects of support.

2.19.2. Serve as a Member of the ILCM Executive Forum. Assign a representative to the ILCM Executive Forum Secretariat.

2.19.3. Support the CSAF and MAJCOM/CCs by recommending phasing and adjustment of requirements to ensure operationally acceptable increments or blocks of capability are fielded in a timely manner.

2.19.4. Support the SAE, CSAF, and MAJCOM/CCs by monitoring and controlling weapon system requirements baselines from MS A to fielding. Special attention will be given to impact on depot activation requirements.

2.19.5. Support the SAE and/or the MDA by reviewing for information purposes acquisition strategies, LCMPs, TEMPs, SEPs, ISPs, TRAs and Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE) plans to ensure robust enterprise-sensitive planning and make recommendations supporting all milestone decisions as required through the life cycle.

2.19.6. Support the SAE, CSAF, and MAJCOM/CCs, by providing direct support for requirements formulation, continuous capability and technology planning, and acquisition strategies with a focus on enhancing program success while balancing performance.

2.19.7. Provide expertise to the SAE, PEOs, and PMs by responding to individual requests or by supporting program reviews to include ASPs, AFRBs, independent review teams, production readiness reviews, and logistics assistance teams. Support the PM in developing and implementing the LCMP.

2.19.8. Execute the AFMC Mission Assignment Process throughout the ILCM life cycle. Establish management responsibilities and align the AFMC acquisition and sustainment infrastructure in support of approved missions/levels of service to achieve designated AF ILCM enterprise objectives.

2.19.9. Coordinate on the selection of nominated Designated Acquisition Officials (DAO).

2.19.10. Establish PGMs when directed in a HAF issuance or at the discretion of the AFMC/CC for specified product groups.

2.19.11. Approve and maintain the SPML.

2.19.12. Ensure all non-space programs on the SPML have a designated PM with responsibility for and authority to accomplish program objectives for development, production and sustainment to meet the users' operational needs.

2.19.13. Review and coordinate on LCMPs for non-space programs on the SPML. Review SEPs for these programs.

2.19.14. Plan and execute the S&T Program. Ensure Air Force Research Laboratory (AFRL) responds to user needs by structuring science and technology efforts to meet near-term documented operational requirements. Participate in the development of agreements and technology transition plans with acquisition personnel to enable rapid and successful transition from AFRL technology projects to acquisition programs or operations.

2.19.15. Provide representatives to support development of program documentation according to AFI 20-101, AFI 10-601, AFI 63-1201, and AFI 99-103 and this AFI. Additional duties are specified in those respective AFIs.

2.19.16. Provide support in the development of COAs.

2.19.17. Assist users in developing JCIDS capability documents and ensure COAs are prepared for newly identified capabilities requirements and for emerging requirements not yet assigned to a PEO or DAO.

2.19.18. Support all domestic, international, and Security Assistance (including FMS) programs in which the AF participates.

2.19.19. Implement acquisition professional development program according to policy established by the Assistant Secretary of the Air Force for Acquisition.

2.19.20. Ensure timely, complete, sufficient, and accurate intelligence analysis, information and support is provided to and integrated within the acquisition process. Ensure the identification and documentation of derived intelligence requirements (including signature data), and assessment of intelligence-related risk during the Materiel Solution Analysis and

Technology Development phases. Integrate results of assessments into life cycle planning, programming and technical life cycle documentation.

2.19.21. Develop critical processes, procedures, and automated systems to facilitate the AF-wide implementation and efficient execution of ILCM critical processes.

2.19.22. Support program transfer from the PEO or DAO portfolio to the appropriate sustainment portfolio. Provide enterprise-wide program transfer status to the ILCM Executive Forum as appropriate.

2.19.23. Act as the AF executive manager for depot source of repair (DSOR). Review and process submitted DSOR packages (may be delegated).

2.19.24. Develop and implement supplemental guidance to this directive as necessary. Supplemental guidance must be sent to SAF/AQX for review and coordination prior to publication.

2.19.25. Develop and provide migration plan training to applicable PMs. The training will relate to the policies and procedures for the storage, reclamation and disposal of inactive aircraft stored at the Aerospace Maintenance and Regeneration Group (AMARG).

2.19.26. Collect, consolidate, review, and submit all required annual migration plans to HQ AF.

2.19.27. Consult with HAF as appropriate on reclamation policies and issues.

2.19.28. Ensure Serialized Item Management (SIM), Reliability Centered Maintenance (RCM) and Condition Based Maintenance Plus (CBM+) concepts and functions are developed and implemented as applicable.

2.19.29. Support planning, programming, and budgeting for out-year sustainment program funding requirements to include sustainment technology process requirements.

2.19.30. Ensure standardization and streamlining of logistics requirements determination process and execution of sustainment funding by the Centralized Asset Management Office. Specific processes affected are Depot Purchased Equipment Maintenance (aircraft, missiles, engines, other major end items, non- Consolidated Sustainment Activity Group (CSAG) exchangeables, area base manufacturing, software and storage), Weapons System Management Support (contractor logistics support, technical orders and sustaining engineering).

2.19.31. Develop processes and procedures for accurate collection and reporting of 50/50 and Core data and provide data IAW data calls. Maintain depot maintenance 50/50 workload mix database and analysis products.

2.19.32. Ensure implementation across sustainment programs for compliance with AF enterprise Core and 50/50 requirements identified to meet Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50).

2.19.33. Present at least annually the Air Force's 50/50 position and present status of all 50/50 initiatives to SAF/IE, SAF/AQ, SAF/US, and AF/A4/7. Immediately notify SAF/IE and AF/A4/7 of projected noncompliance with Title 10 USC §2466.

2.19.34. Through the ALC/CCs, ensure that program strategies and execution of individual programs in their sustainment portfolio or on the SPML are aligned with product support objectives. Maintain responsibility for sustainment program performance for assigned systems or products over which the ALC/CCs have executive oversight; ensure PMs are managing sustainment program cost and schedule to meet all performance requirements within approved baselines, program direction, and the sustainment strategy.

2.19.35. Through the ALC/CCs, direct PMs of activities in their sustainment portfolio or on the SPML by emphasizing planning, reporting, and preparing for program reviews.

2.19.36. Through the ALC/CCs, maintain and implement the SEPs for those programs within their portfolio or on the SPML. Ensure use of a rigorous SE approach in all programs within their portfolio, with emphasis on assurance of OSS&E.

2.19.37. With the SAE, certify to the SECAF that the requirements as described in the CDD for ACAT I, ACAT IA, and non-delegated ACAT II programs can be translated for evaluation in a source selection in a clear and unambiguous way; are prioritized (if appropriate); and are organized into feasible increments of capability. The certification will occur concurrent with document presentation to the AFROC.

2.19.38. For non-space programs, attest that the capability requirements as described in all CPDs and delegated ACAT II and below CDDs are feasible. If appropriate, attestation will be completed concurrent with document presentation to the AFROC.

2.19.39. In collaboration with lead MAJCOMs and PMs, collect, validate, and maintain current requirements and funding data by weapon system for all elements of depot activation and report data to HAF upon request. Establish a central depository for depot activation requirements data, to include associated operational rationale and/or impacts.

2.19.40. Update and maintain configuration control of the Acquisition Strategy (AS) Tool Kit. The AS Tool Kit will be updated to maintain consistency with emerging policy changes as required; as a minimum, the AS Tool Kit will be updated annually.

2.19.41. Ensure that Product Center and ALC System Safety Managers support Center-level program reviews and coordinate on new and updated Programmatic Environment, Safety, and Occupational Health Evaluations (PESHE) generated at their Center.

2.20. Commander, AF Research Laboratory (AFRL/CC) will:

2.20.1. Support the development of phased capabilities requirements by helping the acquisition and operational communities assess the maturity and viability of considered technologies in order to rapidly and successfully transition their technology projects into operational military systems. Provide subject matter experts as requested by SAF/AQR to be Independent Review Panel (IRP) leads and members for program Technology Readiness Assessments.

2.20.2. Help secure approved technology transition plans (TTP), to include prime contractors.

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

2.20.4. Support seamless communication and collaboration to assist in the incorporation of identified technologies; when appropriate co-locate laboratory personnel with the PM.

2.20.5. Ensure incorporation of SE methodologies tailored for AFRL technology development done in support of evolutionary acquisition (EA) programs.

2.20.6. Ensure enhanced management oversight to quickly identify and resolve any issues that arise and exploit additional collaborative opportunities.

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

2.20.8. Promote the use of spectrum efficient technologies.

2.21. Commander, AF Space Command (AFSPC/CC) will:

2.21.1. Support the DOD Executive Agent for Space, SAE, PEOs, and PMs by providing technical assistance, infrastructure, test capabilities, professional education, training and development, and all other aspects of support for space programs.

2.21.2. Appoint AFSPC/CV as a Member of the ILCM Executive Forum. Assign a representative to the ILCM Executive Forum Secretariat.

2.21.3. Advise and assist the DOD Executive Agent for Space and SAE through formal and informal forums.

2.21.4. Support the DOD Executive Agent for Space, SAE, CSAF, and MAJCOM/CCs, by monitoring and controlling space system contracted requirements baselines from MS A to launch/fielding.

2.21.5. Support the DOD Executive Agent for Space, SAE, CSAF, and MAJCOM/CCs monitoring and providing an integrated position on requirements formulation, continuous capability and technology planning, and acquisition strategies with a focus on enhancing program success while balancing performance.

2.21.6. Support the DOD Executive Agent for Space, SAE and/or the MDA by reviewing acquisition strategies, LCMPs, TEMPs, SEPs, ISPs, TRSs, and PESHE plans for space programs to ensure robust enterprise-sensitive planning, and make recommendations supporting all MS decisions as required throughout the life cycle.

2.21.7. Provide expertise to the DOD Executive Agent for Space, SAE, PEOs, and PMs by responding to individual requests or by supporting space program execution reviews to include ASPs, AFRBs, independent review teams, production readiness reviews, and logistics assistance teams.

2.21.8. Ensure all space programs have a designated PM with responsibility for and authority to accomplish program objectives for development, production, sustainment, and disposal to meet the users' operational needs.

2.21.9. Ensure AFRL responds to user needs supporting space programs by structuring S&T efforts to meet near-term documented operational requirements, participating in the development of agreements and technology transition plans with acquisition personnel to enable rapid and successful transition from AFRL technology projects to space acquisition programs.

2.21.10. Provide representatives to support development of program documentation according to AFI 20-101, AFI 10-601, AFI 63-1201, and AFI 99-103, and this AFI. Additional duties are specified in those respective AFIs.

2.21.11. Support all domestic, international and Security Assistance (including FMS) space acquisition programs in which the AF participates.

2.21.12. Implement acquisition professional development program according to policy established by the Assistant Secretary of the Air Force for Acquisition.

2.21.13. Ensure timely, complete, sufficient, and accurate intelligence analysis, information, and support is provided to and integrated within the acquisition process. Ensure the identification of derived intelligence requirements (to include signature data), assessment of intelligence-related risk and the documentation of intelligence requirements, during the Materiel Solution Analysis and Technology Development phases.

2.21.14. Support the processes, procedures and automated systems to facilitate the implementation and efficient execution of CAM, DSOR, and Public-Private Partnerships (PPPs).

2.21.15. Support long-range priorities and systems support planning for space systems.

2.21.16. Develop and implement supplemental guidance to this directive as necessary. Supplemental guidance must be sent to SAF/USA and SAF/AQX for review and coordination prior to publication.

2.21.17. Consult with HAF offices as appropriate on reclamation policies.

2.21.18. Ensure SIM, RCM and CBM+ concepts and functions are developed and implemented as applicable.

2.21.19. Follow the AFMC Mission Assignment Process (MAP) as applicable when requesting support from an AFMC Product Center, Logistics Center, or Laboratory.

2.21.20. Support planning, programming, and budgeting for out-year space system sustainment program funding requirements to include sustainment technology process (STP) requirements.

2.21.21. Ensure standardization and streamlining of logistics requirements determination process and execution of sustainment funding for space programs/systems. Specific processes affected are Depot Purchased Equipment Maintenance (space ground command and control systems, radomes, antennas, and software), Weapons System Management Support (contractor logistics support, technical orders and sustaining engineering)

2.21.22. Support implementation across space sustainment activities for compliance with AF enterprise Core and 50/50 requirements identified to meet Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50).

2.21.23. With the SAE, certify to the SECAF that the requirements as described in the CDD for ACAT I, ACAT IA, and non-delegated ACAT II space programs can be translated for evaluation in a source selection in a clear and unambiguous way; are prioritized (if appropriate); and are organized into feasible increments of capability. The certification will occur concurrent with document presentation to the AFROC.

2.21.24. For space programs, attest the capability requirements as described in all CPDs and delegated ACAT II and below CDDs are feasible. If appropriate, attestation will be completed concurrent with document presentation to the AFROC.

2.21.25. The AF Frequency Management Agency (AFFMA) plans, provides, and preserves access to the electromagnetic spectrum for the AF and selected DOD activities in support of national/international policy objectives, systems development, and global operations.

2.21.26. Ensure that Product Center and ALC System Safety Managers support Center-level program reviews and coordinate on new and updated Programmatic Environment, Safety, and Occupational Health Evaluations (PESHE) generated at their Center.

2.22. Operational Commands and Field Operating Agencies (FOA). Operational commands (e.g., Air Combat Command, Air Mobility Command, AF Special Operations Command, Air Education and Training Command, Air Force Global Strike Command, and AFSPC) and FOAs will:

2.22.1. Develop and document capability requirements and accomplish analysis to ensure needs of capability users are met. Advocate needs through the JCIDS process.

2.22.2. Provide the PM with validated weapon system requirements documents.

2.22.3. Participate with joint organizations to ensure overall capability and specific weapon system requirements and CONOPS are in consonance with requirements, concepts, and directives.

2.22.4. Provide weapon system program advocacy, support development of weapon system Program Objective Memoranda (POM) inputs and advocate capability requirements during the PPBE process.

2.22.5. Conduct analysis and provide documentation for developing new or modified weapon systems that enable AF CONOPS.

2.22.6. Work with the ILCM community and Air Force laboratories to help focus R&D on user needs.

2.22.7. Work with the acquisition community to help evaluate cost-benefit trades.

2.22.8. Ensure weapon system capability based requirements accurately describe operational needs.

2.22.9. Develop weapon system operational architectures according to current JCIDS and ISP requirements, in perspective of overall capability architectures.

2.22.10. Coordinate with PM to keep Expectation Management Agreements (EMA) current.

2.22.11. Implement AF product support policies jointly with HQ AFMC for non-space programs or HQ AFSPC for space programs.

2.22.12. Develop and validate current and projected operational product support requirements and performance parameters/metrics for Performance Based Logistics (PBL).

2.22.13. Support planning, programming, and budgeting for out-year sustainment program funding requirements.

2.22.14. Coordinate with the acceptance authority for program ESOH risks throughout the life cycle of the program and provide formal concurrence on risks classified as "High" or "Serious" as defined by MIL STD-882D.

2.22.15. Participate in the development and/or review of program related documentation when the MAJCOM is the designated operational test organization for a program in lieu of AF Operational Test and Evaluation Center (AFOTEC).

2.22.16. Collaborate with AFMC for depot activation requirements and funding data.

2.23. Commander, Air Education and Training Command (AETC/CC) will:

2.23.1. Ensure capability requirements and acquisition documents contain executable training strategies for effective fielding.

2.23.2. Support acquisition events throughout the life cycle of programs to ensure training issues are addressed to provide long-term viability for capability needs.

2.23.3. Maintain and support the Air Force Center for Systems Engineering (CSE) to provide specific systems engineering help, advice, and assistance as an independent advisor to the program execution leadership.

2.24. Commander, AF Operational Test and Evaluation Center (AFOTEC/CC) will:

2.24.1. Function as the Air Force's operational test agency (OTA) as a direct reporting unit (DRU) to the CSAF. Monitor Air Force technology projects and acquisition programs to ensure operational test and evaluation (OT&E) is conducted prior to full rate production (FRP), full deployment (for automated information systems (AIS)), or fielding.

2.24.2. Participate in the development and/or review of TDS, LCMPs, ISPs, ICD, CDD, CPD, AOAs, COAs, PMDs, and other pertinent program documentation for programs for which AFOTEC is planning to conduct operational testing.

2.24.3. Provide operational test inputs to the T&E strategy, TEMP, and test plans that are integrated.

2.24.4. Develop all areas pertaining to AFOTEC conducted operational testing for the TEMP. Prepare Operational Test portions of the TEMP.

2.24.5. Plan and conduct operational testing for programs on OSD T&E oversight and others as required by AFI 99-103.

2.24.6. Co-chair Integrated Test Team (ITT) with the PMs for programs that AFOTEC is planning to conduct operational testing.

2.25. AF Human Systems Integration Office (AFHSIO) will:

2.25.1. Facilitate and advocate integration of Human Systems Integration (HSI) into the ILCM framework and AF policies and guidance to comprehensively implement, assess, and improve HSI.

2.25.2. Facilitate and advocate comprehensive HSI familiarization, tools, technology and methods to support PEOs, DAOs, PMs, Systems Engineers, and others involved in requirements development, acquisition and sustainment.

2.25.3. Provide expert advice, real-time assistance, and implementation strategies of HSI.

2.25.4. Support the development, communication and implementation of HSI initiatives.

2.25.5. Oversee and advocate HSI focus in activities regarding systems integration, systems engineering, total system performance and total operating costs.

2.26. Program Executive Officers (PEO) will:

2.26.1. Be responsible for total life cycle management of their assigned portfolios including assigned ACAT programs and ensure collaboration across the ILCM framework. The PEO is responsible for, and has authority to accomplish, portfolio/program objectives for development, production, and sustainment to meet warfighters' operational needs. The PEO will lead portfolios based on solid business strategies and work with the CD to secure necessary funding in time to meet those requirements.

2.26.2. Be dedicated to executive management and shall not have other command responsibilities except as waived.

2.26.3. Ensure PMs work with appropriate stakeholders and MAJCOM representatives to develop capabilities based requirements, operational, system and technical level architectures, test plans that integrate, technology transition plans, product support strategies, and acquisition strategies throughout the entire life cycle.

2.26.4. Maintain a continuous dialogue with the operational and implementing commands including sustaining, testing, training, and other development commands. Give early warning to the user, SAE, and acquisition staff of significant problems or issues.

2.26.5. Serve as designated officials for acquisition of services in their respective portfolio and comply with **Chapter 4** of this AFI.

2.26.6. 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. The user representative shall be part of this process throughout the life cycle and shall provide formal concurrence prior to all serious risk acceptance decisions.

2.26.7. Chair ASP for ACAT II (as delegated) and III programs.

2.26.8. Recommend PMs and Deputy PMs for ACAT I, ACAT IA, ACAT II and selected programs to the SAE.

2.26.9. Approve selection of PMs for ACAT III programs.

2.26.10. Charter all delegated ACAT II and ACAT III PMs.

2.26.11. Direct PMs by emphasizing planning, reporting, and preparing for milestone and other program reviews.

2.26.12. Use the Acquisition Centers of Excellence (ACE) to provide real-time, on-call assistance to programs and as independent advisors providing recommendations on program business strategy and documentation, and for independent program assessments.

2.26.13. Review and approve SEPs per AFI 63-1201 and monitor their implementation.

2.26.14. Ensure Courses of Action (COA) are prepared for newly identified capabilities requirements and the users agree with the COA.

2.26.15. Use EVM as an oversight tool, ensure program office compliance with EVM policy and guidance, and ensure program office personnel receive adequate EVM training.

2.26.16. Ensure PMs are managing acquisition program costs and schedules to meet all performance requirements within approved baselines, program direction, and the acquisition strategy.

2.26.17. Ensure that all programs listed on the APML update program information contained in the SMART database. Review and assess each AF Monthly Acquisition Report (MAR) on a monthly basis.

2.26.18. Notify HQ AFMC and/or HQ Air Force Space Command (AFSPC) of new mission workload and changes in workload to include proposed mission transfers. Work with HQ AFMC and/or HQ AFSPC to identify requirements for program facilities, personnel, and resources and validate infrastructure investment requirements identified by PMs.

2.26.19. Review and approve the integrated life cycle strategy, as described in the Life Cycle Management Plan (LCMP).

2.26.20. Ensure validated MAJCOM needs drive the acquisition and modification planning process.

2.26.21. Review requests for End Use Certificates (EUC) identified by the PMs and submit for SAF/AQ approval.

2.26.22. Review and provide concurrence on TEMPs for assigned programs where the PEO is the decision authority, or as delegated or assigned. For programs on the OSD T&E Oversight List, forward TEMPs per TEMP coordination procedures in AFI 99-103.

2.26.23. Ensure implementation across portfolio and acquisition programs for compliance with identified AF enterprise Core and 50/50 requirements to meet Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50).

2.27. Program Executive Officer, Combat and Mission Support (AFPEO/CM) will:

2.27.1. Exercise decision authority for acquisitions of services with a total estimated value of $100 million or greater, or those designated as special interest, according to the procedures in Chapter 4 of this instruction, including delegation of responsibilities as deemed appropriate.

2.27.2. Be dedicated to executive management and shall not have other command responsibilities except as waived.

2.27.3. Provide executive management and overall direction and guidance for the acquisition of services with a total estimated value in excess of the simplified acquisition threshold. (Reference FAR 2.101 and FAR 13.000).

2.27.4. Exercise additional Acquisition of Services roles as identified in Chapter 4 of this document.

2.28. Designated Acquisition Officials (DAO) will:

2.28.1. Be responsible for total life cycle management of their assigned portfolios including assigned ACAT programs and ensure collaboration across the ILCM framework. The DAO is responsible for, and has authority to accomplish, portfolio/program objectives for development, production, and sustainment to meet warfighters' operational needs. The DAO

will lead portfolios based on solid business strategies and work with the CD to secure necessary funding in time to meet those requirements.

2.28.2. Ensure PMs work with appropriate stakeholders and MAJCOM representatives to develop capabilities based requirements, operational, system and technical level architectures, test plans that integrate, technology transition plans, product support strategies, and acquisition strategies throughout the entire life cycle.

2.28.3. Maintain a continuous dialogue with the operational and implementing commands including sustaining, testing, training, and other development commands. Give early warning to the user, SAE, and acquisition staff of significant problems or issues.

2.28.4. Serve as designated officials for acquisition of services in their respective portfolio and comply with **Chapter 4** of this AFI.

2.28.5. 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. The user representative shall be part of this process throughout the life cycle and shall provide formal concurrence prior to all serious risk acceptance decisions.

2.28.6. Chair ASP for ACAT II (as delegated) and III programs.

2.28.7. Recommend PMs and Deputy PMs for ACAT II and selected programs to the SAE.

2.28.8. Approve selection of PMs for ACAT III programs.

2.28.9. Charter all delegated ACAT II and ACAT III PMs.

2.28.10. Direct PMs by emphasizing planning, reporting, and preparing for milestone and other program reviews.

2.28.11. Use the Acquisition Centers of Excellence (ACE) to provide real-time, on-call assistance to programs and as independent advisors providing recommendations on program business strategy and documentation, and for independent program assessments.

2.28.12. Review and approve SEPs per AFI 63-1201 and monitor their implementation.

2.28.13. Ensure Courses of Action (COA) are prepared for newly identified capabilities requirements and the users agree with the COA.

2.28.14. Use EVM as an oversight tool, ensure program office compliance with EVM policy and guidance, and ensure program office personnel receive adequate EVM training.

2.28.15. Ensure PMs are managing acquisition program costs and schedules to meet all performance requirements within approved baselines, program direction, and the acquisition strategy.

2.28.16. Ensure that all programs listed on the APML update program information contained in the SMART database. Review and assess each AF Monthly Acquisition Report (MAR) on a monthly basis.

2.28.17. Notify HQ AFMC of new mission workload and changes in workload to include proposed mission transfers. Work with HQ AFMC to identify requirements for program facilities, personnel, and resources and validate infrastructure investment requirements identified by PMs.

2.28.18. Review and approve the integrated life cycle strategy, as described in the Life Cycle Management Plan (LCMP).

2.28.19. Ensure validated MAJCOM needs drive the acquisition and modification planning process.

2.28.20. Review requests for EUC identified by the PMs and submit for SAF/AQ approval.

2.28.21. Review and provide concurrence on TEMPs for assigned programs where the DAO is the decision authority, or as delegated or assigned. For programs on the OSD T&E Oversight List, forward TEMPs per TEMP coordination procedures in AFI 99-103.

2.28.22. Ensure implementation across portfolio and acquisition programs for compliance with identified AF enterprise Core and 50/50 requirements to meet Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50).

2.29. Program Managers (PM), including System Program Managers (SPM), will:

2.29.1. Be accountable for designated programs through the ILCM governance chain of authority on all matters of program cost, schedule, and performance.

2.29.2. Develop appropriate programmatic documentation as required by this and other applicable instructions. Ensure the programmatic documentation is coordinated with all applicable user, sustainment, test, and system engineering stakeholders. Maintain programmatic documentation throughout the life cycle of the system in accordance with this and other instructions.

2.29.3. Ensure the LCMP fulfills the FAR requirements of the Acquisition Plan and the DODI 5000.02 requirements of the Acquisition Strategy (including the Life Cycle Sustainment Plan).

2.29.4. Execute program within the approved APB or other program baseline documentation.

2.29.5. Immediately notify the PEO/DAO of any breach or potential breach, as defined by law and/or regulation, to the APB or other original or current program baseline documentation.

2.29.6. Participate in the AoA process, development of COAs, and development of TDS.

2.29.7. Ensure product support integration as a continuous and collaborative set of activities that establish and maintain readiness and the operational capability of a system, subsystem, or end-item throughout its life cycle.

2.29.8. Ensure a Systems Engineering Plan (SEP) is developed, implemented, and updated per AFI 63-1201 to provide adequate insight into the program's technical planning.

2.29.9. Develop and implement, as applicable, Condition Based Maintenance Plus (CBM+) functions.

2.29.10. Ensure technologies in the program have been demonstrated in a relevant environment (or preferably an operational environment) prior to MS B and certified by the MDA as required. Ensure technologies are matured prior to MS C for the production of each increment of capability. Coordinate TRA preparations for MDAPs and other DAE/SAE programs with SAF/AQR no later than 12 months prior to MSs B, C. Plan, fund and

complete appropriate technology demonstrations for MSs B and C not later than 2 months prior to the Acquisition Board for each milestone. Ensure maturity of Critical Technology Elements (CTE) is addressed in MDAP source selections conducted in conjunction with MS B.

2.29.11. Ensure and preserve the operational safety, suitability, and effectiveness (OSS&E) throughout the life cycle of systems delivered to the user by working collaboratively with the user, test community, and other stakeholders.

2.29.12. Ensure an intelligence supportability analysis is conducted in collaboration with the local (center-level) intelligence office to establish program intelligence sensitivity, document intelligence requirements (to include signature requirements), and ensure current, authoritative threat data is used for analysis throughout the program life cycle. Analysis shall be conducted in accordance with AFI 14-111, *Intelligence in Force Modernization*, CJCSI 3312.01, *Joint Military Intelligence Requirements Certification* and DODD 5250.01, *Management of Signature Support Within the Department of Defense*.

2.29.13. Ensure all technology, acquisition, sustainment, and management decisions are based on a balance between system or product capabilities, integrated risk assessments, and total ownership cost (TOC).

2.29.14. Seek assistance from functional and acquisition staffs at all levels with respect to compliance with AF guidance, policies, procedures, and public law.

2.29.15. Serve as acceptance authority for program ESOH risks classified "Medium" or "Low" as defined by MIL-STD-882D. PM shall prepare and review High and Serious risk acceptance packages and forward to the appropriate authorities with an action recommendation. The user representative shall be part of this process throughout the life cycle.

2.29.16. Execute Security Assistance (Foreign Military Sales (FMS)) system acquisition programs in accordance with the Arms Export Control Act and DOD 5105.38-M, *Security Assistance Management Manual (SAMM)*. *DOD Financial Management Regulation* 7000.14-R; AFMAN 16-101, *International Affairs and Security Assistance Management*; and DOD 5105.65-M, *Foreign Military Sales (FMS) Case Reconciliation and Closure Manual*. Implementation shall also be in accordance with the DOD 5000 acquisition series; the 63-series acquisition AFIs; and the 16-series operations support AFIs.

2.29.17. Ensure aircraft system programs have an Aircraft Availability Improvement Program (AAIP) plan by MS C and airworthiness certification per AFPD 62-6, *USAF Aircraft Airworthiness Certification.*

2.29.18. Ensure aircraft and weapon/store system programs have a SEEK EAGLE certification plan completed by MS B per AFI 63-104, *The SEEK EAGLE Program*.

2.29.19. Ensure applicable programs meet the requirements of the Clinger-Cohen Act as described in Subtitle III of title 40, United States Code, DODI 5000.02, DODI 4630.8 *Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)* and DODI 8510.01 *Department of Defense Information Assurance Certification and Accreditation Process (DIACAP)*.

2.29.20. Establish an effective quality management system to ensure product quality (e.g., design, manufacturing, performance, reliability, maintainability, and military flight operations) throughout the life cycle.

2.29.21. Establish and co-chair an Integrated Test Team (ITT) prior to MS A (or as early as possible but no later than MS B) to ensure the T&E strategy is developed, coordinated and fully integrated with the acquisition, intelligence, and sustainment strategies throughout the life cycle in accordance with AFI 99-103, *Capabilities Based Test and Evaluation*.

2.29.22. Ensure the ITT develops and implements a test program, including LFT&E if required, in accordance with AFI 99-103.

2.29.23. Ensure a TEMP is developed, coordinated and updated to provide adequate insight into the program's T&E planning.

2.29.24. Develop a system certification plan as early as practical, but no later than MS B, to ensure systems are certified ready for dedicated OT&E according to AFMAN 63-119.

2.29.25. Implement a deficiency reporting process according to Technical Order (TO) 00-35D-54, *USAF Deficiency Reporting, Investigating, and Resolution* and AFI 63-501, *Air Force Acquisition Quality Program.*

2.29.26. Address all aspects of system survivability requirements specified in the program's capability documents and also plan for survivability validation and verification.

2.29.27. Provide an assessment of the system's survivability in the anticipated battlefield environment to support milestone and in-process reviews (IPR). For any shortfalls in meeting survivability requirements identified during milestone and IPR, the PM will provide a plan for meeting the requirements as well as any associated risk analysis and mitigation plan.

2.29.28. In the event of updates to the capability documents, the PM will conduct a review to assess the impacts of changes to system survivability.

2.29.29. Update program information in the SMART database for all programs listed on the APML and prepare an AF MAR on a monthly basis.

2.29.30. Ensure applicable information systems are registered in the AF system of record for IT management data, currently the Enterprise Information Technology Data Repository (EITDR) in accordance with AFI 33-202, Vol. 1, *Network and Computer Security* (to be replaced by AFI 33-200 *Information Assurance Management* and AFI 33-210, *Air Force Certification and Accreditation Process (AFCAP)* when published).

2.29.31. Plan and program for Information Assurance (IA) engineering, certification and accreditation activities in their program plans, budgets, and contracts as appropriate.

2.29.32. Utilize the SISSU process and consider employment of IT Lean on applicable IT programs.

2.29.33. Ensure weapon systems and end-items (e.g., Support Equipment/Automatic Test Systems (SE/ATS), software and firmware) that support nuclear operations follow the Air Force nuclear certification process as outlined in AFI 63-125, *Nuclear Certification Program*.

2.29.34. Identify and coordinate execution of any independent assessments required by statute, executive orders, DOD issuances, or AF issuances.

2.29.35. Ensure the new MDA is up to date on program status and planning if a program's change in ACAT level designation results in a change in MDA.

2.29.36. Ensure non-statutory or non-policy requirements (e.g. independent assessments, out-of-cycle reporting, additional oversight requests, etc.) add value or require the proponent to justify the requirement and identify the resources (e.g., materiel, personnel, skills, training, and funding) for execution. The functional proponent may appeal an SPM/PM determination through the programmatic chain up to the MDA.

2.29.37. Coordinate key program documents and decisions with appropriate members of the ILCM enterprise throughout the life cycle.

2.29.38. Implement a program protection program from inception throughout the life of the system to ensure that critical technology and Critical Program Information (CPI), including Controlled Unclassified Information (CUI), are protected against deliberate and unintended compromise or disclosure in accordance with DOD 5200.1-M, *Acquisition Systems Protection Program*, DODI 5200.39, *Critical Program Information (CPI) Protection within the Department of Defense*, and AFPAM 63-1701, *Program Protection Planning* (will convert to AFMAN 63-113, *Program Protection Planning for Life Cycle Management*).

2.29.39. Ensure that when a program enters acquisition at a point other than pre-MS A all phase-specific criteria relating to a skipped MS are completed consistent with statutory/regulatory requirements.

2.29.40. Ensure that product/system-level performance, integrity, and safety requirements are maintained throughout the operational life of a product or weapon system.

2.29.41. Ensure industrial base constraints are identified and managed throughout the life cycle.

2.29.42. Ensure the establishment of depot stand-up actions from Source of Repair (SOR) decisions.

2.29.43. Implement identified AF enterprise Core and 50/50 program requirements to meet Title 10 USC §2464 (Core) and Title 10 USC §2466 (50/50).

2.29.44. Contact SAF/AQL for assistance with Special Access Programs (SAP).

2.29.45. Collaborate with sponsoring MAJCOMs/Agencies to identify cost and schedule impacts associated with changing any approved operational requirements.

2.29.46. Provide depot activation requirements and funding data to AFMC as requested. Collaborate with AFMC on depot activation requirements and funding.

2.30. Acquisition Centers of Excellence (ACE) will:

2.30.1. Provide expert advice and on-call, real time assistance (pre- and post-award) to the space and non-space SAE, AFMC/CC, AFSPC/CC, PEOs, DAOs, PMs, logistics center commanders and others per the ACE Concept of Operation (CONOPS). Provide support for acquisition strategy development, source selection, acquisition risk management, acquisition just-in-time training, best practices, and lessons learned.

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

2.30.3. Provide specific acquisition help, advice, and assistance as an independent advisor to the program execution leadership (MDA, SAE, PEO, DAO, and center commanders).

2.30.4. Support the implementation of acquisition process improvements within product and logistics centers by identifying issues/problems for process redesign, participating in redesign efforts, and communicating and facilitating re-engineered processes changes. Provide training to the workforce as they implement process changes.

2.31. HQ AF, Chief of Safety (AF/SE) will:

2.31.1. Support AFRBs.

2.31.2. Coordinate on all ESOH Serious and High Risk Acceptance packages before submission for SAE acceptance.

Chapter 3

ACQUISITION AND SUSTAINMENT LIFE CYCLE READINESS

Section 3A—Acquisition and Sustainment Processes

3.1. Acquisition and Sustainment Processes Overview. The Program Manager (PM) has to assess and balance multiple process requirements from this guidance and other DOD and Headquarters Air Force (HAF) issuances. This section contains acquisition and sustainment process requirements applicable to Integrated Life Cycle Management (ILCM). Critical processes within the ILCM enterprise must be standardized to provide repeatable and predictable results. Process owners shall engage policy Offices of Primary Responsibility (OPRs) to ensure that standardized processes are codified in appropriate HAF or MAJCOM issuances. Additional detail on specific documents, requirements, limitations, and activities is presented in later sections.

3.2. Milestone Decision Authority (MDA) Decisions, Certifications, and Reviews. The MDA may tailor program strategies and oversight, including documentation of program information, life cycle phases, 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. All tailoring decisions will be documented by the PM and approved by the MDA. The MDA will consider total life cycle factors such as the program's cost, funding, risk, schedule, importance to the user, technical complexity, information support, and program interfaces when making programmatic decisions. The MDA will conduct program reviews to assess the adequacy of all life cycle strategies, planning, and documents. 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. At the request of the MDA and/or PM, all supporting functional staffs will provide resources and advice as appropriate. MDAs will review at least semi-annually any MDAP that has exceeded critical cost growth thresholds but has not been terminated, until one year after the date on which the program receives a new milestone approval.

3.2.1. **Tailoring Regulatory Information and Procedures.** The MDA may tailor DODI 5000.02 regulatory program information (Enclosure 4, *Statutory and Regulatory Information and Milestone Requirements*) to fit the particular conditions of an individual program. The MDA and PM may tailor AF Departmental guidance only to the extent provided in each applicable directive. Non-compliance with Departmental guidance requires the PM to notify the appropriate HAF organization as outlined in AFPD 63-1/20-1.

3.2.2. All acquisition and sustainment execution requirements, processes, procedures, or activities which require resources and are not required by statutes, executive orders, DOD issuances, Air Force directive issuances, or previously approved through the programmatic chain of command, must add value to the mission. Organizations outside the programmatic chain provide support and advice to the decision makers. If the PM analysis indicates a functional requirement does not add value, the PM can require the proponent to justify the requirement and identify the resources (e.g., materiel, personnel, skills, training, and funding) for execution. The functional proponent may appeal a PM determination through the programmatic chain up to the MDA. The burden of proof lies with the proponent.

3.2.3. The MDA shall comply with all program Milestone (MS) certification requirements as prescribed by statute or DOD policy.

3.2.3.1. MS A Certification. The MDA for all MDAPs, without the authority to delegate, shall assess the program and sign a certification memorandum prior to MS A approval. MDAPs that received MS A approval prior to 22 May 2009 (date of enactment of the Weapon Systems Acquisition Reform Act of 2009) and have not yet reached MS B must complete MS A certification as described herein prior to 22 May 2010. The certification will be completed via a memorandum for the record and will include the statements in 10 USC §2366a without modification.

3.2.3.1.1. For MDAP programs the MDA certifies at MS A:

3.2.3.1.1.1. The program fulfills an approved initial capabilities document.

3.2.3.1.1.2. The program is being executed by an entity with a relevant core competency as identified by the Secretary of Defense

3.2.3.1.1.3. If the program duplicates a capability already provided by an existing system, the duplication provided by such system is necessary and appropriate.

3.2.3.1.1.4. An AoA has been performed consistent with the study guidance developed by the Director of Cost Assessment and Program Evaluation.

3.2.3.1.1.5. That a cost estimate for the program has been submitted with the concurrence of Director of Cost Assessment and Program Evaluation (D,CAPE) and that the level of resources required to develop and procure the program is consistent with the priority level assigned by the Joint Requirements Oversight Council (JROC).

3.2.3.1.2. In addition to certification, the MDA of MDAP programs shall include the following in the ADM for MS A: “I have made the certifications required by section 2366a of title 10, United States Code.”

3.2.3.1.3. The PM shall notify the MDA if the projected cost of the program, at any time prior to MS B approval, exceeds the cost estimate for the program submitted at the time of the MS A certification by at least 25 percent or the program manager determines that the period of time required for the delivery of an initial operational capability is likely to exceed the schedule objective submitted at the time of certification by more than 25 percent.

3.2.3.1.4. The MDA, in consultation with the JROC/AFROC on matters related to program requirements and military needs, determines whether the level of resources required to develop and procure the system remains consistent with the priority level assigned by the JROC/AFROC. The MDA may withdraw the certification concerned or rescind MS A approval if the MDA determines that such action is in the interest of national defense.

3.2.3.1.5. The MDA submits to the congressional defense committees within 30 days of PM notification of an MDAP cost or schedule growth prior to MS B a report that identifies the root causes and appropriate acquisition performance measures and includes one of the following:

3.2.3.1.5.1. A written certification (with a supporting explanation) stating that the program is essential to national security; there are no alternatives to the program that will provide acceptable military capability at less cost; new estimates of the development cost or schedule, as appropriate, are reasonable; and the management structure for the program is adequate to manage and control program development cost and schedule.

3.2.3.1.5.2. A plan for terminating the development of the program or withdrawal of MS A approval, if the MDA determines that such action is in the interest of national defense.

3.2.3.2. MS B Certification. The MDA for an MDAP, without the authority to delegate, shall assess the program business case and sign a certification memorandum prior to MS B approval. MDAPs that received MS B approval prior to 6 Jan 2006 and have not yet reached MS C must complete MS B certification as described herein prior to 16 Feb 2010 or must complete annual certification assessment reviews the time of certification.. The certification memorandum shall include the statements in 10 U.S.C. §2366b without modification. If the program is initiated at a later date, i.e., MS C, a similar certification memorandum shall be prepared. The certification shall be submitted to the congressional defense committees with the first Selected Acquisition Report submitted after completion of the certification.

3.2.3.2.1. For MDAP programs the MDA certifies at MS B that:

3.2.3.2.1.1. The program has received a business case analysis and certifies on the basis of the analysis that the program is affordable when considering the ability of the Department of Defense to accomplish the program's mission using alternative systems.

3.2.3.2.1.2. Appropriate trade-offs among cost, schedule, and performance objectives have been made to ensure that the program is affordable when considering the per unit cost and the total acquisition cost in the context of the total resources available during the period covered by the future-years defense program submitted during the fiscal year in which the certification is made.

3.2.3.2.1.3. Reasonable cost and schedule estimates have been developed to execute, with the concurrence of the Director of Cost Assessment and Program Evaluation, the product development and production plan under the program.

3.2.3.2.1.4. Funding is available to execute the product development and production plan under the program, through the period covered by the future-years defense program submitted during the fiscal year in which the certification is made.

3.2.3.2.1.5. The program has received a PDR and conducted a formal post-PDR assessment, and certifies on the basis of such assessment that the program demonstrates a high likelihood of accomplishing its intended mission.

3.2.3.2.1.6. Appropriate market research has been conducted prior to technology development to reduce duplication of existing technology and products.

3.2.3.2.1.7. The DOD has completed an analysis of alternatives with respect to

the program.

3.2.3.2.1.8. The JROC has accomplished its duties with respect to the program including an analysis of the operational requirements for the program.

3.2.3.2.1.9. The technology in the program has been demonstrated in a relevant environment as determined by the MDA on the basis of an independent review and assessment by the Director of Defense Research and Engineering.

3.2.3.2.1.10. The program complies with all relevant policies, regulations, and directives of the DOD.

3.2.3.2.2. In addition to certification, the MDA of MDAP programs shall include the following in the ADM for MS B: "I have reviewed the program and the business case analysis and have made the certifications required, or executed a waiver of the applicability of one or more of the components of the certification requirement as authorized by section 2366b of title 10, United States Code."

3.2.3.2.3. The PM shall notify the MDA immediately of any changes to the program that alter the substantive basis for the certification relating to any component of such certification or otherwise cause the program to deviate significantly from the material provided in support of such a certification. Upon receiving the notification, the MDA may withdraw the certification concerned or may rescind MS B approval if the MDA determines that such certification approval is no longer valid.

3.2.3.2.4. Waiver for National Security. The MS B MDA may, at the time of MS B approval or at the time of withdrawing a certification or rescinding MS B approval waive the applicability of one or more components of the certification requirement if the MDA determines that, but for such a waiver, the DOD would be unable to meet critical national security objectives. Whenever the MDA makes such a determination and authorizes such a waiver:

3.2.3.2.4.1. The waiver, the determination, and the reasons for the determination shall be submitted in writing to the congressional defense committees within 30 days after the waiver is authorized.

3.2.3.2.4.2. The MDA shall review the program not less often than annually to determine the extent to which the program currently satisfies the certification components until such time as the milestone decision authority determines that the program satisfies all certification components. All budget requests, budget justification material, budget displays, reprogramming requests, Selected Acquisition Reports, or other budget documentation or performance reports submitted to Congress must prominently and clearly indicate that the program has not fully satisfied the certification requirements (until such time as the MDA determines that the program has satisfied such certification requirements)..

3.2.4. Where the course of action, as approved and documented through the programmatic chain of command, conflicts with an AFPD, the PM shall submit a request for a waiver to the certifying authority for the publication, who will obtain SECAF approval for the waiver if warranted. Where the course of action, as approved and documented through the programmatic chain of command, conflicts with Air Force Departmental directive issuances

other than AFPDs, the PM shall submit a notification via memorandum to the appropriate SAF/AQ Capability Directorate, SAF/USA or AF/A4L for action. For programs on the APML, the notification should be submitted to the applicable SAF/AQ Capability Directorate. Notifications involving space programs should be submitted through SAF/USA. For programs on the SPML, the notification should be submitted to AF/A4L. Appropriate action shall be taken by the SAF/AQ Capability Directorate, SAF/USA, or AF/A4L to either provide direction to comply with policy, obtain a waiver to requirements, or to initiate changes to publications as appropriate to resolve the conflict IAW AFI 33-360. Resolution of conflicts between Air Force issuances shall be resolved by SAF/AQX, SAF/USA, AF/A4L or SAF/IEL and the appropriate HAF functional.

3.3. Capability Based Requirements Development. The operational community is responsible for developing capability based requirements. However, the other ILCM stakeholders will participate to gain understanding and communicate the "art of the possible." Refer to CJCSI 3170.01, Joint Capabilities Integration and Development System, the JCIDS Manual, AFI 10-601, Capabilities-Based Requirements Development, and AFI 10-604, Capabilities-Based Planning for additional details about the requirements development process.

3.3.1. The AFMC/CC and AFSPC/CC will support the Chief of Staff of the Air Force (CSAF), Service Acquisition Executives (SAE) and other MAJCOM/CCs by:

3.3.1.1. Recommending phasing and adjustments of requirements to ensure operationally acceptable increments are fielded in a timely manner.

3.3.1.2. Monitoring and controlling weapon system requirements baselines from MS A to fielding.

3.3.1.3. Attesting to feasibility of operational requirements concurrent with all CDD and CPD presentations to the AFROC. Feasible is defined as the requirements are technically achievable and executable within the estimated schedule and budgeted life-cycle cost.

3.3.2. The Joint Capabilities Integration and Development System (JCIDS) process is closely integrated with the acquisition process and exists to identify, develop, and validate capability based requirements. JCIDS implements an approach that 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. In order for the processes to work effectively together, early and continual collaboration is required between both communities.

3.3.3. The PM shall support the establishment of the operational and sustainment related performance attributes that provide the capability that support the warfighter. All acquisition personnel who engage directly with the requirements community on requirements documents shall take the Defense Acquisition University (DAU) training module CLM 041 and the online training course RQM 110 (or appropriate executive level course).

3.3.4. For ACAT I, ACAT IA, and non-delegated ACAT II programs within their portfolio, the SAE and AFMC/CC or AFSPC/CC shall certify CDDs to the SECAF concurrent to document presentation to the AFROC. The certification shall attest:

3.3.4.1. The CDD requirements can be clearly and unambiguously translated for evaluation in a source selection.

3.3.4.2. The capabilities are prioritized (if appropriate) and organized into feasible increments of capability that are technically achievable and executable within the estimated schedule and budgeted life cycle cost.

3.4. Mission Assignment. The AF mission assignment process establishes management responsibilities in support of approved missions to achieve designated AF ILCM enterprise objectives. AFMC/AFSPC shall establish mission assignment processes to manage resources and align the acquisition and sustainment infrastructure and levels of service that ensure the proper resources and skills are positioned to achieve designated program outcomes.

3.4.1. HQ AFMC shall complete mission assignment for non-space activities in sufficient time to define and program for resources to support acquisition and sustainment planning, but not later than program initiation (usually MS B). HQ AFMC will refer to the Acquisition Program Master List (APML) and Sustainment Program Master List (SPML) to ensure appropriate mission assignments.

3.4.2. HQ AFSPC shall complete mission assignment for space activities in sufficient time to define and program for resources to support acquisition and sustainment planning, but not later than program initiation (usually MS A).

3.4.3. Capability Directors, PEOs, DAOs, PMs, MAJCOMs or other impacted organizations will notify HQ AFMC or HQ AFSPC of any change of workload that may impact a mission assignment. This notification will occur at Initial Capabilities Document (ICD) and/or Capability Development Document (CDD) initiation, Materiel Development Decision (MDD), initial Acquisition Decision Memorandum (ADM), or completion of Materiel Solution Analysis but not later than program initiation. Notification should occur in sufficient time to ensure HQ AFMC or HQ AFSPC can assess, define and program for resources to support acquisition and sustainment planning.

3.5. Evolutionary Acquisition (EA). EA is the DOD and AF preferred acquisition strategy for rapidly delivering needed capabilities to the users based on the maturation of technologies. The success of the EA strategy depends on consistent and repeated validation of operational capability requirements, stated in increments of increasing capability. These lead to the development of systems providing required capability. EA strategies demand maturation of technologies, robust systems engineering, and improved supportability strategies focused on adding capabilities in future increments. Under some circumstances, systems may be fielded using a traditional single step to full capabilities approach.

3.5.1. An EA approach delivers capabilities in increments, recognizing up front the need for future capabilities improvements. EA works hand-in-hand with the requirements process to provide 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 supportable capabilities into the hands of the operator. During all phases of EA, sustainment elements must be considered and included in acquisition planning in order to sustain the system cost effectively. **Figure 3.1** displays a notional program being developed using an

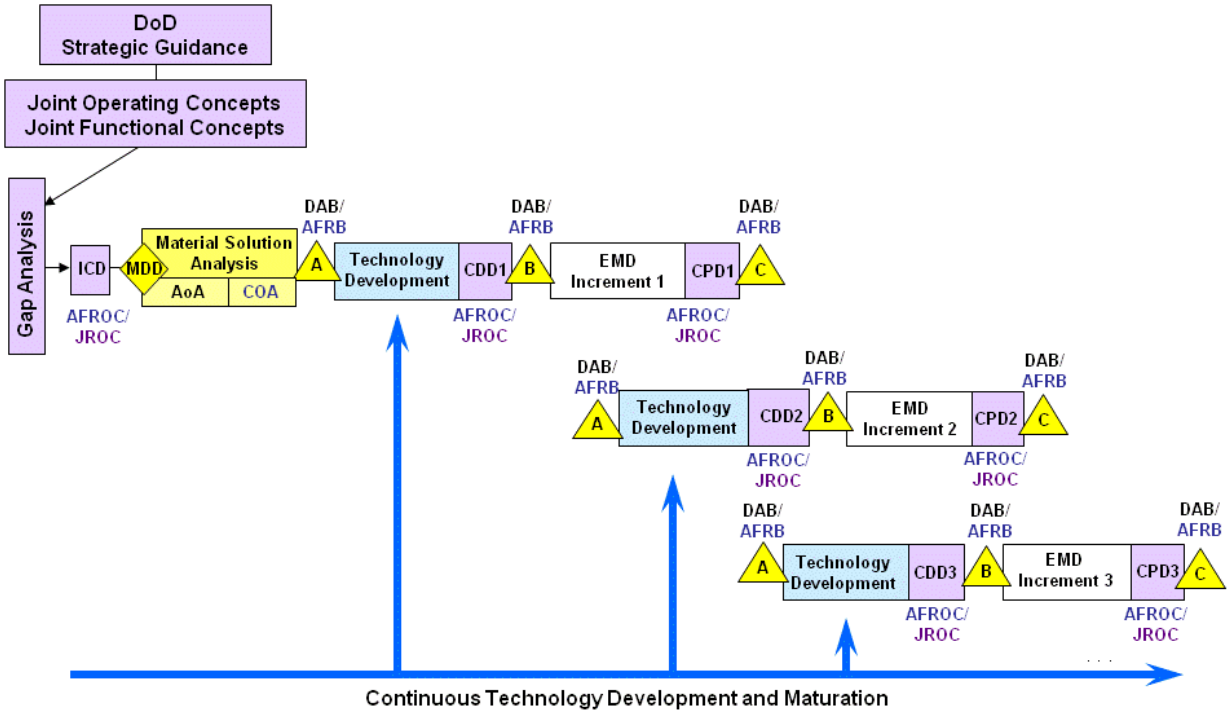
EA approach. Technology development preceding initiation of an increment shall be at the required level of maturity.

3.5.2. **Incremental Development.** There are two approaches to incremental development. The first consists of validated increments at program initiation that lead to satisfying the full end-state capability. The second consists of validated capability needs for the initial increment(s), while future increments and the precise end-state capabilities are not finalized at program initiation.

3.5.2.1. For incremental development that satisfies the full capability need, capability documents specify a stable, well-defined end-state capability and stable, well-defined 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 sustained.

3.5.2.2. For incremental development where the end-state capability is not defined, incremental development relies on user feedback and technology maturation to define requirements for future validation. In this process, the initial capability requirements specify a stable, well-defined first increment(s), including an IOC date for those defined increments. Future increments and end-state capabilities are not finalized 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. Future capabilities requirements for subsequent increments are refined through demonstration and risk management.

Figure 3.1. Evolutionary Acquisition Approach.



3.6. Management of System of Systems (SoS)/Family of System (FoS). Systems of Systems/Family of Systems acquisition is required when a materiel solution analysis to a capability need described in an Initial Capability Document (ICD) cannot be accomplished by a single weapon system, and will require collaboration of new and/or modified weapon systems and existing weapon systems. MDAs and PMs for programs that are system of systems will be cognizant of the decomposition and allocation of capabilities and resources amongst the constituent systems and other elements of the SoS/FoS. Special consideration will be given to critical technical interfaces and programmatic interdependencies. During the acquisition and sustainment process, MDAs shall consider overall system progress during milestone reviews.

3.7. Air Force Review Boards (AFRB)/Acquisition Strategy Panels (ASP). AF Review Boards/Acquisition Strategy Panels are integral to a deliberative process that supports AF leadership in making milestone decisions or conducting major decision reviews.

3.7.1. Air Force Review Boards (AFRB).

3.7.1.1. AF Review Boards are forums chaired by the SAE for conducting major decision reviews (in- or out-of-cycle), as well as making and documenting major milestone decisions. AFRBs are not conducted for services or space programs.

3.7.1.2. AF PM&AE is the AFRB process owner and secretariat.

3.7.1.3. The AFRB process is required for all ACAT IC, ACAT IAC, non-delegated ACAT II programs and special interest programs. The PEO may recommend what type of AFRB is necessary: full, mini (tailored attendance), or paper. A template and more information can be found at the AF PM&AE AF Portal Page.

3.7.1.4. For ACAT ID and ACAT IAMs, AFRBs are used to develop the AF corporate consensus prior to an OSD Defense Acquisition Board (DAB) (pre-DAB within AF) or Information Technology Acquisition Board (ITAB). The AFRB should be conducted no later than two weeks prior to last OSD Overarching Integrated Product Team (OIPT). The SAE determines if an ACAT ID or ACAT IAM program requires an AFRB.

3.7.1.5. PEOs and DAOs execute a tailored AFRB process for delegated ACAT II and ACAT III programs.

3.7.2. Acquisition Strategy Panel (ASP).

3.7.2.1. The Acquisition Strategy Panel supports the SAE and other MDAs. ASPs are forums that evaluate proposed acquisition strategies to ensure all key viable alternatives have been considered and that the best recommendation is provided to the SAE and/or the program's MDA for approval.

3.7.2.2. The AF PM&AE is the SAE-chaired ASP process owner and secretariat for all ACAT I/IA and non-delegated ACAT II programs.

3.7.2.3. The field ACE offices are the ASP process owner and secretariat for all non-SAE chaired ACAT II and III PEO/DAO programs.

3.7.2.4. Information concerning SAE-chaired ASPs, such as the current draft template for briefings, can be found at the AF PM&AE AF Portal Page. Additionally, similar information pertaining to non-SAE chaired ASPs can be found at each of the respective Field ACE websites which are accessible on the AF PM&AE AF Portal Page.

3.7.2.5. Additional information regarding general ASP requirements can be found in AFFARS 5307.104-90, *Acquisition Strategy Panels (ASPs).*

3.8. Configuration Steering Board (CSB). RESERVED

3.9. Design Reviews (Preliminary Design Review (PDR)/Critical Design Review (CDR)) Reports and Assessments. RESERVED

3.10. AF Non-Space Acquisition Program Master List (APML).

3.10.1. The APML will include all non-space ACAT ID, IC, IAM, IAC, II, and III programs. Those potential ACAT I programs that have not gone beyond a MS-B will be annotated as pre-Major Defense Acquisition Programs (pre-MDAPs) and ACAT IA programs that have not gone beyond a MS-B will be annotated as pre-Major Automated Information System (pre-MAIS). Those projects that have not gone beyond a MS-B that will result in ACAT II or III programs will be annotated as Pre-MS B.

3.10.2. Efforts that meet the following criteria shall be coordinated through the appropriate Capability Directorate for final approval by either the SAE or Defense Acquisition Executive (DAE) for inclusion by SAF/AQX on the AF Non-Space APML:

3.10.2.1. Any effort that meets the definition of an Acquisition Program found in the DOD 5000 series.

3.10.2.2. Any effort that met an MDD and entered the acquisition management system as an ACAT or potential ACAT program.

3.10.2.3. Any effort within a larger program that requires separate reporting or acquisition program documentation.

3.10.2.4. Any effort in a weapon or IT system in sustainment that requires expenditure of research, development, test and evaluation (RDT&E) funds.

3.10.2.5. Any effort designated as a program by the DAE or SAE.

3.10.3. Capability Directors (CDs) will ensure that program information contained in Program Management Directives (PMDs) is consistent with the information contained on the APML.

3.10.4. PEOs will ensure that program information contained in the System Metrics and Reporting Tool (SMART) database is consistent with the information contained on the APML.

3.10.5. PEOs will submit to the CDs any proposed updates/recommended changes to the current APML for final approval by either the SAE or DAE.

3.10.6. SAF/AQX shall maintain the non-space APML and ensure it is current.

3.11. Sustainment Program Master List (SPML). HQ AFMC is responsible for maintaining the SPML for all non-space sustainment programs.

3.11.1. HQ AFMC shall update the SPML at least annually for all non-space sustainment programs.

3.11.2. PEOs or ALC Commanders will submit to HQ AFMC any proposed updates/recommended changes to the current SPML for final approval by AFMC/CC.

3.12. Request for Reclassification of Acquisition Programs Categorization. For reclassification of an ACAT I or IA program to a lower ACAT, the SAE must submit requests to USD(AT&L), or the OASD/NII or DOD CIO, whichever applies. The request shall identify the reasons for the reduction in ACAT. The PM shall notify the PEO/DAO and the SAE when it is necessary to raise the ACAT category from an ACAT III or ACAT II to a higher level ACAT category. This notification shall be made immediately upon determining that the program meets the requirements of the higher category as defined in DODI 5000.02. If the program qualifies as an ACAT I program, the program is assumed to be an ACAT ID or IAM until the SAE requests and the USD(AT&L) or OASD/NII agrees to categorize the program as an ACAT IC or ACAT IAC. USD(AT&L), OASD/NII, or the DOD Chief Information Officer (CIO) may reclassify an acquisition program as a pre-MDAP/MAIS or as an ACAT ID or IAM at any time.

3.13. Life Cycle Acquisition and Sustainment Reporting. Life cycle metrics are critical elements in characterizing the progress in a program's achievement of its goals. PMs will use life cycle metrics, including sustainment metrics, to evaluate program status and determine if programs are meeting the weapon system life cycle requirements. Objectives for the metrics shall be established early in the Materiel Solution Analysis Phase, refined throughout the Technology Development and Engineering and Manufacturing Development (EMD) Phases, and then carried through as program baseline goals until system retirement.

3.13.1. All programs listed on the APML and space programs shall initiate and maintain program data to include, at a minimum, cost, schedule, performance, test, logistics, contracts, finance, risk and earned value within the SMART acquisition management system and use SMART to prepare a monthly report. Monthly reports for APML programs will be reviewed by the PEO or DAO and SAE. Reporting requirements and use of SMART by programs on the SPML is at the discretion of the AFMC/CC or designee.

3.13.2. ACAT designated programs shall follow DOD 5000 series for DOD and Congressional reporting requirements.

3.13.3. The PM shall define, measure, report, and make programmatic decisions using appropriate life cycle outcome-oriented metrics. In all cases, the metrics tracked should be aligned with the organization's strategy and objectives as well as provide actionable insight into how well the organization is achieving those objectives.

3.13.4. The PM shall collect, report, and analyze sustainment metrics to measure program life cycle sustainment outcomes that satisfy the sustainment KPP/ Key System Attributes (KSAs) defined by the user in accordance with the JCIDS Manual. This will include as a minimum, materiel availability, materiel reliability, total ownership cost (TOC) and mean down time (MDT). Additional sustainment metric calculation information can be found in AFPAM 63-128.

3.13.4.1. Materiel availability shall measure the percentage of the total inventory of a weapon system's operational capability (ready for tasking) based on materiel condition for performing an assigned mission at a given time. Materiel availability for aircraft will be measured in accordance with AFI 21-101, *Aircraft and Equipment Maintenance Management.*

3.13.4.2. Materiel reliability shall measure the probability that the system will perform without failure over a specific interval. Materiel reliability for aircraft will be measured in accordance with AFI 21-101.

3.13.4.3. TOC shall measure total costs as identified in the OSD Cost Analysis Improvement Group's (CAIG) Operating and Support (O&S) Cost Estimating Structure. TOC will be measured referencing OSD CAIG *Operating and Support Cost-Estimating Guide*, Chapter 4, elements 2.0 through 5.0.

3.13.4.4. Mean down time shall measure the average total downtime required to restore an asset to its full operational capabilities. Mean down time (MDT) for aircraft shall be measured by combining Total Not Mission Capable - Maintenance (TNMCM) time and Total Not Mission Capable - Supply (TNMCS) time in accordance with AFI 21-101.

3.14. Life Cycle Expectation Management. The PM shall ensure effective expectation management is an integral part of the system integrated life cycle management strategy. Successful expectation management will reduce the number of significant issues and surprises that hurt the acquisition community's credibility with Congress, OSD, and AF leadership. The roles and responsibilities of expectation management cut across the acquisition, sustainment, and operational user communities. Program changes or other influences that drive expectation adjustments must be made clear to the most senior leaders who have responsibility for the success of a program. Expectation management documents capture existing validated requirements and agreements among program stakeholders. Documents such as a Life Cycle Management Plan (LCMP) or the Expectation Management Agreement (EMA) will be accessible from an authoritative source to provide the basis for communicating expectations between stakeholders.

3.15. Total Ownership Costs (TOC). Total ownership cost of a system encompasses all life cycle costs including development, production, operations, support, and disposal costs.

3.15.1. At a minimum TOC consists of the following cost elements as defined in the CAIG Operating and Support (O&S) Cost Estimating Structure: Unit Operations (**2.1.1** only); Energy (fuel, petroleum, oil, lubricants, electricity); Maintenance (All); Sustaining Support (all except **4.1**, System Specific Training); Continuing System Improvements (all). Fuel costs will be based on the fully burdened cost of fuel. Costs are to be included regardless of funding source, and the value should cover the planned life cycle timeframe, consistent with the timeframe used in the Materiel Availability KPP. Sources of reference data, cost models, parametric cost estimating relationships, and other estimating techniques or tools must be identified in supporting analysis. Programs must plan for maintaining the traceability of costs incurred to estimates and must plan for testing and evaluation.

3.15.2. The PM shall seek to reduce costs of operating DOD systems while improving readiness, and will be held accountable for clear and timely articulation of actions to reduce life cycle costs for their systems.

3.15.3. Consideration shall be given to both operational and life cycle economic impacts when evaluating technical trade-offs or allocating resources among research and development, acquisition, operating and support costs. TOC must be appropriately estimated and documented to provide the decision makers the needed information for evaluating options.

3.15.4. To reduce the cost of fielded systems while still meeting the program's technical requirements, the PM shall continuously look for opportunities to improve reliability and maintainability; reduce logistics footprints and supply chain response times; and ensure competitive sourcing of product support resulting in streamlining and overhead reductions. Initiatives to consider include Value Engineering (VE), Public-Private Partnerships (PPP), and Reduction of Total Ownership Cost (R-TOC).

3.16. Risk-Based Program Management and Decision Making.

3.16.1. **Programmatic Risk.** PMs shall pursue a comprehensive integrated risk analysis throughout life cycle and shall prepare and maintain a risk management plan. Risks include, but are not limited to, cost, schedule, performance, technical, product data access, technology protection, integration, and Environment, Safety, and Occupational Health (ESOH) risks. These risk areas are influenced by factors such as program stability, manning, contractor execution, the chosen technologies, intelligence supportability, system design and manufacturing processes. Methodologies used to manage risk shall include Risk Management Plans (RMP), program risk reviews, risk-based source selection, technical risk management, Probability of Program Success (PoPS), and the *DoD Standard Practice for System Safety* prescribed in MILSTD882D.

3.16.2. **Probability of Program Success (PoPS).** All programs shall use PoPS to provide program management, at all levels, with leading indicators of risks that can impact program success. Programs shall update PoPS through the SMART database. The *PoPS Operations Guide*, which contains extensive instructions on completing PoPS and populating the PoPS windshield chart, is available at each Center Acquisition Center of Excellence (ACE) or through the Acquisition Chief Process Office (SAF/AQX-ACPO).

3.16.3. **Risk-based Source Selection.** The source selection approach, as part of the acquisition strategy, shall be developed to reduce risk over the life cycle of the program. This includes identifying the strengths, weaknesses, domain experience, process capability, development capacity, and past performance for all developer team members with significant development responsibilities. Source selection guidance and procedures are contained in FAR Part 15, DFARS Part 215, AFFARS 5315.3 and AFFARS Mandatory Procedure 5315.3. To realize high confidence source selection, the Request for proposal (RFP) and source selection approach should require the following:

3.16.3.1. Expectations for warfighters, users, decision-makers, evaluation teams, and industry from the outset of the source selection. This includes an understanding by all of the desired end-state and clear expectations to industry on proposal requirements and timelines.

3.16.3.2. A clear understanding of the methods of estimating costs for the program including uncertainty analysis and verification requirements. The government most probable cost estimate may need to be verified by a certified cost estimator in accordance with SAF/FM policy/guidance.

3.16.3.3. Identification of the key discriminators from among the mission requirements. These must represent the key areas of importance and emphasis to be considered in the source selection decision and support meaningful comparison and discrimination between and among competing proposals.

3.16.3.4. Establishment of the minimum performance or capability requirements against which offers will be judged. For contracts after MS B this includes minimum prototype performance.

3.16.4. **Technical Risk Management.** Chief/Lead Engineers have execution responsibility for technical risk management, and shall utilize Systems Engineering throughout the life cycle, in accordance with AFI 63-1201, *Life Cycle Systems Engineering*, to manage program technical risks. Technical risk management includes risk based prototype planning and development.

3.16.5. All programs conduct Technology Readiness Assessments (TRA) per DODI 5000.02 and are encouraged to conduct Manufacturing Readiness Assessments (MRA) in preparation for program Milestones.

3.16.5.1. Technology Readiness Assessments (TRA). The TRA is the primary tool to assess the maturity of critical technology elements at MS B and C. For MDAPs, the TRA provides information to support MDA certification that "*the technology in the program has been demonstrated in a relevant environment*" prior to MS B approval per USC Title 10 (§2366b). If the MDAP is initiated at a later decision point, MDA certification is required prior to that decision point. Technologies that are demonstrated in a relevant environment are at a Technology Readiness Level 6 (TRL 6) (reference *DOD Technology Readiness Assessment (TRA) Deskbook*, July 2009, for additional guidance.)

3.16.5.1.1. All acquisition programs on the APML shall complete an objective, measurable TRA for MDA consideration prior to MS B and MS C.

3.16.5.1.2. Critical Technology Elements (CTE) (reference *DOD Technology Readiness Assessment (TRA) Deskbook*) shall be demonstrated prior to MS B in a relevant environment (preferably an operational environment) and matured for the production of each increment of capability prior to MS C. The PM and Chief/Lead Engineers will incorporate appropriate technology demonstrations in program acquisition documentation to support milestone decision points.

3.16.5.1.3. The MDA directs, reviews, and approves TRAs for delegated ACAT II and III programs.

3.16.5.1.4. SAF/AQR directs MS B and C TRAs for Air Force programs where the SAE or DAE is the MDA. SAF/AQR reviews and endorses MS B and C TRAs to SAF/AQ for SAE programs and to DUSD (S&T) for DUSD (AT&L) and OASD/NII programs. The results of space TRAs for MS B and C are forwarded to the MDA and Independent Program Assessment Team (IPAT) leader.

3.16.5.1.5. The PM shall contact SAF/AQR 12 months prior to MS B for MDAP programs to coordinate TRA preparations.

3.16.5.1.6. The PM shall address technology maturity in the solicitation supporting source selections conducted in conjunction with a MS B. The measure of merit that "the technology in a program has been demonstrated in a relevant environment" is that all Critical Technology Elements (CTE) are at TRL 6 or greater. The PM shall include language in solicitations for the EMD phase advising offerors that (1) the government will not award a contract to an offeror whose proposal is based on CTEs

that have not been demonstrated in a relevant environment, and (2) that offerors will be required to specify the technology readiness level of the CTEs on which their proposal is based and to provide reports documenting how those CTEs have been demonstrated in a relevant environment.

3.16.5.2. **Manufacturing Readiness Assessment (MRA).** The MRA including identifying Manufacturing Readiness Levels (MRLs) were developed to provide an understanding of manufacturing risk and maturity similar to TRLs. MRLs and MRAs can foster better decision making, program planning and program execution through improved understanding and management of manufacturing risk. See *Acquisition Community Connection*, **https://acc.dau.mil**, for more information.

3.16.6. Environment, Safety and Occupational Health (ESOH). Although an integral part of a program's overall Risk Management effort throughout the system's life cycle, ESOH risk management has some unique requirements imposed by DODI 5000.02.

3.16.6.1. The PM and Lead/Chief Engineer shall use the DOD Standard Practice for System Safety, MIL-STD-882D, to manage ESOH risks as part of the Systems Engineering (SE) process in all developmental and sustaining engineering activities.

3.16.6.2. The PM should try to eliminate ESOH hazards where possible and minimize the ESOH risks where the hazards cannot be eliminated.

3.16.6.3. ESOH hazards and risks include those resulting from routine system operations and maintenance (O&M); from mishaps or system or subsystem failures; and from potential impacts to program cost, schedule, and performance from requirements to comply with ESOH laws and regulations.

3.16.6.4. The PM shall document the strategy for integrating ESOH considerations into the SE process in a Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE).

3.16.6.5. **Formal ESOH Risk Acceptance.** The PM shall document that the associated risks have been accepted by the following acceptance authorities: the SAE for high risks, PEO-level for serious risks, and the PM for medium and low risks prior to exposing people, equipment, or the environment to known system-related ESOH hazards. Formal risk acceptance requirements apply throughout the life of the system.

3.16.6.5.1. Serious and High risk acceptance packages shall be coordinated with the user representative, SAF/AQR, and AF/SE before submission to the SAE for acceptance.

3.16.6.5.2. The PM shall ensure each High risk acceptance package describes the hazard; predicted risk consequence and probability; available mitigation measures; costs, or other limitations to mitigation implementation; proposed mitigation measures; resulting net mishap risk after implementation of proposed mitigation; the proposed acceptance period; and an assessment of the expected losses for the period of acceptance.

3.16.6.5.3. The period of a risk acceptance should be either the remaining life of the system if no mitigations are proposed, or the period for implementation of the

proposed mitigation(s) throughout entire fleet plus sufficient time to validate the effectiveness of the implemented mitigation(s).

3.16.6.5.4. The risk assessments that support High risk acceptance packages must conform to the guidance in MIL-STD-882D and AFI 91-202, *The US Air Force Mishap Prevention Program*, Attachment 15.

3.16.6.6. The PM shall report the status of all applicable ESOH technology requirements at all program and technical reviews.

3.16.6.7. In addition to inclusion in the ESOH hazard tracking system of identified hazardous materials either imbedded in the system or used for system O&M, the program will provide additional information in the tracking system on the locations, amounts, disposal requirements, and special training requirements for the hazardous materials. Program Offices developing or sustaining aircraft will provide this information to the Air Force Civil Engineer Support Agency (AFCESA) responsible for including these data in TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services).*

3.16.6.8. The PM shall assist the system testers, operators, and maintainers in the application of Operational Risk Management (ORM) to those systems, to include the assessment of hazards and potential mitigation measures. Refer to AFI 90-901, *Operational Risk Management*, for more information on ORM.

3.16.6.9. The PM shall provide system-specific ESOH hazard and risk analyses and data to support using commands' and T&E organizations' National Environmental Policy Act/Environmental Impact Analysis Process (NEPA/EIAP) and E.O. 12114, *Environmental Effects Abroad of Major Federal Actions*, documentation requirements.

3.16.6.10. The PM shall support the mishap investigations of all Class A and B mishaps involving their systems, provide analyses of the ESOH hazards that contributed to the mishap under investigation, and make recommendations for materiel risk mitigations measures, especially those designed to minimize the potential for human error.

3.16.7. **Intelligence Risk Management.** Center Intelligence Offices will assist Program Manager's in their assessment and reporting of the intelligence metrics in PoPs.

3.16.8. Product Support Risk Management. The Acquisition Sustainment Tool Kit (AS Tool Kit), Logistics Health Assessment (LHA), and Independent Logistics Assessment (ILA) are three product support/logistics life cycle tools designed to help program managers identify, track, and mitigate product support risks.

3.16.8.1. The AS Tool Kit provides program office personnel a road map of logistics processes from Milestone A through disposal. It identifies tasks critical to successful integration of product support planning that are required by current DOD and Air Force guidance. The AS Tool Kit ensures disciplined product support planning is accomplished and provides a baseline of product support activities to support individual program detailed planning. It also provides a method to effectively and efficiently plan, organize, and manage integrated life cycle logistics tasks. See Section 3D and AFPAM 63-128 for additional information on AS Tool Kit.

3.16.8.2. LHA provides a standard method for program office personnel to assess product support and to highlight risks. It creates a site picture of program logistics health at any point in the system's life cycle and is tailorable for individual programs. LHA provides a mechanism for assessing, measuring, and recording, logistics planning and execution information, and can be accessed through System Metric and Reporting Tool (SMART).

3.16.8.3. ILAs are an objective assessment of product support planning and execution in preparation for major milestones B, C, and Full Rate Production. They are performed at the discretion of the MDA by an independent team of subject matter experts (members not in the direct chain of command for the program being assessed). Their purpose is to highlight risks and impacts associated with up-front decisions, cuts, and trade-offs so senior leaders can make more informed decisions.

3.17. Earned Value Management (EVM). Earned Value Management is a program management tool that integrates the technical, cost, and schedule parameters of a project into a Performance Measurement Baseline (PMB). It measures how efficiently resources are consumed against what was planned to be consumed to meet technical goals.

3.17.1. The PM shall integrate EVM into their management processes and contracts in accordance with Defense Federal Acquisition Regulation Supplement (DFARS) and DODI 5000.02. When EVM is required, the PM shall conduct Integrated Baseline Reviews (IBRs), receive and analyze EVM data from the contractor, perform detailed analysis of EVM data using procedures detailed in the Defense Contract Management Agency (DCMA) EVM Implementation Guide, understand the PMB, and use EVM as a management tool. As part of the analysis process, the PM should reconcile Contract Performance Reports (CPR) report formats and reconcile Contract Funds Status Reports (CFSR) to the CPR, if the contractor is not required to do so. The contractor has ownership of the Earned Value Management System (EVMS), is expected to maintain compliance with the EVMS standard and uses EVM as an internal management tool.

3.17.2. DCMA is designated as the DOD Executive Agent for EVMS. The DCMA is responsible for ensuring the integrity and application effectiveness of contractor EVMS.

3.17.3. EVM applicability and implementation is required based on the dollar threshold and type of contract. The requirement for EVM applies to cost or incentive contracts, subcontracts, intra-government work agreements, and other agreements that meet certain dollar thresholds prescribed in DFARS, unless a waiver is obtained from the MDA.

3.17.3.1. The PM shall implement EVM on applicable contracts within acquisition, upgrade, modification, or materiel maintenance programs, including highly sensitive classified programs, major construction programs, and automated information systems (AIS).

3.17.3.2. The PM shall implement EVM on applicable contracts when the following exist: (1) the prime contractor or one or more subcontractors is a non-U.S. source; (2) contract work is to be performed in government facilities; or (3) the contract is awarded to a specialized organization such as the Defense Advanced Research Projects Agency (DARPA).

3.17.3.3. The PM shall implement EVM on applicable contracts designated as major capital acquisitions in accordance with Federal Acquisition Regulation and Office of Management and Budget Circular A-11, Part 7, *Planning, Budgeting, Acquisition, and Management of Capital Assets.*

3.17.4. The PM shall ensure EVMS compliance or validation based on the dollar threshold and type of contract. The EVMS compliance standard is the latest release of the 32 Guidelines of American National Standards Institute/Electronic Industries Alliance Standard ANSI/EIA-748, *Earned Value Management Systems (EVMS) Standard*. Reference information is contained within the standard document, however actual compliance and if required, validation, is determined by the DCMA. The DCMA's guidance may be found in the Earned Value Management Implementation Guide and the Defense Acquisition Guidebook. Consult the AF EVM IPT CoP website for the latest AF-specific working-level guidance and links to additional resources.

3.17.5. The PM shall ensure EVMS reporting for each contract, unless otherwise specified. AF requires that the resulting level-one data for each contract with EVM be reported in SMART. Programs that are considered to be MDAPs are expected to report EVM data in the Defense Acquisition Executive Summary (DAES). SMART and DAES data will be reconcilable to each other.

3.18. Performance Based Contracting. 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 across the program life cycle.

3.18.1. The PM shall consider performance based contracting to the maximum practical extent, unless exempted by the Services Designated Official (defined in **Chapter 4**).

3.18.2. The contracting officer has the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. Contracting officers' 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.

3.18.3. Internal Controls for Procurements on Behalf of the DOD by Certain Non-Defense Agencies. Program managers shall only place an order, make a purchase, or otherwise procure property or services in excess of the simplified acquisition threshold through a non-defense agency in any fiscal year, if the head of the non-defense agency has certified that the agency will comply with defense procurement requirements for the fiscal year. The Director, Defense Procurement and Acquisition Policy (DPAP) may make exceptions to this requirement or extend such determinations if it is determined, in writing, that it is necessary in the interest of the DOD to continue to procure property and services through the non-certified non-defense agency.

3.19. Selection of Contractors for Subsystems and Components. PMs shall determine the approach to establish and maintain access to competitive suppliers for critical areas at the

system, subsystem and component level. Refer to *Subcontractor Management, Make or Buy Plans*, FAR 7.105(b)(11), FAR 15.407.2 and FAR 44.202-2.

3.20. New Start Notification. A New Start is any program, subprogram, modification, project, or subproject not previously justified to and approved by Congress during the appropriations process for the fiscal year involved. 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, *Department of Defense Financial Management Regulation (FMR)*, **Volume III Chapter 6**

3.20.1. **New Start Validation Responsibilities.** The PM, along with the respective Program Office Chief Financial Officer (CFO)/or Program Control Chief (PCC), is required to document and validate that efforts underway have obtained approval for new start or have been adequately assessed and 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.

3.20.1.1. Where there is no PM, such as technology development efforts, validation is the responsibility of the Technical Director (TD).

3.20.1.2. Refer to AFI 65-601, *Budget Guidance and Procedures*, Volume I and *DOD Financial Management Regulation (FMR)* Volume III Chapter 6 for additional guidance on the key points delineated in the Validation Form at Attachment 3 of this publication. If no item in the Validation Form (Attachment 3 of this publication) is marked YES, then the PM shall work with their respective Program Element Monitor (PEM) and/or Capability Director (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's contract file.

3.20.2. **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 activities from complying with all regulations pertaining to New Start Notifications in the event that a New Start is planned for initiation.

3.20.2.1. All Basic Research (**6.1**), Applied Research (**6.2**) efforts, and Advanced Technology Development (**6.3**) 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.

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

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

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

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

3.20.3. Reference AFI 65-601 Volume I for details on the New Start Notification process, procedures, and reporting requirements. In addition, individuals can contact SAF/AQXR, AF PM&AE and SAF/FM for additional guidance and/or help regarding New Starts specific issues.

3.21. Modification Management. For the purposes of this instruction, a modification is defined as a change to the form, fit, function, or interface (F3I) of an in-service, configuration-managed Air Force asset. Modifications are identified as capability modifications or sustainment modifications and can be either temporary or permanent. All modifications must be coordinated through a formal configuration review/control process and implemented in accordance with HAF publications. All approved modifications shall be implemented by a PM or project manager who will be the designated individual with the responsibility for, and authority to accomplish modification program objectives for the development, production, and sustainment of materiel modifications that satisfy user operational needs. Additional information, terms and guidance governing AF modification management is contained in AFI 63-131, Modification Program Management. Further guidance on capability modifications can be found in AFI 10-601, Capabilities-Based Requirements.

3.21.1. Modification efforts that are designated ACAT programs or activities on the APML shall comply with all program requirements commensurate with their ACAT level. Modification efforts on the SPML shall comply with program requirements as identified by the AFMC/CC or designee. Modification efforts not on the APML or SPML will establish baseline technical, cost, and schedule objectives per AFI 63-131.

3.21.2. Limitation on Modification of Certain Items (a.k.a. Sunset Provisions). 10 USC §2244a limits the Secretary of the Air Force (SECAF) from carrying out a modification to an aircraft, weapon, or other item of equipment that the SECAF plans to retire or otherwise dispose of within five years after the date on which the modification, if carried out, would be completed.

3.21.3. The prohibition does not apply under the following situations:

3.21.3.1. A modification for which the cost is less than $100,000.

3.21.3.1.1. The reusable items of value installed on the item of equipment as part of the modification will, upon retirement or disposal of the modified item, be removed from the item, refurbished, and installed on another piece of equipment and the cost of this modification (including cost of removal and refurbishment of reusable items of value) is less than $1M.

3.21.3.1.2. The modification is a safety modification.

3.21.4. The SECAF may waive the prohibition if the SECAF determines that carrying out the modification is in the national security interest of the U.S. Such a waiver requires notification to congressional defense committees in writing.

3.22. Program Terminations. It may be necessary to terminate a program for a variety of reasons including a Presidential, Congressional, DOD or an AF Leadership decision, change in threat, poor contractor performance or withdrawal of funding.

3.22.1. Upon the termination decision, the PM shall notify the Head of Contracting Activity (HCA) and Senior Procurement Executive of all ACAT program terminations. The termination decision is normally documented in a Program Decision Memorandum (PDM).

3.22.2. Upon termination decision, the PM shall develop a termination strategy to describe how to close the program down in an expeditious, orderly manner with the least impact to the government. The termination strategy shall at a minimum address status of contracting activities, status of contract, location of the Termination Contracting Officer, the most advantageous way to conclude open contracts, termination costs and unliquidated obligations, potential for claims against the government, disposition of technology, disposition of accumulated equipment, organizations' responsibilities, enterprise/architectural impacts, and reassignment of Government personnel.

3.22.3. The termination strategy shall be approved by the MDA.

3.23. Materiel Fielding. Materiel fielding is the process by which AF weapon systems and equipment are delivered to and put into service by operational units in the field. The central element of this process is the requirement for PMs to plan and coordinate materiel fielding requirements and activities with materiel developers, product support/sustainment organizations, and the lead/using command(s), well in advance of required materiel delivery dates, and in a manner that enables all parties to identify, understand, and resolve issues associated with the materiel to be fielded. The overarching objective of the materiel fielding process is to ensure sufficient time is available and required investments are made to develop the capabilities and infrastructure that will be necessary to operate and sustain the materiel once it is fielded. The materiel fielding process is a collaborative activity that is primarily executed by the PM, with significant support from AF/DOD product support organizations and the user(s).

3.23.1. For all programs on the APML, designated space programs, or at the SPML PM discretion, the PM shall develop and maintain a Materiel Fielding Plan (MFP) from program initiation through the production and deployment phase. The MFP will include and describe the materiel fielding-related requirements, methodologies, and timelines contained in the user's approved capability requirements document, all fielding-related activities or actions plans to be executed during the Engineering and Manufacturing Development (EMD) and production phases, and all organizational responsibilities and points of contact associated with the planning for, and the delivery of, the materiel to its intended user(s). The PM shall coordinate the MFP with the lead/using command(s) and other stakeholder organizations that will interface with, sustain, or provide support (e.g. training) for the materiel being developed. At the PM's discretion and with MDA approval, the MFP may be a stand-alone document, an annex to the program LCMP, or embedded within the LCMP itself.

3.23.2. At MS/KDP C and all subsequent production decision reviews the PM shall update the MFP as necessary to reflect the materiel fielding-related requirements specified in the user's CPD, or any changes in the user's system/product delivery and acceptance criteria, the user's operational/mission employment and product support concepts, or the user's requirements to support operator and maintenance training (e.g. Required Assets Available), Initial Operational Capability (IOC), and Full Operational Capability (FOC).

3.23.3. At MS C and all subsequent production decision reviews the PM shall update the MFP as necessary to reflect the materiel fielding-related requirements specified in the user's CPD, or any changes in the user's system/product delivery and acceptance criteria, the user's operational/mission employment and product support concepts, or the user's requirements to support operator and maintenance training (e.g. Required Assets Available), Initial Operational Capability (IOC), and Full Operational Capability (FOC).

3.23.4. At program inception and through the FRP decision review, the PM shall include a "Materiel Fielding" section in the program's EMA. The PM and user will use this section of the EMA to document any materiel fielding-related requirements, timelines, responsibilities, or agreements between the user and the program office.

3.23.5. Consult AFPAM 63-128 for additional guidance and information related to the materiel fielding process. This pamphlet provides detailed planning criteria and considerations that PMs can use to develop, coordinate, and implement MFPs.

3.24. Post Implementation Review (PIR). The PIR is not a single event or test; it is a finite sequence of activities when combined provides the necessary information and preliminary planning to ensure weapon system effectiveness and suitability throughout the life cycle. The PIR compares actual system performance to program expectations and mission realities based upon the operational environment and CONOPS. PIR activities may be accomplished in the context of typical program acquisition activities or system operational processes. Review of Final Operation Test and Evaluation Results, Mission Readiness and Platform Readiness reports, User Surveys, War Game results, and the Annual Chief Financial Officer Report are examples of information that could be included in the PIR. Post Deployment Performance Review and PIR may be used interchangeably, both terms refer to the same process; the evaluation of how well actual program results have met established performance objectives for any acquisition program.

3.24.1. The PM shall develop a PIR plan no later than the Full-Rate Production (Deployment) Decision Review/Full Deployment Decision Review (FDDR). The plan shall outline PIR activities to support initial deployment of each increment.

3.24.2. The PM shall evaluate the programs current sustainment capability status, activities, and schedule to achieve the sustainment strategy's full capability to include sustainment attribute measurements, integrity monitoring activities and sustainment funding.

3.24.3. The PM, in conjunction with the user, shall conduct program reviews comparing actual program results with the current program established performance goals from the Capability Document for all MDAP and MAIS programs.

3.24.4. The initial PIR will be conducted after IOC but prior to FOC.

3.24.5. The PM in conjunction with the user shall assess build-to system requirements, technical requirements and provisioning against facts-of-life mission realities and CONOPS. Disconnects between build-to and facts-of-life shall be identified and documented as a potential capability shortfall.

3.24.6. The PM shall document the outcome of the PIR to include all identified shortfalls and adjustments due to mission realities and amend to the existing LCMP.

3.24.7. DELETED.

3.25. System/Program Transfer. System/Program transfer is the process by which the management authorities and responsibilities for AF weapon systems and acquisition programs are formally transferred between AFMC product centers and logistics centers. There are two overarching requirements associated with this process. First is the requirement for the losing and gaining organizations to thoroughly coordinate the transition requirements, activities, and timeframes associated with a proposed transfer. Second is the requirement for the gaining organization to secure sufficient resources (manpower, funding, facilities, etc.) prior to accepting weapon system/program management responsibilities. The overall objective of this process is to ensure a seamless (within AFMC) and transparent (to the user) transition of system/program management responsibilities.

3.25.1. System/Program Transfer Requirements. Management authorities and responsibilities for weapon systems and acquisition programs on the APML that are initially managed at an AFMC product center shall not be transferred to an Air Logistics Center (ALC) unless, at a minimum, the system, subsystem, component, or increment of capability has been certified as interoperable within its intended operational environment, has achieved IOC and FRP, and is logistically supportable per the user's requirement. Executive management responsibilities for acquisition programs identified on the APML shall remain with the PEO/DAO.

3.25.1.1. Space systems/programs do not typically transfer to a logistics center for sustainment management. For space systems/programs the acquisition program manager retains responsibility for the system for the life of the program. A System Sustainment Manager (SSM) is assigned to manage sustainment activities within the program office; this person reports to the PM.

3.25.2. System/Program Transfer Process. The system/program transfer process is a collaborative activity that is primarily executed by the PM at the losing organization, in close coordination with their counterparts at the gaining organization. PMs may initiate planning for program transfer at any point in the acquisition process, but must establish and document the initial target transfer date in the LCMP no later than MS C or as determined by the SAE. As part of this planning activity, the losing PM shall determine and coordinate system/program transition requirements and timelines based on the criteria outlined in the previous paragraph, and the program transfer planning criteria and considerations described in AFPAM 63-128. As the transfer planning effort unfolds, the PM shall brief their transition plans, requirements, risks and risk mitigation plans, and associated timelines during applicable milestone and production/deployment decision reviews, and during other program/portfolio reviews as necessary to inform senior system/program management executives and resolve transfer-related issues.

3.25.3. Transfer Support Plans (TSP). All system/program transfers shall be conducted in accordance with a Transfer Support Plan that is prepared by the losing PM in collaboration with their counterparts at the gaining organization. All affected PEOs/DAOs and AFMC center commanders that (will) oversee the program designated for transfer shall be signatories on the TSP. The AFMC/CC shall be the final signatory on the TSP prior to forwarding the plan to the SAE for approval. The PM shall target completion of the TSP no later than three years prior to the target transfer date. Once the TSP is approved, the losing PM shall update the program LCMP and any other detailed supporting plans/documents (systems engineering plan, test and evaluation master plan, etc.) as necessary to reflect the

actions, timelines, and responsibilities specified in the TSP. The TSP will be maintained until the program transfer is completed, or a determination is made to terminate the proposed program transfer.

3.25.4. Consult the *System/Program Transfer Guide* chapter in AFPAM 63-128 for additional guidance and information related to the system/program transfer process. This pamphlet provides detailed planning criteria and considerations that PMs can use to develop, coordinate, and implement TSPs.

3.25.5. The PM shall provide TSP status to AFMC and the gaining logistics organization as requested and shall coordinate changes impacting the transfer date/ TSP with the MDA and the gaining logistics organization, and notify AFMC of approved changes as detailed in AFPAM 63-128.

3.26. Portfolio Transfer. Portfolio transfer is the process by which the management authorities and responsibilities for AF acquisition programs are formally transferred between PEO and DAO portfolios. Transfer of non-space programs between PEO and DAO portfolios shall be coordinated through the AFMC/CC and approved by the SAE. The impacted PEO and DAO shall prepare a joint request providing rationale and justification for the proposed transfer. Once the portfolio transfer request is approved, the impacted PEO and DAO shall prepare and execute a portfolio transfer plan.

3.27. Urgent Operational Needs. To satisfy Warfighter Urgent Operational Needs (UON), refer to process in AFI 10-601 Capabilities-Based Requirements Development, Attachment 3, Responding To Warfighter Urgent Operational Needs (UON) and AFI 63-114, Warfighter Urgent Needs and the Rapid Response Process. The UON process provides a limited number of needed systems/capabilities in a combat theater during an ongoing conflict or crisis situation to address a critical capability gap/shortfall that could result in "loss of life" and/or prevent mission accomplishment. The Joint Urgent Operational Needs process is contained in CJCSI 3470.01, Rapid Validation and Resourcing of Joint Urgent Operational Needs (JUONS) in the Year of Execution.

3.28. Warfighter Rapid Acquisition Process. The AF Warfighter Rapid Acquisition Process (WRAP) accelerates the development and fielding of operational initiatives resulting from innovation. Guidance on the WRAP process may be found in AFPAM 63-128.

3.29. Joint Capability Technology Demonstration. The Joint Capability Technology Demonstration (JCTD), previously called Advanced Concept Technology Demonstration (ACTD), process is a pre-acquisition activity, spanning from two to four years. It provides the user an opportunity to assess innovative technologically mature capabilities and determine the military utility before deciding to acquire additional units. The concept falls between the Joint Rapid Acquisition Cell (JRAC) "urgent needs" process of fewer than two years with little or no development and the traditional, more deliberate, formal acquisition process that can stretch five to ten years. JCTDs focus on four areas: Joint, Transformational, Coalition, and Inter-agency capabilities.

3.29.1. JCTDs are intended to exploit mature and maturing technologies to solve important military problems and to concurrently develop the associated CONOPS to permit the technologies to be fully exploited. These capabilities and operational concepts are then evaluated in military exercises on a scale large enough to clearly establish operational utility

and system integrity. Emphasis is on technology assessment and integration rather than technology development. The demonstration is jointly sponsored by the operational user and the materiel development communities.

3.29.2. JCTDs typically have one of three outcomes: 1) enter into formal acquisition as a new program; 2) integrate with an existing program; 3) return to technology development. A JCTD becomes a candidate for transition following a successful military utility assessment. A key goal of JCTDs is to move into the appropriate phase of formal acquisition without loss of momentum. To ensure transition occurs smoothly, the transition objective must be identified at the time the JCTD is initially approved and the transition strategy, including sustainment, must be included in the JCTD Management Plan approved by the SAE and developed during the detailed planning for the JCTD.

3.29.3. The Director, Defense Research and Engineering (DDR&E) is responsible for oversight of the JCTD process. Prior to approval of a JCTD, an "Implementation Directive" is required to clarify the roles and responsibilities of the various parties executing the JCTD and to provide unambiguous top level guidance. This document is a succinct agreement which defines the operational capability to be demonstrated, the general approach, the agencies responsible for planning and conducting the demonstration, a notional approach to transition assuming a successful military utility assessment (MUA) and a positive acquisition decision, and the approximate funding and schedule. The Implementation Directive is typically signed by the sponsoring combatant command commander, Operations Deputy of the lead service, Joint Staff representative, the SAE, and DDR&E.

3.29.4. More information can be found in CJCSI 3170.01 *Joint Capabilities Integration and Development System*, the JCIDS Manual, AFI 10-601, and at the

3.30. Intelligence Supportability Requirements. The PM, in collaboration with the Center Intelligence Office and other stakeholders, shall develop and document requirements and level of intelligence support required for the life cycle of the system IAW AFI 14-111, *Intelligence in Force Modernization* and AFI 14-205, *Geospatial Information and Services.* AFI 14-201, *Intelligence Production and Applications and* CJCSI 3312.01a, *Joint Military Intelligence Requirements Certification.*

3.30.1. Documentation of intelligence requirements shall include the creation of a life cycle signature support plan for validated and approved signature dependent programs; in accordance with DOD Directive 5250.01, *Management of Signature Support within the Department of Defense.* Intelligence requirements can be developed and maintained as a stand-alone document or incorporated into the LCMP as appropriate.

3.30.1.1. The signature support plan, developed during the Materiel Solution Analysis and Technology Development phases, shall be developed and fully defined in collaboration with the Center Intelligence Office prior to Milestone B , as defined in DOD Directive 5000.01 and DOD Instruction 5000.02. The support plan shall document signature data requirements for events and activities supporting all ACAT levels and phases of the acquisition process. Requirements captured in the plan shall include but not be limited to signature data used for intelligence, targeting, combat identification (CID), Blue Force tracking (BFT) and other tracks, smart munitions, training, weapon systems, and weapon systems development. The support plan will be reviewed, requirements re-verified and approved by Center Intelligence Office prior to each Milestone Decision.

The support plan can be developed and maintained as a stand-alone document or incorporated into the LCMP as appropriate.

3.30.2. In each instance that intelligence support is required, the following must occur:

3.30.2.1. The Center Intelligence Office will determine if the program's intelligence requirements can be obtained from existing intelligence products. If the required intelligence does not currently exist, the PM will work with the Center Intelligence Office to develop a mitigation strategy; to include the development of cost estimates for tailored intelligence production.

3.30.2.2. The Center Intelligence Office shall assist the PM initiate, develop and submit intelligence community production requests as required.

3.30.2.3. If developmental or operational testing is required for any aspect of the program/initiative, the PM shall coordinate with the Center Intelligence Office and the Air Force Operational Test and Evaluation Center (AFOTEC) to plan for development of any intelligence resources that will ultimately be needed for testing and to develop data for inclusion in the Test and Evaluation Master Plan (TEMP) and supporting documents.

3.30.2.4. The PM shall coordinate with the supporting intelligence office at AFMC, AFSPC or AF/A2 to develop the intelligence appendix to the Information Support Plan (ISP). Before the plan is submitted to the MDA, the intelligence appendix to the ISP must be approved by the supporting intelligence office.

3.30.3. The PM will work collaboratively with the Center Intelligence Office to determine and document requirements for geospatial information support in accordance with AFI 14-205; to include those requirements supporting Foreign Military Sales program. The Center Intelligence Office will provide the PM the appropriate geospatial information products as required. Requirements for National Geospatial Agency (NGA) geospatial product and services support not immediately available through the Center Intelligence Office must be submitted through AFMC/A2 or AFSPC/A2 to AF/A2 for approval.

3.30.4. The PM shall engage with SAF/AQL for special access programs (SAP) or special access initiatives. SAF/AQL will work with the appropriate AF/A2 representative to determine whether intelligence support is required.

3.30.5. All ACAT ID and pre-MDAP acquisition programs/initiatives or programs requiring joint oversight, must team with their Center Intelligence Office to prepare and provide intelligence related inputs to JCIDS documents and subsequent Intelligence Certification assessments.

3.30.6. The PM will incorporate the results of intelligence supportability analysis as an integral component of life cycle planning, documentation, reviews and other programmatic activities and ensure the results consider supporting program protection activities.

3.31. Independent Assessments. Independent assessments not specified by statute, executive orders, DOD issuances, or AF Policy Directives are at the discretion of the MDA. The functional proponent for the independent assessment may appeal the decision to the DAE/SAE for assessments within the acquisition execution chain and to AFMC/CC or to AFSPC/CC for assessments within the sustainment execution chain.

3.32. Nuclear Weapon Related Acquisition. Life-cycle management of Joint Air Force-National Nuclear Security Administration (AF-NNSA) developed nuclear weapons will be accomplished in accordance with DODD 3150.1, *Joint DOD-DOE Nuclear Weapon Life-Cycle Activities*, DODI 5030.55, *DOD Procedures For Joint DOD-DOE Nuclear Weapons Life-Cycle Activities*, and AFI 63-103, *Joint Air Force-National Nuclear Security Administration (AF-NNSA) Nuclear Weapons Life Cycle Management*. Where the AF and NNSA have agreed through a weapon-specific memorandum of understanding that the AF will be responsible for the life cycle management (to include acquisition and sustainment) for specific non-nuclear components/subsystems integral to a joint AF-NNSA nuclear weapon program, the DOD 5000-series publications and this instruction shall be followed. Additional Air Force nuclear weapon related policy may be found in AFI 91-101, *Air Force Nuclear Weapons Surety Program,* AFI 63-125, *Nuclear Certification Program,* AFI 63-104, *The SEEK EAGLE Program,* AFI 21-204, *Nuclear Weapons Maintenance Procedures,* AFI 16-601, *Implementation of, and Compliance With, Arms Control Agreements,* AFI 63-1201, *Life Cycle Systems Engineering, Memorandum of Understanding Between the National Nuclear Security Administration and the Department of the Air Force Regarding Joint Testing and Assessment of the Nuclear Weapons Stockpile,* and AFI 99-103, *Capabilities Based Test and Evaluations.*

Section 3B—Acquisition Programmatic Requirements

3.33. Acquisition Programmatic Requirements Overview. The following section outlines acquisition program management requirements that shall be addressed throughout the program life cycle development and execution process.

3.34. Documentation. The PM is responsible for completing or coordinating all applicable program documentation as required by statute and policy and assessing the value to the program of other related documentation requirements. However, the law does not always specify format or level of detail.

3.34.1. The PM shall ensure sufficient detail is included in documentation to facilitate a decision by the MDA. If the PM analysis indicates a documented functional requirement does not add value, the PM can require the proponent to justify the requirement. The functional proponent may appeal a PM determination through the programmatic chain up to the MDA. The burden of proof lies with the proponent.

3.34.2. 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. PMs shall use automated tools, as available, to streamline coordination and approval.

3.34.3. The PM shall ensure program documentation is maintained and made available electronically. The PM shall ensure the LCMP, ISP, SEP, and the TEMP are consistent and complementary documents. The PM shall consolidate information requirements and streamline documentation as approved by the MDA and consistent with statute, regulations, policies, and mandates.

3.35. Materiel Development Decision (MDD). All potential programs proceed through an MDD review when entering the acquisition lifecycle framework. The MDD review is the formal entry into the acquisition process substantiating the need for a materiel solution based on a validated capability gap. MDD reviews will be conducted using the established Defense Acquisition Board (DAB) / Information Technology Acquisition Board (ITAB) / Air Force Review Board (AFRB) processes. The MDD review shall ensure that a complete and rigorous analysis/assessment of alternatives and their non-materiel implications will be or has been conducted. An MDA decision to begin Materiel Solution Analysis DOES NOT mean that a new acquisition program has been initiated.

3.35.1. MDD Authority. The Defense Acquisition Executive (DAE), as the Milestone Decision Authority, (MDA) chairs the MDD for all potential Air Force Acquisition Category (ACAT) I and IA programs, unless delegated or designated per DODI 5000.02. The SAE, as the MDA, chairs all potential ACAT II MDD reviews unless delegated to a Program Executive Officer (PEO) or a Designated Acquisition Official (DAO). The PEO or DAO, as MDA, chairs all potential ACAT III MDD reviews unless the MDA authority has been delegated to the Deputy PEO.

3.35.2. MDD Preparation. Prior to the MDD review, organizations have the following responsibilities:

3.35.2.1. The Lead Operational MAJCOM (or other sponsor organization):

3.35.2.1.1. Leads the effort to develop and obtain approval of the Initial Capabilities Document (ICD) or other document that validates the capability gap (supported by AF/A5R) (JROC approval required for ACAT I and IA potential programs).

3.35.2.1.2. Leads the effort to identify initial materiel concepts.

3.35.2.1.3. Coordinates on Concept Characterization and Technical Descriptions (CCTD) prior to their presentation at the MDD review. The CCTD will be at a level of fidelity commensurate with concept maturity.

3.35.2.1.4. Drafts the Analysis of Alternatives (AoA) Study Guidance, and provides it to Director, Cost Assessment and Program Evaluation (D,CAPE) for potential ACAT I and IA programs. For ACAT I and IA potential programs the D,CAPE reviews and approves the MAJCOM draft AoA Study Guidance to ensure it is ready to present to MDA for the MDD.

3.35.2.1.5. For potential ACAT II and III programs, develops alternative analysis / supporting analysis guidance to present at the MDD review.

3.35.2.1.6. Identifies Requirements Manager and notifies the appropriate SAF/AQ Capability Director (CD) or SAF/US CD.

3.35.2.1.7. Notifies SAF/AQ CD or SAF/US CD to schedule DAB / ITAB / AFRB (or other venue as established by MDA or DOD policy) to conduct the MDD.

3.35.2.2. SAF/AQ CD or SAF/US CD.

3.35.2.2.1. Notifies Service Acquisition Executive (SAE) and obtains approval to schedule MDD (Note: SAE approval not required for delegated ACAT II and III potential programs).

3.35.2.2.2. Schedules MDD and any additional pre-decisional meetings (schedules with Director, Acquisition Resources and Analysis (D,ARA) for potential ACAT I and IA programs).

3.35.2.2.3. Develops and proposes DAB / ITAB / AFRB outcome objectives for the MDD (coordinates with OSD for potential ACAT I and IA programs prior to the MDD, include resource strategy and phase-specific entrance criteria for next program MS, supported by Development Planning (DP) and MAJCOM organizations).

3.35.2.3. PEO / DAO and assigned Program Office and/or Product Center XR(s) in support of Lead Operational MAJCOMs (or other sponsor organizations).

3.35.2.3.1. Leads initial trade space (ICD / CONOPS to concept) and concepts' characterization activities for materiel solutions.

3.35.2.3.2. Obtains stakeholder inputs and develops and provides Lead Operational MAJCOM (or other sponsor organizations) initial CCTDs in support of AoA Study Guidance. Provide CCTDs for potential ACAT I and IA programs to SAF/AQR prior to the AFRB that precedes the MDD review (CCTDs developed to the appropriate level of maturity to support the proposed lifecycle phase of entry).

3.35.2.3.3. Determines supporting rationale for where the program should enter in the acquisition lifecycle.

3.35.2.3.4. Analyzes and provides recommendation on ACAT level.

3.35.2.3.5. In concert with implementing MAJCOM, develops plan to have in place the resources appropriate to execute the effort based on the lifecycle phase entry point.

3.35.2.4. Implementing MAJCOM (HQ AFMC / HQ AFSPC).

3.35.2.4.1. Programs and prioritizes resources to review potential concepts and provide operational and acquisition stakeholders input on each concept feasibility and potential ACAT level.

3.35.2.4.2. Provides logistics considerations for the AoA Study Guidance or alternative analysis / supporting analysis guidance as appropriate to ACAT category.

3.35.2.5. For potential ACAT I and IA programs the D,CAPE reviews and approves the MAJCOM draft AoA Study Guidance to ensure readiness for presentation to MDA at the MDD.

3.35.3. Conducting the MDD. The MDD review occurs at a DAB / ITAB / AFRB or other venue as established by MDA or DOD policy. The MDD precedes entry into the acquisition management system. At a minimum, conducting an MDD is dependent upon a JROC / AFROC approved ICD (validated capability gap) and the D, CAPE / Lead Operational MAJCOM being prepared to present the AoA Study Guidance or alternative analysis / supporting analysis guidance for MDA approval. At the MDD, organizations have the following responsibilities:

3.35.3.1. The Lead Operational MAJCOM (or other sponsor organization).

3.35.3.1.1. Presents ICD (validated capability gap documentation), include preliminary concepts of operation, description of the needed capability, operational risk, and basis for determining that non-materiel approaches are insufficient.

3.35.3.1.2. Describes potential materiel concepts/solutions identified in CCTDs.

3.35.3.1.3. Present ACAT II and III alternative analysis / supporting analysis guidance for MDA approval. Note: For potential ACAT I and ACAT IA programs AoA Study Guidance is presented by D, CAPE.

3.35.3.1.4. Present AFROC recommendation that a materiel solution is required. Note: For potential ACAT I and ACAT IA programs Joint Staff will present JROC recommendation.

3.35.3.2. SAF/AQ CD or SAF/US CD (Supported by Program Office and/or Product Center XR(s)/DP organization).

3.35.3.2.1. Proposes DAB / ITAB / AFRB recommended objective outcomes for decision.

3.35.3.2.2. Recommends and provides rationale for lifecycle phase entry point.

3.35.3.2.3. Presents plan to have resources in place appropriate to lifecycle phase entry point.

3.35.3.2.4. Proposes phase-specific entrance criteria for next program MS.

3.35.3.2.5. Presents potential materiel solutions feasibilities.

3.35.3.3. Milestone Decision Authority (MDA).

3.35.3.3.1. Determines if additional information is required.

3.35.3.3.2. Reviews AoA Study Guidance or alternative analysis / supporting analysis guidance.

3.35.3.3.3. Approves recommended acquisition phase of entry and phase-specific entrance criteria for next program MS.

3.35.3.3.4. Designates lead acquisition organization. Note: If DAE is MDA, designation is of lead DOD Component.

3.35.3.3.5. Makes decision to begin Materiel Solution Analysis Phase (or other acquisition phase based on appropriate justification).

3.35.3.3.6. Approves resource strategy for post MDD phase of effort.

3.35.4. After the MDD review, organizations have the following responsibilities:

3.35.4.1. Lead Operational MAJCOM (or other sponsor organization).

3.35.4.1.1. Drafts AoA Study Plan or alternative analysis / supporting analysis plan.

3.35.4.1.2. Identifies and obtains stakeholder coordination (include OSD for ACAT I and IA potential programs).

3.35.4.1.3. Obtains AoA Study Plan or analysis plan AF validation via the AFROC.

3.35.4.1.4. Obtains AoA Study Plan or analysis plan MDA coordination (MDA approves ACAT II and III plans).

3.35.4.1.5. Obtains AoA Study Plan D,CAPE approval for potential ACAT I and IA programs and for programs which the JROC is the validation authority for the joint military requirement.

3.35.4.1.6. Ensures allocation of appropriate funding for execution of effort to meet next milestone.

3.35.4.1.7. Conducts AoA or other appropriate analysis for ACAT II and III potential programs.

3.35.4.2. SAF/AQ CD or SAF/US CD.

3.35.4.2.1. Drafts and staffs Acquisition Decision Memorandum (ADM) for MDA approval for ACAT I, IA, or non-delegated ACAT II program, capturing MDD decisions and directions.

3.35.4.2.2. Supports OSD staffing of ADM (as required).

3.35.4.2.3. Distributes ADM and AoA Study Guidance or alternative analysis / supporting analysis guidance to appropriate Lead Operational MAJCOM (or other lead sponsor organization), implementing MAJCOM, and PEO / DAO.

3.35.4.2.4. Ensures potential program added to the APML and interfaces with Director, Acquisition Resource Analysis (D,ARA) for inclusion on the USD(AT&L) MDAP List as required.

3.35.4.2.5. Supports program documentation preparation consistent with phase of entry (e.g., New Start Notification, R-docs).

3.35.4.3. PEO and assigned Program Office and/or Product Center XR(s).

3.35.4.3.1. Begins acquisition efforts appropriate to lifecycle phase of entry.

3.35.4.3.2. Provides current versions of CCTDs for concepts proposed for inclusion in the AoA Study Plan or analysis plan to SAF/AQR prior to AFROC validation.

3.35.4.4. Implementing MAJCOM (HQ AFMC / HQ AFSPC).

3.35.4.4.1. Designates and assigns lead and supporting Product Centers.

3.35.4.4.2. Begins appropriate actions to support potential program start up per ADM.

3.35.4.4.3. Identifies AFMC/AFSPC primary activities (centers/functionals) for sustainment support and environmental considerations.

3.35.4.5. MDA.

3.35.4.5.1. Documents the Materiel Development Decisions from the MDD review in an ADM (e.g., phase of entry with phase-specific entrance criteria for next program MS, AoA Study Guidance approval, AF organization).

3.35.4.5.2. Provides ADM and AoA Study Guidance / alternative analysis / supporting analysis guidance to lead DoD Component / appropriate CD.

3.35.4.6. SAE.

3.35.4.6.1. Assigns to PEO / DAO (if not already delegated) with HQ AFMC or HQ AFSPC input.

3.36. Courses of Action (COA). The purpose of the Courses of Action (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 as well as initial risk assessment 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 lead MAJCOM commander and MDA level for the selected COA will ensure agreement among leadership on program expectations, risks and performance (or incremental performance) for specified cost and schedule goals.

3.36.1. COA Team Composition. The COA team, led by the acquisition community, is comprised of representatives from S&T, T&E, financial management, contracting, planning/requirements, intelligence, sustainment, acquisition, and user communities and others that are deemed necessary.

3.36.2. COA Development. The MDA (or designee) will lead the development of the COA in conjunction with the user to identify different acquisition strategy approaches for the selected materiel solution selected from the AoA. The acquisition strategy options may vary based upon the full or partial capabilities needed by the user over time coupled with the type of approach recommended. Different COAs may have different contracting strategies, incremental development schedules, product support considerations, or deployment methodologies. 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 user fully participates in the process, and the lead MAJCOM commander is presented with more than one approach. While the TDS 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.

3.36.2.1. COA Attributes. Joint Pub 5-00.1, *Joint Doctrine for Campaign Planning*, defines required COA attributes this way: "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."

3.36.2.2. Preparing COAs. The COA has no specified format. Each COA briefly describes how the program will deliver the required capability to the user and clearly state the cost, schedule, and performance objectives. A collaborative team (acquirer, user, tester, sustainer, etc.) determines the specific content of the COA. The COA should state an initial risk assessment. COAs will capture possible tradespace to satisfy user capability needs. The final COAs should clearly state each capability's development schedule and delivery date as well as cost estimates. The commitments in the COAs

should be presented at the most realistic level possible. Documentation must show confidence levels regarding cost, schedule, capabilities delivered, risk mitigation, etc.

3.36.3. Selecting a COA.

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

3.36.3.2. Selection. The lead MAJCOM may select 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 lead MAJCOM commander's decision will serve as a basis for the LCMP and the EMA.

3.36.3.3. Funding and Changes. The selected COA will include the lead MAJCOM's commitment to appropriately fund the development effort in accordance the governing Program Objectives Memorandum (POM). Any changes must be in writing with the mutual agreement of the MDA and the lead MAJCOM.

3.36.3.4. Documenting a COA. The COA will serve as an agreement and will be reflected in the program's acquisition documentation. Help from the Acquisition Center of Excellence (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.

3.37. Program Management Directive (PMD). 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 PEO, DAO, PM, CDs, HAF offices, MAJCOMs, test organizations, FOAs, and any other component or organization essential for meeting the operational need. PMDs are required for funded programs contained in the Acquisition Program Master List (APML). If events necessitate programmatic changes, the PMD OPR must update the PMD. (See Headquarters Operating Instruction (HOI) 63-1, *HQ AF Guidance for Preparing Program Management Directives*, for additional details and guidance).

3.38. Product Support Considerations and Strategic Sourcing Determination. Product support considerations and strategic sourcing considerations shall be identified as part of development planning. This includes identifying and documenting product support considerations and strategic sourcing as part of AoA and COA analysis and decisions. Product support considerations and strategic sources determination shall be made as early as feasible and should consider the Air Force enterprise needs.

3.39. Life Cycle Management Plan (LCMP). The Life Cycle Management Plan (LCMP) is the integrated acquisition and sustainment strategy for the life of the system. The LCMP fulfills the FAR, DFARS, and AFFARS requirements of the Acquisition Plan and the DODI 5000.02 requirements of the Acquisition Strategy which includes the Life Cycle Sustainment Plan. (See AFPAM 63-128 for LCMP template and detailed guidance.)

3.39.1. The PM shall develop a LCMP that documents the life cycle strategies necessary to satisfy statutory and regulatory requirements for programs or modifications acquired under DODI 5000.02. The LCMP streamlines, consolidates, and makes visible to senior leadership all aspects of the program. The LCMP shall guide program execution from program

initiation (generally at MS B) through demilitarization and will be used as the basis for program transfer planning and materiel (hardware, software, and services) fielding decisions.

3.39.2. The LCMP is required for all programs on the APML, weapon systems identified in AFPD 10-9 *Lead Command Designations and Responsibilities for Weapon Systems*, and space acquisition programs. At the AFMC/CC, ALC/CC, or PM discretion, programs on the SPML may utilize an LCMP. At the AFSPC/CC, SMC/CC, or PM discretion, space programs in sustainment may utilize an LCMP. It shall be approved prior to program initiation (normally MS B), drafted as early as possible and continually matured through program life cycle. An LCMP is required for ACAT III programs; however this can be accomplished by a tailored LCMP as approved by the LCMP approval authority.

3.39.2.1. The LCMP shall be updated/approved preceding each milestone decision point or whenever the approved strategies change.

3.39.2.2. At the discretion of the approval authority, the LCMP for a modification may be an annex to the existing and approved system LCMP.

3.39.2.3. 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 approved strategies or APB.

3.39.2.4. Existing programs that do not currently have an LCMP shall transition to an LCMP when the program:

3.39.2.4.1. Enters a new milestone, or

3.39.2.4.2. Implements a significant change that would have resulted in a revision to the Product Support Management Plan (PSMP), or

3.39.2.4.3. Implements a major system modification. At the discretion of the approval authority, the requirement may be met with an annex to the existing system approved acquisition/sustainment strategy documentation. The annex will be completed in accordance with all LCMP requirements.

3.39.2.4.4. DELETED.

3.39.2.5. The LCMP shall be coordinated and approved at the levels dictated by the AFFARS, as appropriate to the ACAT. Refer to AFFARS Part 5307 and supplements for guidance. For additional information refer to *Defense Acquisition Guidebook* (DAG).

3.39.2.6. The PM is responsible for the LCMP development and maintenance but shall collaborate with and be supported by stakeholders.

3.39.2.7. The responsibility for updating, maintaining and approving the LCMP shall convey with program transfer.

3.39.2.8. The MDA for programs on the APML should approve the LCMP prior to the release of a formal solicitation for EMD. For programs on the SPML that require an LCMP, the approval authority should approve the LCMP prior to the release of a formal solicitation.

3.39.2.9. The PM shall ensure approved LCMPs are posted and maintained on the AF Knowledge Now (AFKN) Portal: LCMP Community of Practice (CoP). The PM will use the portal to document, share, and update programmatic data.

3.39.3. The LCMP integrates all aspects of acquisition and sustainment into a single integrated life cycle plan. It shall be the overarching document that encompasses and integrates information from all other program plans and assessments (plans that cover systems engineering; test and evaluation; training; intelligence supportability, information support; diminishing manufacturing; sustainment, corrosion, etc.). See AFPAM 63-128 for LCMP template and detailed guidance.

3.39.3.1. The PM may incorporate or reference in the LCMP final conclusions, recommendations, or summaries of traditional documents where appropriate. Reference AFPAM 63-128 for a list of possible source documents and detailed guidance.

3.39.3.2. For non-space programs the PM shall ensure the LCMP includes all requirements identified for inclusion in the Acquisition Strategy per DODI 5000.02 including, but not limited to: Statutory and regulatory requirements per Enclosure 4, life cycle sustainment planning per Paragraph 8, summaries of action required to comply with Clinger Cohen Act Compliance per Table 8, and a summary of Human Systems Integration (HSI) planning per Enclosure 8.

3.39.3.3. DELETED.

3.39.3.4. The PM shall ensure the LCMP:

3.39.3.4.1. Summarizes New Start requirements and documents appropriate Congressional notification. (SAF/FM New Start Homepage on AF Portal: All Organizations : HAF - Headquarters Air Force : SAF/FM - Financial Management and Comptroller : SAF/FMB - Budget : Unique To Us : SAF/FMBI : New Starts).

3.39.3.4.2. Identifies available program funding. Separately identifies the funding required to support planned Developmental Test and Evaluation (DT&E) and Operational Test and Evaluation (OT&E) programs. (10 USC §139; 10 USC §2431). Provides a breakout by year of appropriation for all funding sources and identifies support from the Working Capital Fund areas as required for depot maintenance or supply management.

3.39.3.4.3. Defines the proposed acquisition approach. (10 USC §2304, 10 USC §2305, and 10 USC §2306)

3.39.3.4.4. Identifies the acquisition chain of authority for the program meeting the requirements identified in DODD 5000.01, paragraph E.1.1.26.

3.39.3.4.5. Summarizes the “make or buy” approach to establish and maintain access to competitive suppliers for critical areas at system, subsystem, and component level (e.g., requiring an open systems architecture, make or buy plan. etc.). (FAR 7.105(b)(11), and FAR 15.407-2)

3.39.3.4.6. Summarizes how market research was conducted and the results. (10 USC §2377)

3.39.3.4.7. Summarizes the source selection approach (competitive award, sole source procurement, or dual source development with down select to one production contract). If sole source, document applicable exception(s) to full and open competition. Describe and justify strategy changes from core (initial) to subsequent increments. (FAR Part 6, 10 USC §2304, 10 USC §2305, and 10 USC §2306, 15 USC §644 (a), (d), and (j); PL 100-533)

3.39.3.4.8. Identifies source selection procedures to be utilized (AFFARS 5315.3, 10 USC §2305).

3.39.3.4.9. Identifies the anticipated type of contract(s) and anticipated contract incentive(s). This shall include how competition will be sought, promoted, and sustained throughout the course of the acquisition and the comparative benefits of awarding a new contract vice placing an order under an existing contract. (10 USC §2306, 10 USC §2304) This shall describe the measures taken to ensure competition or the option of competition, at both the prime and subcontract level throughout the program life-cycle. (Weapon Systems Acquisition Reform Act of 2009 (Public Law 111-23)).

3.39.3.4.10. Summarizes the approach for identifying and analyzing the key programmatic risk elements including interdependence with other programs.

3.39.3.4.11. Summarizes the approach for identifying and analyzing the key risk elements. Identifies how prototypes will be used to mitigate key risk elements.

3.39.3.4.12. Identifies the technical and cost parameters that will be used to manage the program. This will include objective and threshold values or reference Acquisition Program Baseline (APB), if applicable. (10 USC §2435)

3.39.3.4.13. Summarizes the configuration management approach and identifies how changes to the baseline will be documented.

3.39.3.4.14. Summarizes the Systems Engineering (SE) approach, reflecting a disciplined process to ensure critical considerations (including but not limited to Operational Safety, Suitability, and Effectiveness (OSS&E), verification, security, supportability, human systems integration (HSI), product and system integrity, ESOH, and industrial base issues) are implemented during concept development, system design, development, production and sustainment. (AFI 63-1201, *Life Cycle Systems Engineering*).

3.39.3.4.15. Identifies if Clinger-Cohen Compliance is applicable (40 USC §8066).

3.39.3.4.16. Identifies if arms control treaties and agreements impact the program.

3.39.3.4.17. Summarizes the anticipated test and evaluation strategy, structure, and objectives of the integrated test program and overall approach to contractor and government development test and evaluation, live fire test and evaluation (LFT&E) (if required), and operational test and evaluation. (see AFI 99-103, *Capabilities Based Test and Evaluation*; 10 USC §139, 10 USC §2366, 10 USC §2399, 10 USC §2400).

3.39.3.4.18. Includes a corrosion prevention control plan summarizing the approach for identifying and controlling corrosion.

3.39.3.4.19. Identifies and summarizes the approach to meeting any certification or independent assessment requirements.

3.39.3.4.20. Summarizes the approach to meeting electromagnetic spectrum requirements of the system over its entire life cycle in accordance with OMB Circular A-11, Section 33-4.

3.39.3.4.21. Summarizes the projected materiel fielding methodologies and timelines and presents the materiel fielding-related activities to be conducted during the EMD phase.

3.39.3.4.22. Includes a Life Cycle Sustainment Plan (LCSP) addressing the life cycle sustainment considerations using the following top-level Product Support Elements: 1) sustaining/system engineering, 2) design interface, 3) supply support, 4) maintenance planning and management, 5) support equipment/automatic test systems (SE/ATS), 6) facilities, 7) packaging, handling, storage, and transportation (PHS&T), 8) technical data management/technical orders, 9) manpower and personnel, 10) training, 11) computer resources, and 12) protection of critical program information and anti-tamper provisions. The product support elements are further defined in AFPAM 63-128.

3.39.3.4.23. Summarizes the approach to satisfying life cycle statutory requirements for core and 50/50. This will include 50/50 assessments and document program specific issues and requirements as well as a summary of depot activation requirements and funding. If a HQ AFMC certified source of repair determination has not been completed, this will include the approach to develop organic depot repair capability for those workloads identified to satisfy a core capability requirement(s). (10 USC §2464,10 USC §2466)

3.39.3.4.24. Identifies and summarizes potential and existing Public-Private Partnerships.

3.39.3.4.25. Summarizes the plan for Depot Source of Repair (DSOR) determination.

3.39.3.4.26. Summarizes the plan for satisfying Military Equipment Valuation (MEV) requirements by MS C/Build Approval.

3.39.3.4.27. Summarizes the approach for meeting Serialized Item Management (SIM) requirements including Item Unique Identification (IUID) planning and, if applicable, Radio Frequency Identification (RFID) (This is also required in the Information Support Plan (ISP)). (10 USC §2223, DODI 5000.02, DODI 4151.19)

3.39.3.4.28. Summarizes how modeling and simulation will be used throughout the life cycle.

3.39.3.4.29. Summarizes, if applicable, the Interim Contract Support (ICS) requirements, approach and a plan to transition to normal sustainment support.

3.39.3.4.30. Summarizes the approach for providing the reliability, maintainability, and readiness necessary to meet the needs of the warfighter with minimum logistic foot print at best value.

3.39.3.4.31. Provides a Data Management Strategy including a description of the system data rights analysis and action plan to satisfy AF needs for all technical data including drawings and technical orders. This includes a strategy to acquire data and data rights in anticipation of sustainment strategy including future organic depot repair capability and demilitarization efforts if applicable. (Rights and Technical Data, 10 USC §2320)

3.39.3.4.32. Provides a summary of the Programmatic Environment, Safety and Occupational Health Evaluation (PESHE) risk management approach (see paragraph 3.49) to include the integration strategy, the NEPA Compliance Schedule, and a summary of all "High" and "Serious" risks (based on the projected final risk category). (National Environmental Policy, 42 USC §4321-4347).

3.39.3.4.33. Identifies the impact of the life cycle approach on the national technology or industrial base. (Technology and Industrial Base Plans, 10 USC §2440)

3.39.3.4.34. Identifies if and when a critical program information (CPI) assessment was accomplished using the systems engineering process and documents if a Program Protection Plan (PPP) is needed. Summarizes existing PPPs.

3.39.3.4.35. Summarizes the migration (disposal) approach.

3.39.3.4.36. Identifies opportunities for allied participation within the program. (Cooperative Research and Development Agreements (CRDA), 10 USC §2350a).

3.39.3.4.37. Summarizes the results of intelligence supportability analysis.

3.39.3.4.38. Summarizes and provides rationale for any deviation or tailoring of policy requirements.

3.39.3.4.39. Establishes the initial target transfer date; date required to be documented not later than MS C or as determined by the SAE.

3.39.3.4.40. Summarizes the plan for sustaining the replaced (existing) system during fielding and transition to the new system. (10 USC §2437)

3.40. The Acquisition Decision Memorandum (ADM). The ADM officially starts the acquisition process and documents the results of the Materiel Development Decision and every MS decision. The ADM will document descriptions of the responsibilities of each organization, the funding source, and the actions necessary to prepare for the next MS decision. The ADM is also used to document MDA decisions not related to a milestone such as results of the Post–PDR Assessment and formal acceptance of moderate and high residual risks. The MDA signs the ADM. A copy of the ADM for non-space programs shall be provided to HQ AFMC for assignment of management responsibilities to AFMC product and logistics centers or adjustment of previously assigned center responsibilities as necessary.

3.41. Acquisition Program Baseline (APB). The PM shall ensure each program or increment has an APB establishing program goals—thresholds and objectives—for the minimum number of cost, schedule, supportability, and performance parameters that describe the program over its life cycle. Reference 10 USC §2433 and 10 USC §2435.

3.41.1. The PM shall structure the APB to be consistent with the incremental development strategy and capability documents.

3.41.2. The original APB is prepared prior to the program entering EMD or program initiation whichever occurs later. The APB shall be revised at each subsequent MS decision and at full rate production. The APB shall be updated at significant or critical Nunn-McCurdy cost breaches.

3.42. Program Management Agreement (PMA)/Expectations Management Agreement (EMA). The PMA/EMA is a jointly developed and formally documented agreement between the PM and the lead command to proactively resolve or de-conflict potential issues to include cost, schedule, and performance expectations over the life of the program. The PMA/EMA is designed to facilitate effective communication and provide updates and support for building an understanding between the acquisition/sustainment and operational communities. The PMA/EMA will also establish a "contract" between the MDA (SAE for ACAT ID/IAM), PM, and the lead command. It will provide a documented basis for ensuring that a PM's annualized plan is consistent with those of the stakeholder organizations, that there is a common basis for understanding and accountability, that the specified plans are resourced and achievable, and that the organization's and individual's responsibilities are effectively communicated.

3.42.1. The PMA/EMA serves to fulfill the requirements of the Program Management Agreement (PMA) as identified in DODI 5000.02.

3.42.2. All ACAT I, IA, and II programs shall have a PMA/EMA. ACAT III and programs on the SPML are encouraged to utilize PMA/EMAs.

3.42.3. The PM shall initiate a PMA/EMA after the AF makes an investment decision to pursue a new program, and then jointly developed by all stakeholders. Once realistic expectations are mutually agreed to, changes that impact those expectations, no matter what their source, must be identified and communicated to leadership by updating the original PMA/EMA.

3.42.4. The PM shall ensure the PMA/EMA contains, and the annual review addresses, at a minimum the following:

3.42.4.1. Achievable and measurable annual plan that is fully resourced and reflects the approved program to include acquisition, fielding and sustainment.

3.42.4.2. Program execution against the APB.

3.42.4.3. Program execution against all requirements identified in the current increment of the JCIDS document.

3.42.4.4. Results to date from Test and Evaluation (T&E) Programs.

3.42.4.5. Other programmatic expectations identified and agreed to by the PM and user as significant but not found in the CDD.

3.42.4.6. Cost expectations compared to existing program cost estimates.

3.42.4.7. Funding expectations for successful program execution.

3.42.4.8. Any mutually agreed-to changes in expectations relating to cost, schedule, and performance.

3.42.4.9. Identified risks, risk mitigation strategies, and residual risk acceptance decisions.

3.42.4.10. Any expectation concerns or areas of disagreement of either the PM, the Lead Command, or other stakeholders or a statement indicating there are no such concerns.

3.42.4.11. The PM's tenure.

3.42.5. The PM shall ensure PMA/EMAs are reviewed, updated, and signed annually. This may occur more frequently if the conditions that formed the basis for the agreement (requirements, funding, or execution plans) have changed. Changes to the PMA/EMA must be agreed to by all signatories.

3.42.5.1. ACAT ID and IAM PMA/EMAs shall be signed by the PM, the Lead Command (General Officer/SES), and the SAE.

3.42.5.2. ACAT IC, IAC, II, and III PMA/EMAs shall be signed by the PM, the Lead Command (General Officer/SES), and the MDA.

3.42.5.3. The PM shall consider posting approved and updated PMA/EMAs to the PMA/EMA Community of Practice (CoP) as appropriate based on content, to share with others and provide examples of successful documents.

3.42.5.4. For additional information on PMA/EMA content and format refer to AFPAM 63-128, *Acquisition and Sustainment Life Cycle Guidance.*

3.42.6. The PM shall have the authority to object to the addition of new program requirements that would be inconsistent with the parameters established at Milestone B and reflected in the PMA/EMA (unless such requirements are approved by appropriate CSB); and the authority to recommend to the appropriate CSB reduced program requirements that have the potential to improve program cost or schedule in a manner consistent with program objectives.

3.43. Technology Development Strategy (TDS). The TDS defines the activities of the Technology Development Phase and provides the technology development strategy over the system life cycle. The results of the Analysis of Alternatives (AoA) during the Materiel Solution Analysis Phase provide the basis for the TDS. The TDS documents the plan for multiple technology development demonstrations or prototypes that may be necessary before the user and developer agree that a proposed technology solution is affordable, militarily useful, and based on mature technology. (Reference: Public Law 107-314, Section 803.)

3.43.1. The MDA shall determine who will prepare the Technology Development Strategy (TDS). AFRL shall assist in the preparation of a TDS for MS A, B, and C when appropriate.

3.43.2. The TDS is required for MS A and precedes the formal acquisition strategy. The TDS is updated at subsequent milestones and does not need to be a standalone document. It may be subsumed into the LCMP after MS A. The technical content of the TDS shall be consistent with the SEP. For evolutionary acquisition programs, the TDS shall be approved by the MDA prior to the start of each increment.

3.43.3. Final Requests for Proposals (RFPs) for the Technology Development Phase should not be released or any action be taken that would commit the program to a particular contracting strategy for Technology Development, until the MDA has approved the TDS.

3.43.4. The TDS at a minimum shall include the requirements defined in DODI 5000.02. In addition the TDS shall include the following:

3.43.4.1. A summary of the prototyping and competition approach including the number of competing prototypes, prototype units, and prototype subsystem elements that may be produced and deployed during technology development. It will identify the decision point to which the prototypes will be carried and a description of how prototypes will be supported. It will correlate the prototypes to the program risks and identify specific performance goals. Unless waived, competitive prototyping is now a statutory requirement for MDAPs. (Reference: Public Law 111-23).

3.43.4.2. Address reliability, availability, maintainability, and supportability (RAMS) concepts and technologies to ensure the technology(s) being developed meet the RAMS capability needs identified in the ICD.

3.43.4.3. The technology development test plan, including the goals and exit criteria for technologies being developed in all phases of the acquisition not just the Technology Development Phase. This plan is distinct from the separately developed and approved T&E Strategy which takes a broader view.

3.43.4.4. A summary of the intelligence support (to include signature data) required to develop and execute the TDS, concept/goal development, prototype evaluation and exit criteria for completing the Technology Development phase.

3.43.5. AFRL Support. AFRL will support the development of the TDS and the associated risk plan. To rapidly and successfully transition their technology projects into operational military systems, AFRL will support the development of phased capabilities requirements by helping the acquisition and operational communities assess the maturity and viability of considered technologies in the operational environment.

3.43.5.1. Help secure approved technology transition plans (TTP), to include prime contractors.

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

3.43.5.3. Support seamless communication and collaboration to assist in the incorporation of identified technologies; when appropriate co-locate laboratory personnel with the PM.

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

3.43.5.5. Ensure enhanced management oversight to quickly identify and resolve any issues that arise, and exploit additional collaborative opportunities.

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

3.44. Test and Evaluation (T&E) Strategy. The PM, working through the Integrated test Team, shall ensure the T&E strategy is approved by MS A for all programs on the APML. The T&E Strategy is 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. 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 TE strategy is a precursor to

the Test and Evaluation Master Plan (TEMP). Guidance on development of the T&E Strategy can be found in AFI 99-103.

3.45. Test and Evaluation Master Plan (TEMP). The PM, working through the ITT, shall ensure a TEMP is prepared prior to MS B for applicable programs in accordance with AFI 99-103. The TEMP integrates the requirements, acquisition, Test and Evaluation (T&E), and sustainment strategies, along with all T&E schedules, funding, and resources, into an efficient continuum of integrated testing. PMs must not disregard T&E for commercial-off-the-shelf (COTS), non-developmental items (NDI), and government-furnished equipment (GFE). TEMPs are strongly encouraged for all programs, projects, and activities. Guidance on development of the TEMP can be found in AFI 99-103.

3.46. Integrated Master Plans (IMP) and Integrated Master Schedules (IMS). The PM shall develop and maintain the Integrated Master Plan (IMP) and Integrated Master Schedule (IMS) that integrates all program activities and schedules into a single sight picture. This includes integrated master schedules from all contractors, as well as government activities to include test plans. 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. Refer to *Defense Acquisition Guidebook* for additional information.

3.46.1. Performance Measurement Baseline (PMB) Analysis. The PM shall perform recurring, cost, schedule, and risk analysis of the contractors' PMB to assure continuing progress and program realism. 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 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 comprehensive reviews of the IMP, IMS, and PMB are essential to avoid surprises and miscommunication.

3.47. Reliability, Availability, Maintainability, and Supportability (RAMS) Analysis and Documentation. Weapon system capability and supportability will be used throughout the entire life cycle to evaluate program status. Reliability, availability, and maintainability are system parameters which directly contribute to mission capability and supportability. Overall responsibility for establishing and documenting RAMS requirements rests with the lead MAJCOM. The program manager, in collaboration with the sustainment community, is responsible for conducting an analysis of the users' requirements and recommending RAMS parameters that are within the technical, cost, schedule, and risk constraints of the program. In this analysis, consideration shall be given to the entire life cycle requirements and design decisions shall strive to minimize total ownership costs while delivering effective and suitable operational capability. RAMS requirements shall be developed in concert with operational requirements and addressed throughout the system life cycle. Reference the *DOD Guide for Achieving Reliability, Availability, and Maintainability* and the *DOD Reliability, Availability, Maintainability, and Cost Rationale Report Manual* for additional information.

3.47.1. Lead MAJCOM or designated operating command (Ref. AFI 10-601) shall:

3.47.1.1. Identify RAMS and other suitability requirements that satisfy the mission capability requirements. Cite critical mission capability and supportability requirements in specific operational terms.

3.47.1.2. Ensure compatibility with the AF and MAJCOM logistics strategic plans.

3.47.1.3. Support investigation of operational and support concepts for similar systems.

3.47.1.4. Consider surge and combat support needs at forward operating bases and austere sites.

3.47.1.5. Tailor support requirements and assess tradeoffs.

3.47.1.6. Document the methodologies and assumptions used to develop specific requirements and rationale for including specific parameters in requirements documents. This rationale shall include the quantified impact of RAMS on operational tasks, assumptions about the operational mission scenario, mission profile, and failure definitions for OT&E.

3.47.1.7. Advocate for adequate resources to be programmed to acquire, field, sustain and dispose of mission capabilities.

3.47.2. The PM shall:

3.47.2.1. Analyze the users' RAMS requirements and make recommendations to ensure they are balanced with the technical, cost, schedule, and risk constraints of the program.

3.47.2.2. Translate lead MAJCOM/designated operating command requirements into quantifiable contractual terms and articulate these throughout the design process and document methodologies and rationale used.

3.47.2.3. Determine costs associated with solutions to satisfy mission capability and RAMS requirements.

3.47.2.4. Identify the resources required to acquire, field, sustain and dispose of mission capabilities.

3.47.3. The PM shall document the analyses, rationales, and tradeoffs made in the development of the RAMS requirements and link measures of effectiveness and suitability used in the AoA to the measures stated in the JCIDS documents. The initial development of RAMS requirements shall begin with a validated need and continue in parallel with development of the operational capability document. The RAMS documentation shall be consistent with the Concept of Operations (CONOPS).

3.47.3.1. The PM shall document an executive overview of the RAMS goals and constraints, the material developer's and user's analysis, and the threshold RAMS requirements.

3.47.3.2. The PM shall document the failure definition and scoring criteria, as identified by the user, to classify the cause and effect of RAMS characteristics testing failures.

3.47.3.2.1. A mission-essential functions list (MEFL) shall document the minimum operational tasks that the weapon system must be capable of performing to accomplish its mission profiles. All intended mission profiles will have a MEFL.

3.47.3.2.2. Minimum Essential Subsystems List (MESL) documents the minimum essential subsystems needed to perform the intended missions. All intended mission profiles will have a MESL. Reference AFPD 10-6, *Lead Command Designations and Responsibilities for Weapon Systems,* and AFI 21-103, *Equipment Inventory Status and Utilization Reporting*, for more information.

3.47.3.2.3. The classification and chargeability guidelines as described in the Joint Reliability and Maintainability Evaluation Team (JRMET) (or similar IPT) Charter shall describe the rules for coding failures, maintenance events, and maintenance actions.

3.47.3.3. The PM shall document the feasibility analysis and allocation of users' RAMS requirements. This identifies the RAMS characteristics constrained by technology, cost, schedule, and risk. This documentation shall provide for the translation of operational requirements into technical contract specifications and shall include:

3.47.3.3.1. A baseline comparison system used to estimate the RAMS characteristics of a proposed system. This may be an actual system (such as the proposed system's predecessor) or a hypothetical system of assemblies with similar technology and complexity to the proposed system.

3.47.3.3.2. The design reference mission profile that identifies the tasks, events, timelines and duration, operating conditions, and environments of the system for each phase of a mission. It also defines the boundaries of the performance envelope and identifies appropriate system constraints.

3.47.3.4. The PM shall document the testability analysis of the RAMS requirements that determine if the parameters identified are testable and documents the test methods for each parameter.

3.47.3.5. The PM shall document the user analysis used in developing the RAMS requirements and their operational utility. This includes the RAMS impacts analysis performed during the user's AoA and KPP determination, operational effectiveness analysis for each increment, and total cost of ownership analysis. This should be an interactive process with the developer's analysis to ensure proper balance between operational utility, cost, schedule, and risk considerations.

3.47.3.6. The PM shall document the RAMS parameters and methods of calculation that, as a minimum, include the following areas: availability, reliability, cost of ownership, and mean down time (MDT). The PM shall implement a reliability growth program if the initial mandatory sustainment KPPs and supporting materiel reliability KSA are not met.

3.47.4. Aircraft Availability Improvement Program (AAIP). PMs of programs which have aircraft as a system shall have an AAIP plan by MS-C. The AAIP strategy shall be summarized in the LCMP.

3.48. Risk Management Plans. The PM shall prepare a Risk Management Plan (RMP) for all ACAT programs, potential ACAT programs, and Services Category I and II programs. The RMP describes the strategy by which the program will coordinate and integrate its risk management efforts to include a description and the responsibilities of the cross-functional risk

management IPT. The Risk Management Guide for DOD Acquisition is the basic guidance for executing risk management.

3.48.1. The PM shall use the 5x5 risk matrix, likelihood criteria, and consequence criteria provided in Chapter 12 of AFPAM 63-128 to assess cost, schedule, performance, and other program risks.

3.48.1.1. Risks identified using the MILSTD882D system safety methodology shall be translated using Table 3.1, Translation of MIL-STD-882D Risk Matrix to the OSD Risk Management Guide Matrix.

3.48.1.2. The RMP can be incorporated into the LCMP or other appropriate planning document. The RMP shall be linked to the risk management activities described in other planning documents (e.g., source selection plan, SEP, PESHE).

3.48.1.3. The RMP shall be developed and continually matured throughout the life of the weapon system.

3.48.2. The PM shall prepare risk handling/mitigation plans for all moderate and high risks. The PM shall ensure a mechanism is in place to track and archive all risks and handling/mitigation plans throughout the program's life cycle.

3.48.3. DELETED.

3.48.4. The PM shall present the following risk related information as a part of all program, technical, and Milestone decision reviews or to support other key decision points.

3.48.4.1. The standard 5x5 risk matrix. On the risk matrix, the PM shall plot, and be prepared to discuss, each of the program's identified "high" and moderate risks and the corresponding mitigation plans.

3.48.4.2. The Technology Readiness Levels (TRLs) of all critical technology elements. See the *Defense Acquisition Guidebook* for more information.

3.48.4.3. The system's assessed Manufacturing Readiness Levels (MRLs). See the *Defense Acquisition Guidebook* for more information.

3.48.4.4. The Probability of Program Success (PoPS) Windshield Chart.

3.48.4.5. All "high" and "serious" ESOH risks identified using the MILSTD882D system safety methodology and the translation table at Table 3.1 Translation of MIL-STD-882D Risk Matrix to the OSD Risk Management Guide Matrix.

3.48.5. Formal acceptance of moderate and high residual risks (after all mitigation plans have been completed) shall be included in approval documentation.

Table 3.1. Translation of MIL-STD-882D Risk Matrix to the OSD Risk Management Guide Matrix.

DoD Acquisition Risk Management Guide

LIKELIHOOD	1	2	3	4	5
5		IVA		IIA	IA
4		IVB	IIIA IIIB IIIC	IIB	IB
3		IVC	IIID IIIE	IIC	IC
2		IVD		IID IIE	ID
1		IVE			IE

CONSEQUENCE

MIL-STD-882D

PROBABILITY	IV	III	II	I
A				
B				
C				
D				
E				

SEVERITY

3.49. Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE). The PM shall prepare and maintain a PESHE throughout the life of the program. The PESHE is required at MS B, MS C, and at the Full-Rate Production Decision Review/Full Deployment Decision Review/Build Approval. The PM shall obtain formal coordination of new and updated PESHEs from their Product Center or ALC Environmental, Safety, SG offices, and ESOHC-IPT offices. The PESHE must document the following:

3.49.1. The strategy for integrating ESOH considerations into the SE process (reference MIL-STD-882D as a guide). This ESOH integration strategy must define the division of roles and responsibilities with the HSI effort for the overlapping domains of environment, safety and occupational health.

3.49.2. The ESOH risk matrix, including definitions of each of the ESOH Severity Categories, Probability Levels, Risk Values, and Risk Categories.

3.49.3. The ESOH hazard tracking data, preferably by linking to the hazard tracking system. This should include hazardous materials, wastes, and pollutants. (AFI 32-7086, *Hazardous Materials Management*)

3.49.4. The method for tracking ESOH hazards throughout the life cycle of the system and for reporting the status of ESOH hazards to the testers, operators, and maintainers.

3.49.5. A compliance schedule for National Environmental Policy Act/ Environmental Impact Analysis Process (NEPA/EIAP) (42 USC §4321-4370d and Executive Order 12114). SAF/AQR is the Air Force approval authority for NEPA documentation for which the PM is the proponent (32 CFR 989).

3.49.6. Identification of roles, responsibilities, and resources allocated for ESOH management within the SE process.

3.49.7. A reasonably current assessment of the ESOH management efforts using the ODUSD(A&T)/SSE "System Safety-ESOH Management Evaluation Criteria for DOD Acquisition."

3.49.8. Identification of system-specific applications that use hexavalent chromium (Cr6+). Include risks associated with Cr6+ use, efforts to qualify less toxic alternatives, and status of PEO or ALC/CC approval to continue to use Cr6+ in each application. Analysis of alternatives should address cost/schedule risks and life cycle cost comparisons (including material handling and disposal costs and system overhaul cycle times/costs due to differences in corrosion protection). Reference Corrosion Prevention and Control Planning paragraph (3.68) of this document for guidance on integrating with corrosion control planning and obtaining PEO or ALC/CC approval for each Cr6+ application.

3.50. Modeling and Simulation (M&S). The PM shall evaluate the benefits of including Modeling and Simulation. M&S is a key enabler to reduce weapon system life cycle costs (LCC) as well as reduce risk and accelerate acquisition and fielding. M&S can facilitate the analysis of complex new system requirements and designs and expand performance envelopes.

3.50.1. The PM shall coordinate M&S activities with other design, analysis, and T&E/verification and validation (V&V) activities to capitalize on efficiencies and savings.

3.50.1.1. If applicable, the PM shall coordinate with the Center Intelligence Office to assess the need and determine the most appropriate method to obtain intelligence data for M&S. For more information reference AFI 14-206, *Modeling and Simulation*.

3.50.1.2. If applicable, the PM shall plan for the use of M&S to support aircraft-stores certification over the life cycle of the item, in accordance with AFI 63-104, *SEEK EAGLE Program*.

3.50.1.3. If applicable, the PM shall plan for the use of M&S to facilitate analysis of complex systems and SoS requirements and designs.The PM shall plan for and insert M&S early and throughout the life cycle. The PM shall document M&S analysis and resulting plans in the SEP and T&E Strategy as well as provide a summary in the LCMP.

3.51. Contractor Incentives. AF acquisition activities shall implement contract strategies, applying incentives where appropriate, to consistently motivate excellent contract performance while ensuring cost, schedule, and technical performance control. Contract fee structures must be implemented throughout the life cycle that tie incentive or award fee to realized program outcomes while, simultaneously recognizing the contractor's need to earn fees throughout the contract performance period. There is no "one size fits all" incentive strategy; the PM must use methods to reward performance, motivating the contractor to deliver all contractual requirements in a superior manner. Further direction is found in an appended note to 10 USC §2302, FAR Part 16, and DFARS Parts 215 and 216. Refer to AFPAM 63-128 for further guidance on contract incentives.

3.52. Lead Systems Integrator (LSI) Limitations. The MDA, PEO, DAO, and PM shall ensure no entity performing Lead System Integrator (LSI) functions in the acquisition of a major system by the Department of Defense has any direct financial interest in the development or construction of an individual system or element of a system of systems or is performing inherently governmental functions (reference PL 110-181 Section 802).

3.53. Inherently Governmental Functions Determinations. If contractor support services are being considered as part of the acquisition strategy, the PM shall solicit and receive written determination from the Installation/Wing Manpower Office identifying if there are military (active or Reserve Component) or civilian employees of the Air Force available to perform the functions and if the required services are inherently governmental, acquisition functions closely associated with inherently governmental functions, or otherwise inappropriate for performance by contractor employees. (Reference DODI 1100.22, *Guidance for Determining Workforce Mix*, FAR Subpart 7.5, DFARS Subpart 207.503(S-70), and Title 10 USC. §2463.)

3.54. Commercial Item Purchase. Commercial purchase determinations and guidance is contained within Part 12 of the Federal Acquisition Regulation (FAR) and its supplements (Defense Federal Acquisition Regulation Supplement (DFARS) and AF Federal Acquisition Regulation Supplement (AFFARS)).

3.55. Buy American Act (BAA). The BAA was codified in 1933 to provide preferential treatment for domestic sources of un-manufactured articles, manufactured goods, and construction material.

3.55.1. BAA applies to supplies and construction materials above the micro–purchases thresholds and restricts the purchase of supplies that are not domestic end products for use within the US. (Reference 10 USC. §10a-10d)

3.55.2. For specific guidance and regulations, please follow FAR Part 25 as supplemented by DFARS Part 225 and AFFARS Part 5325.

3.56. Berry Amendment and 10 USC §2533b Compliance. Similar to the BAA, the Berry Amendment and 10 USC §2533b restricts the purchase of specific items to domestic sources unless exempted or waived. The Berry Amendment establishes domestic source preferences for different commodities, including textiles, specialty metals, and machine or hand tools, in DOD acquisitions above the simplified acquisition threshold. 10 USC §2533b establishes domestic source preferences for specialty metals.

3.56.1. The PM shall ensure that all activities within the acquisition cycle are compliant with 10 USC. §2533a and §2533b unless they have an approved Domestic Non-Availability Determination (DNAD). 10 USC §2533a applies to all food, clothing, tents, cotton and other natural fiber products, and hand or measuring tools; 10 USC §2533b applies to specialty metals.

3.56.2. A DNAD to the Berry Amendment and 10 USC §2533b may be granted only by the SECAF, another Service Secretary, or OUSD (AT&L).

3.56.3. The Berry Amendment applies to contracts and subcontracts for procurement of commercial items, applies to both end products and raw materials and applies to Foreign Military Sales (FMS) cases. If the end product is comprised of components made of restricted items or materials, those components must also be wholly domestic of origin and manufacture unless either an exception or a waiver exists. (Reference Section 804 of the Defense Appropriations Act for Fiscal Year 2008).

3.56.4. For specific guidance and regulations, please follow FAR Part 25 as supplemented by DFARS Part 225 and AFFARS Part 5325.

3.57. Leasing. For specific guidance and regulations governing leasing equipment follow the regulations and guidance found in DFARS 207.4, DOD Financial Management Regulation 7000.14-R and OMB Circulars A-11 and A-94.

3.58. Serialized Item Management (SIM). The purpose of SIM is to improve the AF's capability to manage materiel through the generation, collection, and analysis of data on individual assets in order to enhance asset visibility, financial accountability, and improved weapon system life cycle management. SIM is enabled through Item Unique Identification (IUID), automatic identification technology (AIT), and automated information systems (AIS). IUID is the assignment and marking of individual assets with a standardized, machine-readable, two-dimensional marking containing a globally unique and unambiguous item identifier. AIT is the technology used to scan the marking at points within the supply chain to identify discrete transactions of an asset as well as transmit the data collected from these transactions to AIS. AIS store and process the data so it can be used to make informed decisions concerning the management of the asset or the system. Reference DODD 8320.03, *Unique Identification* (*UID) Standards for a Net-Centric Department of Defense,* DODI 8320.04, *Item Unique Identification (IUID) Standards for Tangible Personal Property*, *DOD Guide to Uniquely Identifying Items* and DODI 4151.19, *Serialized Item Management (SIM) for Materiel Maintenance,* for additional guidance.

3.58.1. The PM shall ensure all solicitations, contracts or delivery orders that result in the delivery of tangible personal property to the Government include IUID requirements using the DFARS clause 252.211-7003, *Item Identification and Valuation* and, as applicable, DFARS clause 252.211-7007, *Item Unique Identification of Government Property*. This includes service contracts for repair of an unmarked item that results in the delivery of a marked repaired item. Where a contract or delivery order was signed prior to the implementation date of the DFARS clause 252.211-7003, the clause will be inserted into the contract or delivery order as soon as feasible, but no later than at a phased event or exercise of a contract option, or other modification of contractual requirements.

3.58.2. The PM shall require unique identification for assets meeting the following criteria: (For additional guidance see DODI 8320.04, *Item Unique Identification (IUID) Standards for Tangible Personal Property*, DOD 4140.1-R, *Supply Chain Material Management Regulation*, *DoD Guide to Uniquely Identifying Items*, and AF Manual 23-110, *USAF Supply Manual*, Vol. 1, Part 4 and Vol. 2, Part 13.)

3.58.2.1. Items (a single hardware article or unit formed by a grouping of subassemblies, components, or constituent parts) for which the Government's unit acquisition cost is $5,000 or more. For existing items already owned by the Government, this value should be construed as the acquisition value to replace the item.

3.58.2.2. Items for which the Government's unit acquisition cost is less than $5,000, when identified by the managing or requiring activity as serially managed, mission essential, controlled inventory or requiring permanent identification.

3.58.2.3. Any DOD serially managed subassembly, component, or part embedded within a delivered item, regardless of value.

3.58.2.4. Any parent item (as defined in DFARS 252.211-7003(a)) that contains the serially managed embedded subassembly, component, or part.

3.58.3. IUID criteria apply to government assets and tangible personal property assets owned by the AF in the possession of contractors know as Property in the Possession of Contractors (also generically known as Government Furnished Property (GFP)). Reference *DOD Item Unique Identification of Government Property Guidebook* for more information.

3.58.4. IUID requirements shall apply to security assistance programs.

3.58.5. The PM shall document the SIM strategy including the IUID implementation plan in the LCMP and Information Support Plan (ISP).

3.58.5.1. The PM shall document a plan for IUID in the LCMP. The plan will consider maintenance strategy and ownership of spare parts inventory when determining what assets should be considered for unique identification.

3.58.5.2. The PM shall identify in the ISP any system operational needs for data to conduct SIM in order for Unique Item Identifiers (UIIs) to be used as the key field to associate data on tangible personal property assets.

3.58.6. The PM shall ensure information on marked items is included in the DOD IUID Registry.

3.58.7. The PM shall prepare an IUID implementation plan for all programs that result in the delivery of tangible personal property items to the Department of Defense and address all items meeting the IUID criteria. The implementation plan will address cost, schedule, impacts on legacy assets in service and in inventory, existing on-going contracts, engineering drawing update strategy, budget requirements, and impacts to FMS. Plans should reflect coordination between program acquisition and sustainment activities, and industry. Additional guidance and a template for the IUID implementation plan can be found in AFPAM 63-128.

3.58.7.1. The PM shall prepare an initial IUID implementation plan within 90 days of ACAT designation.

3.58.7.2. Plans will be approved by the program's MDA (or equivalent for non-ACAT programs). Adequacy of the IUID implementation plan requirements shall be assessed at all milestone reviews.

3.58.7.3. The PM shall review the plan prior to each milestone or at least annually to ensure currency and track progress toward completion until all items used by the program have been uniquely identified.

3.58.7.4. IUID Implementation Plans will be consolidated for programs related to the same weapon system in a logical manner while maintaining appropriate visibility on priority programs.

3.58.7.5. Program planning for AIT infrastructure requirements and/or AIS enhancements to include IUID should occur only if the program is responsible for the management and/or maintenance of AIT and/or AIS.

3.58.7.6. Plans should identify the items used by the program that meet the IUID criteria. This includes items managed by the AF, other DOD Components and Agencies, Government agencies outside the DOD, or support contractors.

3.58.8. The PM shall use AIT for unique identification of items.

3.58.9. Physical application of a Unique Item Identifier (UII) will follow MIL-STD-130, *Identification Marking of U.S. Military Property*.

3.58.9.1. Where engineering analysis determines physical application of a UII would destroy the form, fit, or function of an item, an alternate method to uniquely identify the item will be used.

3.58.9.2. The PM for MAIS that will store data on tangible personal property assets shall ensure the system can accommodate all needed UII data for the identified assets.

3.59. Military Equipment Valuation (MEV). Military Equipment Valuation is a DOD initiative to capitalize, and depreciate assets, including modifications, to meet federal accounting standards as defined in DOD Instruction 5006.64, *Accountability and Management of DOD-Owned Equipment and Other Accountable Property*.

3.59.1. The PM shall account for all Military Equipment assets subject to capitalization and depreciation.

3.59.2. Military Equipment is defined as tangible assets that:

3.59.2.1. Have an expected useful life of two or more years;

3.59.2.2. Are not intended for sale in the ordinary course of business;

3.59.2.3. Are intended to be used or are available for use in performance of military missions, to include training; and

3.59.2.4. Meet the capitalization threshold found in the DOD Financial Management Regulation (FMR) Volume 4, Chapter 6.

3.59.3. Military Equipment Valuation:

3.59.3.1. Is required for aircraft, intercontinental ballistic missiles (ICBMs), unmanned air vehicles, pods, satellite launchers and satellites.

3.59.3.2. Will not be performed on drones, munitions, initial spares, repair parts, simulators and other ballistic missiles. In addition, other equipment assets (e.g., ground equipment, support equipment, etc.) will be valued as general purpose equipment.

3.59.4. The PM shall include a military equipment program description as part of the LCMP. At Milestone C/(or any other decision point that leads to production or procurement of end items to be used for operations) for any program, project, product or system that has deliverable end items that meet the capitalization threshold, the program's military equipment description will identify the following deliverables at a detail level consistent with level 2 of the Program Work Breakdown Structure (WBS) (detailed guidance on the work breakdown structures for defense materiel items is located in MIL-HDBK-881):

3.59.4.1. The assets meeting the capitalization thresholds.

3.59.4.2. The government furnished material that will be included in the assets.

3.59.4.3. Other deliverables that will accompany the assets (e.g., manuals, technical data, etc.).

3.59.4.4. Other types of deliverables that will be bought with program funding (e.g., initial spares, support equipment, etc.) but that cannot be directly attributed to a specific assets.

3.59.5. The PM shall ensure proper accounting and contractual allocation of program expenditures between capitalized assets and expenses. This shall be completed for every program, project, product, or system that has deliverable assets. Detailed guidance on accounting policy and procedures may be found in DOD 7000.14-R, DOD FMR Volume 4 and at OSD's military equipment website.

3.59.5.1. Business/Financial Management Analysts will identify to contracting personnel the items and services to be acquired and segregate them by accounting treatment within the requests for acquisition of services or materiel (e.g., military equipment; operating materials and supplies; inventory; internal use software; expenses). Each type of deliverable must be uniquely distinguishable and identified individually as a separate line item on the requisition.

3.59.5.2. The PM shall ensure the gross book value of military equipment assets and modification to those assets are provided to the Air Force's MEV system. The PM shall also ensure the useful life of the assets and modification programs are also provided to the MEV system.

3.59.6. Contracting Officers will be responsible for creating the proper contract line item (CLIN) and sub-line item (SLIN) to reflect the distinction necessary to facilitate appropriate financial accounting treatment of the military equipment to be acquired. Proposals, solicitations, contracts, and/or orders for or related to the acquisition of military equipment will be structured so that each type of item or service is properly segregated by use of separate CLINs and SLINs.

3.60. Government Cost Estimates. The PM shall update life cycle cost estimates in accordance with AFPD 65-5, *Cost and Economics*, and AFMAN 65-506, *Economic Analysis*, and compare them to the program budget to assess program executability. Risk assessments and sensitivity analyses will be performed as level of knowledge and assumptions change. 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.

3.61. Cost Realism. All participants over the life cycle of a 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 shall be provided with cost estimates at the mean confidence level and the 80% confidence level. The PM should consider providing the MDA with estimates at a cumulative density function (S curve) to show varying levels of confidence. The program funding should also be identified on the chart with its corresponding confidence level. To the greatest extent possible, the PM shall identify the TOC and the major drivers to this cost. Realistic program planning assumptions should be developed to ensure adequate analysis of life cycle cost, schedule, and performance risks. This will be documented in the Program Office Estimate, which is generally developed from the Cost Analysis Requirements Description (CARD) for major programs or a similar document for less than major programs. These cost estimates shall be reconciled with the contractor's proposal prior to award. Refer to DFARS 215 for additional information.

3.61.1. For MDAP and MAIS programs, state the confidence level used in establishing the cost estimate and the rationale for selecting it for cost estimates used in support of MS A, MS B, MS C, LRIP, Full Rate Production, any certification under 10 USC§§ 2366a, 2366b, or 2433a, any report under 10 USC §2445c, or as specified by appropriate authority. If the confidence level is less than 80%, also provide the justification for selecting the lower confidence level.

3.61.2. The confidence level statement shall be included in the ADM approving the APB and with any other cost estimates for MDAP and MAIS prepared in association with the estimates identified above, and for MDAPs, in the next SAR report prepared in compliance with 10 USC §2432, and for MAIS, in the next quarterly report prepared in compliance with 10 USC §2445c. Reference the US Air Force Cost Risk and Uncertainty Handbook for more information.

3.62. Budget Stability. Acquisition program budget perturbations are a fact of life. However there are still actions a PM can take to document budget history and ensure budget decisions are made based on current and accurate information. The PM shall at a minimum complete the following:

3.62.1. Maintain a realistic cost estimate and ensure it is well documented to firmly support budget requests, enlist user advocacy for the program via the AF Program Objective Memorandums (POM), or initially included as part of the Course of Action (COA) effort.

3.62.2. Ensure funding for the execution year(s) is consistent with the contractor's ability to expend the funding according to the current program schedule; reassess throughout the program's life cycle and make sure the data continues to firmly support budget requests; and if not, enlist user 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.

3.62.3. Develop a range of independent estimates at completion from cost data and analysis of the IMS. Compare the results to the contractor's projected final costs to assess realism and to form the basis for adjusting the program budget.

3.62.4. Reflect budget changes in the PMA/EMA as required.

3.63. 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. The PM shall assure that this data is in a structured format, is made available to the government through an electronic interface and meets contractual requirements.

3.64. Unliquidated Obligations (ULO). The PM shall conduct periodic analysis of unliquidated obligation(s) (ULO) balances to ensure deobligation of funds without a valid requirement. The analysis shall as a minimum include ULO balances, reason each ULO exists, estimated date of liquidating the ULO balances, and any amount to be deobligated. For programs using the Transportation Working Capital Fund the PM shall additionally track expenses and conduct periodic analysis of accrued expenditures unpaid (AEU) balances to ensure funds are expended in the year given. The analysis shall include AEU balances, reason

for AEU balance, estimated date of moving AEU, accrued expenses paid (AEP), and any amount that will be expensed in the following year.

3.65. Use of Specifications and Standards. Specifications and standards may be used in solicitations to define essential standard practices (e.g., system safety and parts management) and 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 USC §2451-2457, DODD 5000.01 and DODI 5000.02 are contained in DOD 4120-24M, *Defense Standardization Program (DSP) Policies and Procedures*. AF guidance is contained in AFI 60-101, *Materiel Standardization*.

3.66. Program Protection Planning. The PM and/or Chief Engineer/Lead Engineer (CE/LE) must ensure critical technologies, systems, and information identified as Critical Program Information (CPI) are protected to prevent loss, theft, or compromise that could yield any of the following negative consequences: impact cost, schedule, performance, or 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 countermeasures. Program protection planning applies to all phases of the system's life cycle including capability planning activities, technology research, development program efforts, modification efforts, and continues through sustainment and disposal. Program protection planning must involve all stakeholders including the operating and other participating commands. Reference DOD 5200.1-M, *Acquisition Systems Protection Program*, DODI 5200.39, *Critical Program Information (CPI) Protection within the Department of Defense*, and AFPAM 63-1701, *Program Protection Planning* (will convert to AFMAN 63-113, *Program Protection Planning for Life Cycle Management*) for more information.

3.66.1. The PM and/or CE/LE shall accomplish protection on technology and programs by using systems engineering processes to perform a functional decomposition of the technology/system to determine if CPI exists in the project/program.

3.66.1.1. The requirement to complete program protection analysis cannot be waived or exempted. In addition, non-AF funded programs using AFRL or AF program personnel will comply with this requirement.

3.66.1.2. The applicable PM and/or CE/LE shall develop a Program Protection Plan (PPP) for the technology or program if CPI are identified.

3.66.1.3. If the PM and/or CE/LE determines there is no CPI associated with the technology or program (neither internal to the program nor inherited from a supporting program), a PPP is not required. Approval not to develop a PPP must be obtained in writing from the AFRL/CC, the MDA, or the ALC/CC commensurate with the execution authority of the activity.

3.66.2. The PM and/or CE/LE shall provide for protection planning (including cost considerations) at all CPI locations until the PM and/or CE/LE makes the determination that protection is no longer required. MAJCOMs shall ensure compliance at all user locations until the PM determines CPI no longer exists and that protection is no longer required.

3.66.2.1. CPI protection begins once a military unique capability is identified during technology research and development, during the Materiel Solution Analysis Phase, or any other time CPI is identified and continues throughout the life cycle. The CPI

continues to be protected through all phases in the technology's life cycle including capability planning, acquisition, sustainment, modification, developmental and operational testing, and through retirement and disposal.

3.66.2.2. Incidents of loss, compromise, or theft of CPI shall be reported in accordance with DODI 5240.4, *Reporting Of Counterintelligence and Criminal Violations* and DOD 5200.1-R, *Information Security Program,* as well as the criteria for defensive Information Operations (IO) reporting established by AFPD 10-7, *Information Operations* and AFI 10-2001, *Defensive Counterinformation Planning, Operations and Assessment*.

3.66.3. Technology protection is a Common Core Compliance Area (CCCA) as outlined in AFI 90-201, *Inspector General Activities*.

3.66.4. Program Protection Plans (PPP).

3.66.4.1. The PM and/or CE/LE shall prepare a PPP as soon as practicable after CPI are identified and submit the PPP to the approval authority for review and approval. The need for a PPP may occur at any time during the life cycle of the program to include modifications or upgrades. Typical triggers for developing a PPP are identification of CPI, receipt of an ICD, CDD, PMD, CPD or AoA, or following mission assignment. Refer to AFPAM 63-1701, for the recommended procedures to create a PPP and DODI 5200.39 for the minimum required elements of the PPP.

3.66.4.1.1. AFRL/CC is the approval authority for technology programs unless the activity is at a battlelab or warfare center. For protection plans generated by the battlelabs and warfare centers, the approval authority is the commander/director.

3.66.4.1.2. The MDA is the approval authority for ACAT programs.

3.66.4.2. The PM and/or CE/LE shall coordinate the PPP with the all stakeholders including the operating, implementing and participating commands, acquiring agency, and intelligence community, as applicable.

3.66.4.3. The PM and/or CE/LE shall apply common security measures for protecting similar CPI that are used by more than one program to ensure horizontal protection. The PM and/or CE/LE shall ensure horizontal protection through the distribution of the approved, signed PPP plan to any related or affected programs or subsystems for incorporation into their PPP.

3.66.4.4. The PM shall review and update as necessary the PPP at MS B and MS C, as required by changes to acquisition program status, or by changes in the actual or projected threat, or reviewed and updated at least every three years.

3.66.4.5. The PPP shall be maintained throughout the life of the CPI. Ownership and responsibility for the PPP shall transfer to the PM solely when a technology is incorporated into a system and remains with the PM throughout the life cycle of the system.

3.66.5. The PM, in coordination with SAF/AQL, and the supporting systems engineering function, shall identify, plan, program, develop, implement, and validate anti tamper (AT) measures, if necessary. The AT Plan will be integrated into and maintained as a classified annex to the PPP. Refer to DODI 5200.39, the DOD AT website, and contact the Air Force Anti-Tamper OPR for additional information.

3.66.6. The PM and/or CE/LE shall ensure the principles of Systems Security Engineering (SSE) are applied to their technology and acquisition programs throughout the life cycle as an essential element of systems protection. SSE ensures time-phased, affordable security protection alternatives and requirements are integrated into the weapon system and supporting subsystems security architecture in order to reduce system susceptibility to damage, compromise, or destruction; and to support the identification, evaluation, and elimination or containment of system vulnerabilities to known or postulated security threats in the operational environment. Other required equipment and supporting facilities should be integrated using risk management principles.

3.66.6.1. For ACAT programs the PM and/or CE/LE will establish the Systems Security Working Group (SSWG) as early as possible but not later than MS B. Working in concert with the PM and/or CE/LE, the SSWG defines and identifies all SSE aspects of the system, develops SSE architecture, reviews the implementation of the architecture, and participates in design validation. For development or non-ACAT programs or projects, the PM and/or CE/LE will ensure an Integrated Product Team (IPT) process is used to conduct program protection planning. The SSWG or IPT is comprised of technology developers, acquisition and sustainment program office personnel; testers, supporting counterintelligence (CI), intelligence, and security personnel; system user representatives; and other concerned parties supporting the PM and/or CE/LE.

3.66.7. The PM and/or CE/LE develop a Counterintelligence Support Plan (CISP) for each PPP in coordination with their servicing AF Office of Special Investigation (AFOSI) research and technology protection specialist. The plans will address defensive Information Operations (IO) and CI support for the life cycle of the system or technology.

3.66.8. Special Access Programs (SAP) due to their unique nature are not required to comply with Program Protection Planning. However, the programs must comply once SAP provisions are removed. The PM and/or CE for a collateral program will collaborate with SAF/AAZ when SAP information is involved to determine a prudent protection approach prior to developing a PPP.

3.67. Information Support Plans (ISP). The Information Support Plan (ISP) describes and evaluates needs including intelligence, infrastructure, interoperability, and other Information Technology (IT) and National Security Systems (NSS) interfaces that the acquisition program needs during development, testing, training, operations and disposal. The ISP also documents current/projected deficiencies in intelligence support required to develop the weapon system capability. Additional guidance on ISPs can be found in: the Defense Acquisition Guidebook; DOD Directive 4630.5, *Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*; DODI 4630.8, *Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*; and CJCSI 6212.01, *Interoperability and Supportability of Information Technology and National Security Systems (NSS)*.

3.67.1. The PM shall prepare the ISP, which documents the information support needed to develop warfighter capabilities described in the ICD, CDD, and Capability Production Document (CPD).

3.67.2. The PM shall prepare an ISP for IT and NSS programs regardless of ACAT and for systems in sustainment that exchange information with external systems or reside on the

Global Information Grid (GIG). The Lead Command, as part of the requirements process and identification of Net-Ready Key Performance Parameter (NR-KPP), shall identify IT and NSS interoperability requirements, infrastructure, and other support requirements early in the life cycle. This information will form the basis of the ISP.

3.67.3. The PM shall update the ISP due to a modification to an IT/NSS system to reflect any impact that the modification may have on their NR-KPP. ISPs that do not have an NR-KPP will have a NR-KPP section added.

3.67.4. For systems that will be part of a Family of Systems or System of Systems (FoS/SoS), an ISP is required unless waived. If the Milestone Decision Authority (MDA)/Cognizant Fielding Authority for the FoS/SoS approve, an annex to the FoS/SoS ISP may be developed to meet ISP requirements for a new system that is part of a FoS/SoS.

3.67.5. PMs that do not believe their IT or NSS system requires the development of an ISP shall submit a request to waive the ISP requirement through SAF/XCP to OASD/NII /DOD-Chief Information Officer (CIO).

3.67.6. An approved initial ISP is required not later than MS B (or appropriate and related "milestone-like event" (for non-ACAT)) and should be initially developed concurrently and collaboratively with the associated CDD, unless exceptions are noted in an ADM. The PM shall prepare the updated final ISP for the MS C Decision Review concurrently and collaboratively with the associated CPD. As the program matures or proceeds through multiple evolutionary blocks, phases, or modifications, the Program Manager shall update the ISP as needed.

3.67.6.1. The program office must coordinate with the supporting intelligence office or AFMC/A2 to develop the intelligence appendix to the Information Support Plan. Intelligence appendices to ISPs supporting AFSPC programs must be reviewed and approved by the supporting intelligence office, AFSPC/A2, and AF/A2. Before the plan is submitted to the MDA, the intelligence appendix to the ISP must be approved by the supporting intelligence office, AFSPC, AFMC, or AF/A2.

3.67.7. ISP Reviews. ISPs prepared for Milestone Decision Reviews must first undergo the formal ISP review process before they can be approved. ACAT I, ACAT IA, and special interest programs are reviewed at both the Air Force and Joint level. ACAT II and below are reviewed at the Air Force level only. The PM will enter the ISPs into the Air Force C4I Program Assessment Tool (APAT) to initiate the automated review process. Reference the *Air Force Program Manager's Guide for Developing, Processing, and Approving ISPs* for more information on the development, review, coordination, and approval of Information Support Plans.

3.67.8. ISP Approval**.** The MDA or ALC/CC (for non-space systems in sustainment) shall review, assess, and approve ISPs for ACAT and sustainment programs at each Milestone Decision Review. The PM shall consider the ISP for making DSOR recommendations.

3.67.9. ISP Support. At the end of MS B or equivalent, the PM will ensure all support concept elements are fully identified with supporting documentation.

3.67.10. Additional ISP policy guidance can be found on the Information Support Plan Policy CoP.

3.68. Corrosion Prevention and Control Planning. As part of a long-term DOD corrosion prevention and control strategy that supports reduction of total cost of system ownership, the PM shall document a Corrosion Prevention and Control Plan. The Corrosion Prevention and Control Plan shall be required at MS B and C as part of the LCMP/Acquisition Strategy and SEP. Corrosion considerations shall be objectively evaluated throughout program design and development activities, with trade-offs made through an open and transparent assessment of alternatives. See DODI 5000.67, *Prevention and Mitigation of Corrosion on DOD Military Equipment and Infrastructure*, for additional guidance. Additional information including the DOD Corrosion and Prevention Guidebook can be found at **Home -** CorrDefense.

3.68.1. The Air Force designated Corrosion Control and Prevention Executive (CCPE) is the senior Air Force Corrosion Control and Prevention Enterprise official. The CCPE is responsible for coordinating AF-level corrosion control and prevention activities, advocating for corrosion prevention and mitigation, and evaluating the effectiveness of AF corrosion prevention and mitigation.

3.68.2. AFMC, PMs, and PGMs shall provide data as requested by the AF CCPE to support the evaluation and reporting of AF corrosion control and prevention activities and identify funding levels necessary for providing corrosion prevention and mitigation throughout the system's life cycle.

3.68.3. The PM shall incorporate the DOD ban on the use of Cr6+ in their long-term corrosion prevention planning. This ban applies to all programs regardless of ACAT or life cycle phase.

3.68.3.1. The PM shall obtain PEO or ALC/CC approval for any new or continued use of Cr6+. In order to approve the request to use Cr6+, the PEO or ALC/CC must certify that there is no acceptable alternative for the requested use. The PM will obtain AF CCPE concurrence on all approval requests prior to submittal to the PEO or ALC/CC

3.68.3.2. To enable the PEO or ALC/CC to make this certification, the PM must demonstrate the assured availability of Cr6+ for the period of the requested approval and one or more of the following findings concerning the available alternatives: (1) unacceptable life cycle cost increases; (2) technically not feasible; (3) Serious or High ESOH risks (based on MIL-STD-882D); (4) MRL of 7 or less; (5) lack of assured availability for the period of the requested approval; or (6) unacceptable corrosion prevention performance. Additional guidance on documenting Cr6+ usage and elimination efforts in the PESHE is provided in the PESHE section of this document.

3.69. System Survivability. The AF will address survivability requirements and performance parameters for a system's entire life cycle based on the capabilities of that system. System developers will review all capability documents to assess how these survivability requirements apply to their program. System survivability assessment, based on system concept of operations and validated threat assessment, shall be considered during SE and HSI planning. This planning should be in conjunction with affordability, schedule, and performance considerations. Designing, testing, and/or analysis during the acquisition process will be carried out against specific performance attributes.

3.69.1. Capability document sponsors will develop and define the survivability requirements for each system, including designating the level of survivability that a system must have in

the operational environment for which it is intended. The sponsors will plan for all resource requirements to satisfy survivability requirements.

3.69.2. The PM shall integrate validated survivability requirements into the systems engineering process from the earliest possible stages of program planning and throughout the life cycle. In addition to previously stated documents, this paragraph also implements survivability policy and guidance found in Public Law 108-375, Section 141 *Development of Deployable Systems to Include Consideration of Force Protection in Asymmetric Threat Environment, and* Section 1053, *Survivability of Critical Systems Exposed to Chemical and Biological Contamination;* DODD 3222.3, *DOD Electromagnetic Environmental Effects (E3) Program;* MIL-HDBK-237, *Electromagnetic Environmental Effects and Spectrum Certification Guidance for the Acquisition Process;* 50 USC §1522, *Conduct of Chemical and Biological Defense Program (CBDP).*

3.69.3. The PM shall follow the guidance outlined in the above referenced documents and comply with documentation and reporting procedures as specified in each. If the system will provide an urgent operational need, full compliance with survivability is not expected until FOC. When there is an incremental acquisition or the system is modified, the lead command, PM, and lead operational test organization will conduct a survivability review to assess how the increments/modifications affect the survivability of the system.

3.69.3.1. The PM shall include the system survivability requirements, the system's threat assessment, and a summary of the program's overall plan for addressing survivability in the LCMP, TEMP, and SEP and other life cycle documents as applicable.

3.69.3.2. If a system requires hardening to survive against nuclear, ballistic, chemical, biological, high power microwave, or laser threats, the PM shall implement a hardness assurance, maintenance, and surveillance (HAMS) program. (Reference DNA-H-93-140, *Military Handbook for Hardness Assurance, Maintenance, and Surveillance (HAMS)*)

3.69.3.3. During technical, program, and Milestone decision reviews, the PM will provide an assessment of the system's survivability in the anticipated battlefield environment. For any identified shortfalls in meeting survivability requirements, the PM will provide a plan for meeting requirements prior to key testing and operational events. At MS C, the MDA will verify compliance with survivability requirements.

3.69.3.4. Survivability requirements apply to COTS/NDI.

3.70. Arms Control Compliance. The PM shall ensure all activities within the acquisition cycle are compliant with all United States Government arms control obligations. The PM shall ensure SAF/GC, AF/A3/5 (for compliance with arms control agreements) and AF/JA (for compliance with international law) review all weapons for legality at the earliest possible stage, whether new acquisitions or modification of existing weapons. This assessment will occur prior to all Milestone reviews or when concerns arise. If necessary, the PM shall seek (with AF/A3/5 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.

3.71. Foreign Military Sales (FMS) and Security Assistance (SA). International relationships are a critical component of U.S. national security and its commitment to promoting democratic institutions, world peace, and global security. Security Assistance (SA) and Foreign Military Sales (FMS) programs support U.S. foreign policy and national security objectives by enabling the United States to build, sustain, expand, and guide international partnerships that are critical enablers for its national security objectives.

3.71.1. SA programs allow the transfer of military articles and services to friendly foreign governments. These transfers are also conducted using Letter of Offer and Acceptance (LOAs) between the U.S. Government and an authorized foreign purchaser and may be carried out via authorized sales, grants, or leases under the premise that if these transfers are essential to the security and economic well-being of allied Governments and international organizations, they are equally vital to the security and economic well-being of the United States. SA programs support U.S. national security and foreign policy objectives by increasing the ability of our friends and allies to deter and defend against possible aggression, promoting the sharing of common defense burdens, and helping to foster regional stability. SA is witnessed by: the delivery of defense weapon systems to allied and friendly foreign governments and international organizations; U.S. Service schools training international students; U.S. personnel advising other governments on ways to improve their internal defense capabilities; and U.S. personnel providing guidance and assistance in establishing infrastructures and economic basis to achieve and maintain regional stability.

3.71.2. FMS is that portion of U.S. security assistance authorized by the Foreign Assistance Act of 1961, as amended, and the Arms Export Control Act of 1976, as amended. It differs from other forms of assistance in that the recipient provides reimbursement for defense articles and services transferred. The FMS program is conducted using LOAs which are agreements between the United States Government and an authorized foreign purchaser. These agreements authorize the sale of military equipment and services to allied and friendly foreign governments and international organizations. SAF/AQ, as the SAE, is responsible for acquisition policy, program management, and execution of all AF FMS acquisition cases and will work with SAF/IA and HQ AFMC to accomplish necessary tasks.

3.71.3. For clarity, program management responsibility for FMS programs is limited to elements/tasks contained in a government-to-government agreement and specifically implemented for execution to the PM, through the appropriate accountability reporting chain, by the assigned DOD component authority over the specific agreement.

3.72. Management of AF Training Systems. Management of training systems requires close coordination between lead and using commands and the acquisition and sustainment community. Refer to AFI 36-2251, *Management of Air Force Training Systems,* for specific requirements and responsibilities associated with the acquisition and sustainment of training systems, including aircrew mission training systems, maintenance training systems, and training services attendant to AF weapon systems. The PM shall apply AFI 63-1201, to ensure the OSS&E of training systems. Training systems that have been designated as stand-alone acquisition programs shall be governed by a PMD.

3.72.1. The PM shall contact the weapon system Training System Product Group Manager (TS-PGM) or equivalent prior to/at program initiation to develop and assign organizational responsibilities for the acquisition and sustainment of training systems for the weapon system. Weapon system PMs shall coordinate their program plans and activities with the TS-PGM, specific training system PMs, lead and using commands, and HQ Air Education and Training Command (AETC) as necessary to meet training system life cycle cost, schedule, and performance requirements.

3.72.2. As appropriate, the PM or their designees shall participate in Training Planning Teams (TPT) activities including accomplishing the Training System Requirements Analysis (TSRA) and the development of System Training Plans (STPs). Lead commands will determine when TPTs, TSRAs and STPs are required. The PM will coordinate on STPs prepared by lead commands.

3.72.3. As requested, the PM shall assist lead and using command modernization planning and POM development efforts, including the analysis of training system needs, materiel and non-materiel alternatives, development of capability documents, and preparation of budget materials.

3.72.4. The PM shall include weapon system training concepts and training system requirements in all LCMPs prepared for, and subsequent to, MS B. As appropriate, the PM will include the TS-PGM, training system PMs, lead and using commands, and HQ AETC during the development of weapon system acquisition strategies, program plans, and pertinent contract documents such as System Requirements Documents.

3.72.5. The PM shall ensure training systems remain current with prime mission systems throughout the life cycle of a weapon system, in accordance with approved program management directives and funding. The PM shall ensure training system requirements are included in all post-production system modification/upgrade programs conducted for prime mission systems.

3.72.6. The PM shall, with lead and using commands, determine the training system fielding requirements necessary to support the fielding of prime weapon systems and equipment. The PM shall coordinate training system product acceptance, movement, and delivery matters with the lead and using commands that will receive the training system(s).

3.72.7. The PM shall assist lead and using commands with management and reporting of training system concurrency matters (e.g., AF/A3/5 data calls).

3.72.8. The PM shall manage and execute the disposal of training devices in accordance with federal acquisition regulation and supplements, AFMAN 23-110, and AFI 23-501, *Retaining and Transferring Materiel*, as applicable. PMs will coordinate actions for the declassification and demilitarization of training devices, the removal and repatriation of weapon system-common equipment, and the disposal of hazardous materiels prior to the shipment of training devices to the Defense Reutilization and Marketing Office (DRMO) or other final resting places.

3.73. End Use Certificates. The AF purchases products produced by allies and friendly countries, and participates in cooperative development programs to 1) promote interoperability, standardization, and an expanded procurement base, and 2) to obtain products that best meet U.S. needs at the lowest cost. An End Use Certificate (EUC) may be necessary to facilitate purchases

of foreign products when the purchase of such products is in the best interest of the United States. An EUC applies to all personnel who purchase, use, and dispose of restricted items from a foreign vendor. See DODD 2040.3, *End Use Certificates (EUC*), for more details.

3.73.1. When an EUC is necessary or requested by foreign governments they can be divided into three categories:

3.73.1.1. Category I. Applies to acquisition items classified for security purposes by a foreign government and covered by the nonproliferation agreements to which the United States is a party (such as missile technology). This permits the item to be used by or for the U.S. Government in any part of the world and transfer by means of grant aid, International Military Education and Training (IMET) programs, FMS, and other security assistance and armaments cooperation authorities.

3.73.1.2. Category II. Applies to all other items not defined as either Category I or III.

3.73.1.3. Category III. USD (AT&L) must grant a waiver for items that require Category III EUCs as it limits the right to use an item by or for the U.S. Government in any part of the world; or to provide the item to allies engaged together with the United States in armed conflict with a common enemy.

3.73.2. The SECAF, or a delegated civilian officer, appointed by the President with the advice and consent of the Senate, is the approval authority for Category I and II EUCs. To purchase an item with a Category III EUC, the SECAF or the SECAF representative must request authority from the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)).

3.73.3. EUCs originating in development and test centers require AF/TE review prior to requesting formal approval.

3.73.4. The following procedures shall be used to request formal approval for the purchase of foreign items for each EUC category as indicated:

3.73.4.1. Category I EUC.

3.73.4.1.1. The PM shall prepare a package requesting permission to purchase an item requiring EUC. The request includes the item's name, nomenclature, and purpose; justification of need; and any other purchasing options.

3.73.4.1.2. Test center commanders will notify AF/TE when requesting permission to purchase an item requiring a EUC. The request includes the item's name, nomenclature, and purpose; justification of need; and any other purchasing options.

3.73.4.1.3. The PEO, DAO, or AF/TE, in coordination with the applicable CD, requests approval to purchase an item requiring a EUC from the approval authority.

3.73.4.2. Category II EUC.

3.73.4.2.1. PMs or test center commanders will follow approval process as outlined for Category I.

3.73.4.2.2. The approval authority must notify USD(AT&L) at least 21 calendar days prior to approving the request of the intent to purchase an item with a Category II EUC. Notification to USD (AT&L) must include a description of the recommended

item and all limitations imposed on it by the exporting government. The approval authority may assume that USD (AT&L) concurs with the purchase if it does not receive a response by the end of the 21-day period.

3.73.4.3. Category III EUC.

3.73.4.3.1. To justify a waiver, PMs or test center commanders will follow approval process as outlined for Category I, and the PM or center commander must specify:

3.73.4.3.1.1. The reasons the US Government would benefit from purchasing the foreign item;

3.73.4.3.1.2. The limitations imposed by the exporting government and their justification;

3.73.4.3.1.3. The cost, schedule, or operational requirements that could not be filled by any satisfactory alternative, either domestic or foreign.

3.73.5. The SECAF, or a delegated civilian officer, requests policy waivers from USD(AT&L).

3.73.5.1. If USD (AT&L) grants a policy waiver, then signature authority is delegated to the PEO, DAO, or AF/TE.

3.73.6. The PEO, DAO, or AF/TE signatory must sign two original EUCs and provide both to the PM.

3.73.7. The designated PM or test center commander will:

3.73.7.1. Transmit the two signed originals to personnel representing the foreign government for signature. The foreign government will keep one original and return the second to SAF/AQ which forwards a copy to the PM or test center commander.

3.73.7.2. Send copies of the form to the PEO, DAO, or AF/TE and to USD(AT&L).

3.73.7.3. Notify major command (MAJCOM) headquarters of the EUC approval and explain any restrictions on the use, transfer, or disposal of the item's hardware, technology, and associated technical data. Command Headquarters must notify users of the EUC restrictions.

3.73.8. Upon receiving a proposal to waive the EUC restrictions from the MAJCOM, the PM or test center commander must immediately request permission from the originating foreign government. The PM or test center commander must then advise MAJCOM Headquarters, the approval authority, and USD (AT&L) of the foreign government's response.

3.73.9. MAJCOM headquarters must ensure AF compliance with EUC restrictions and advise the SECAF, or a delegated civilian officer, of any proposal that would require a waiver of EUC restrictions.

3.73.10. MAJCOMs will develop procedures for identifying, cataloging, controlling, and disposing of items with EUCs.

Section 3C—Life Cycle Systems Engineering Requirements

3.74. Life Cycle Systems Engineering (SE). Life cycle Systems Engineering (SE) is addressed in AFI 63-1201, *Life Cycle Systems Engineering*, which will take precedence if there are any conflicts. Application of SE fundamentals must begin with concept inception, and must cover all efforts across all life cycle phases, to include sustainment and disposal. All AF products and systems must exhibit and preserve attributes of OSS&E and mission assurance throughout their operational life.

3.74.1. SE addresses architecting, requirements development and management, design, technical management and control, and test and evaluation (T&E) / verification and validation (V&V). These fundamental elements must be accomplished on all development, acquisition, and sustainment efforts to develop a relevant technical knowledge base that is matured, maintained, and transferred in a disciplined manner. They are not to be implemented independently but must be integrated to mutually reinforce each other.

3.75. AF SE Management Responsibilities. PM and Chief/Lead Engineer responsibilities are typically not formally assigned prior to MS A. For early capability development efforts, such as science and technology (S&T) and concept studies, the term "program" refers to the specific activity; for those efforts a designated project or capability manager performs the SE tasks identified herein as PM and Chief/Lead Engineer responsibilities. ALC and related post-MS C SE efforts may be assigned to the applicable PM, SSM, PGM (including software), Commodity Manager, or Supply Chain Manager (SCM). PMs and Chief/Lead Engineers must include relevant performance incentives in contract solicitation, evaluation, award, and execution processes.

3.75.1. PM. The PM (or ALC designee, for sustainment efforts) is responsible to ensure application of SE across all program areas throughout the product or system life cycle.

3.75.2. Chief/Lead Engineer. The Chief/Lead Engineer is the PM's designated technical authority in the disciplined execution of the SE process, including development of the Systems Engineering Plan (SEP). The Chief/Lead Engineer is responsible to the PM to establish, implement, manage, and control SE activities necessary to develop and field robust products and systems that exhibit attributes of system security, OSS&E, and Mission Assurance.

3.75.3. Center-Level Technical Authority. A designated SE Technical Authority at each Product, Test, and Logistics Center is responsible to the PEO, DAO, or the Center Commander for a portfolio approach to SE implementation across all technical efforts and programs, regardless of ACAT.

3.76. Systems Engineering Plan (SEP). The Systems Engineering Plan (SEP) documents the organizations, authorities, roles and responsibilities, processes, and integration used to plan, evaluate, execute, and manage the technical aspects of a program. AFI 63-1201 identifies SEP requirements for all AF efforts, including those that may not formally be identified as "programs" (e.g., pre-acquisition activities or modifications managed at a Logistics or Test Center). To facilitate entry into formal acquisition, managers of pre-acquisition efforts shall ensure that documentation of analysis and technical planning is compatible with SEP requirements for MS A and B. The SEP should be developed in concert with the technical

planning supporting the acquisition strategy, the ICD, and other relevant predecessor documents. The SEP must be reviewed annually, and updated as required throughout the life cycle.

3.77. Environment, Safety, and Occupational Health (ESOH). The PM must eliminate Environment, Safety, and Occupational Health (ESOH) hazards where possible and shall manage risks of hazards that cannot be avoided. Refer to AFI 63-1201 Atch. 4 for a more complete discussion of ESOH requirements.

3.78. Operational Safety, Suitability, and Effectiveness (OSS&E)/Mission Assurance .

3.78.1. OSS&E is an integrated effort to ensure that base-lined characteristics of systems and end items are not allowed to degrade as a result of operational use, configuration changes, maintenance repairs, aging, parts substitutions, and similar activities. The PM must assure OSS&E throughout the life cycle of each configuration of the system by working collaboratively with members of the operational, maintenance/sustainment, and test communities. The PM shall ensure historical OSS&E data is considered during the development of new systems. Reference AFI 63-1201, *Life Cycle Systems Engineering*, Atch 3.

3.78.2. Mission Assurance is the integrated engineering-level assessment of analysis, production, verification, validation, operation, maintenance, and problem resolution processes performed over the life cycle of a system or end item, by which an operator/user determines that there is an acceptable level of risk to its employment to deliver an intended capability in an intended environment. The objective of the assurance process is to identify and mitigate design, production, and test deficiencies that could impact mission success.

3.79. Human Systems Integration (HSI). The PM shall integrate manpower, personnel, training, human factors engineering, safety and occupational health, personnel survivability, environment, and habitability considerations into the Systems Engineering process. 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. Reference AFI 63-1201, *Life Cycle Systems Engineering*, Atch 5 for more information.

3.80. Maintenance Engineering/Sustaining Engineering (ME/SE). Maintenance Engineering/ Sustaining Engineering (ME/SE) involves the review, assessment, definition, and resolution of hardware deficiencies revealed throughout the life cycle, including development and production as well as operational service. PMs and Chief/Lead Engineers shall employ ME/SE principles throughout the system's life cycle. Reference AFI 63-1201, *Life Cycle Systems Engineering*, Atch 6 for more information.

3.81. Configuration Management (CM). The PM shall ensure the use of Configuration Management (CM) functions to establish and maintain consistency of product/system attributes with requirements and configuration information throughout the entire life cycle. Product and system characteristics, including components, key processes, and methods used to verify compliance with design and performance requirements, must be documented.

3.82. Product and System Integrity. The PM and Chief/Lead Engineers are responsible for ensuring that product/system-level performance and safety requirements will be met under any

combination of design usage environments throughout the operational life of a product or weapon system. Processes that must be addressed to ensure product/system integrity include design, configuration management, system safety, manufacturing, quality management, test, maintenance, inspection, supply chain management, flight operations, and mishap investigation. Reference AFI 63-1201, *Life Cycle Systems Engineering*, Atch 7 for more information on implementing these processes. Reference AFI 63-1401, *Aircraft Information Programs*, to implement data collection and distribution capabilities that support these processes.

3.82.1. Quality Management. The PM and Chief/Lead Engineers are responsible for assuring the delivery of quality products and services. Policy for addressing program quality management is contained in AFI 63-501, *Air Force Acquisition Quality Program*.

3.82.2. Aircraft Structural Integrity Program (ASIP). In accordance with AFI 63-1001, an aircraft-specific ASIP is required for each Mission Design Series (MDS) of aircraft (manned or unmanned) the AF acquires, uses or leases. Each ASIP shall be developed, documented, approved, and executed according to MIL-HDBK-1530, *Aircraft Structural Integrity Program (ASIP).*

3.82.3. Aircraft Weapon System Integrity Program. An aircraft-specific aircraft weapon system integrity program shall be developed, documented, approved, and executed according to MIL-HDBK-515 (USAF), *Weapon System Integrity Guide (WSIG).*

3.82.4. Propulsion Systems Integrity Program. An aircraft-specific propulsion systems integrity program shall be developed, documented, approved, and executed according to MIL-STD-3024, *Propulsion System Integrity Program*.

3.82.5. Mechanical Equipment and Subsystems Integrity Program. An aircraft-specific mechanical equipment structural integrity program shall be developed, documented, approved and executed according to MIL-STD-1798, *Mechanical Equipment and Subsystem Integrity Program.*

3.82.6. Avionics Integrity Program. An aircraft-specific avionics/electronics integrity program shall be developed, documented, approved, and executed.

3.83. Aircraft Information Program. All Air Force weapons systems requiring airworthiness certification shall have an Aircraft Information Program (AIP) to evaluate and integrate weapon system information requirements. These weapons systems shall employ an information recording capability consisting of those components deemed necessary to meet the collection, processing, storage, distribution and reporting needs of processes such as mishap investigation, integrity programs, Military Flight Operations Quality Assurance, and Condition-Based Maintenance. This systematic approach to integrating all data requirements is essential to ensure capture of critical information and optimization of benefit while minimizing overall cost. Reference AFPD 62-6, *USAF Aircraft Airworthiness Certification*, and AFI 63-1401, *Aircraft Information Program (AIP)*.

3.83.1. Crash Survivable Flight Data Recorders. Provide a crash-survivable data collection capability for mishap investigation, including parametric (i.e. flight data recorder) and acoustic (i.e. cockpit voice recorder) data. Employ devices such as Emergency Locator Transmitter (ELT), Underwater Locator Beacon (ULB), and Crash Position Indicator (CPI) to enable the recovery of the crew and information recording devices in the event of a mishap.

3.83.2. Military Flight Operations Quality Assurance (MFOQA). A platform-specific MFOQA program is required for each MDS the AF acquires or uses (manned, unmanned, and leased) per AFPD 90-13, *Military Flight Operations Quality Assurance*. MFOQA provides insight into the operational usage of the aerial system, supporting OSS&E through analysis of flight maneuvers and identification of hazardous trends, facilitating risk assessment and mitigation activities.

3.84. Software Engineering. Programs and developmental efforts must address key software focus areas throughout the life cycle, beginning with pre-MS A activities. These focus areas will be incorporated as appropriate in the SEP, or acquisition plans. Consideration should be given to application of Modular Open Systems Approach (MOSA) and Open Technology Development (OTD) principles, and software assurance. PEOs/DAOs may tailor the implementation of these focus areas as required, and the SAE will be notified of all tailoring. Reference AFI 63-1201, *Life Cycle Systems Engineering*, Atch 8 for more information.

3.85. Value Engineering (VE). All AF systems, subsystems, equipment and products are candidates for value engineering (VE) procedures and processes, except those specifically exempted by the Federal Acquisition Regulation (FAR), Part 48. For more information reference FAR 52.248-1.

3.85.1. AF personnel charged with procuring systems, subsystems, equipment and products will comply with FAR Parts 48 and 52 when dealing with suppliers. Voluntary participation via Value Engineering Change Proposals (VECP) will be the primary means to achieve contractor support.

3.85.2. When resources permit, an in-house VE program to review and analyze internal AF processes with the goal of reducing the cost of doing business is encouraged. A Value Engineering Proposal (VEP) documents the effort.

3.86. Systems Engineering in Integrated Master Plan (IMP) and Integrated Master Schedule (IMS) . The IMP/IMS must capture key SE events, activities, and criteria; contain sufficient detail about SE efforts, resources, monitoring, and control; and be integrated at all levels.

3.87. System Compatibility and Interoperability. The PM shall identify and assess the potential impacts on technical, schedule, cost, and funding critical path issues of meeting system compatibility and interoperability requirements for independent AF or joint operations. DOD 4120.24M, DODI 2010.06 and AFI 60-101 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.

3.87.1. For joint, allied and coalition operations, the PM shall consider compatibility and interoperability attributes (e.g., databases, fuel, transportability, ammunition) that may need to be identified and require verification to ensure a capability is interoperable IAW CJCSM 3170.01.

3.87.2. The PM shall consider future multinational operations in the acquisition of all materiel intended for use by U.S. Forces DODI 2010.06, *Materiel Standardization and Interoperability with Allies and Coalition Partners*. For programs delivering capabilities with potential use in allied and coalition operations, the identification and assessment should include the ISAs applicable to areas such as cross-servicing (with interchangeable fuels,

lubricants, gases, and munitions), armaments, air transport and air drop, medical evacuation, combat search and rescue, crash/fire/rescue, and geospatial/intelligence.

3.87.3. Following approval of the acquisition strategy, the PM should notify AF/A5 and SAF/AQR of all applicable ISAs that are not included in the Systems Requirement Document (SRD) to allow agreement reservations to be registered with the appropriate multinational body (see AFI 60-106, *The United States Air Force International Military Standardization Program*, for further information).

Section 3D—Sustainment Planning Requirements

3.88. Product Support/Sustainment Planning Overview. Product support is a continuous and collaborative set of activities that establishes and maintains readiness and the operational capability of a system, subsystem, or end-item throughout its life cycle. It is an overarching activity that bridges the acquisition and sustainment phases of a program. A product support strategy shall be built around the product support elements to integrate the acquisition and sustainment phases of a system throughout its life cycle.

3.88.1. The PM shall ensure the appropriate concepts, techniques, and analyses necessary to assure achievement of predefined supportability and support requirements and objectives are applied. The PM shall ensure that integrated logistics support objectives are considered and introduced as early as practical with a far-reaching life cycle view concerning logistics design and supportability of the system. This activity requires integration of current logistics concepts into preliminary planning to evaluate the various options for maintenance concepts and supply support from the standpoint of life cycle cost and parameters to ensure balanced life cycle strategy. The PM will use the Acquisition Sustainment (AS) Tool Kit as an aid to facilitate product support/sustainment planning and management throughout the life cycle of the program. Reference AFPAM 63-128 for more information on the AS Tool Kit.

3.88.2. The PM shall consider life cycle sustainment during the Materiel Solution Analysis phase and mature sustainment planning in the Technology Development phase. The PM shall ensure the requirement for a Life Cycle Sustainment Plan is included as an integral part of the LCMP prepared for MS B (program initiation) using the following top-level Product Support Elements: 1) sustaining/system engineering, 2) design interface, 3) supply support, 4) maintenance planning and management, 5) support equipment/automatic test systems (SE/ATS), 6) facilities, 7) packaging, handling, storage, and transportation (PHS&T), 8) technical data management/technical orders, 9) manpower and personnel, 10) training, 11) computer resources, and 12) protection of critical program information and anti-tamper provisions. Additional information on the Product Support Elements is in AFPAM 63-128.

3.88.3. To ensure compliance with Title 10, USC, Sections 2464, *Core Logistics Capabilities*, and 2466, *Limitations on the Performance of Depot-Level maintenance of Materiel*, the PM shall reflect the Air Force enterprise Core and 50/50 requirements in programmatic strategy and detailed product sourcing documents throughout the program life cycle.

3.88.3.1. Prior to MS-B the PM shall have an initial plan for depot activation requirements and funding, to include operational rationale, which shall be finalized prior to IOC. Data shall be kept current until all depot activation requirements are achieved.

3.88.3.2. The PM shall collaborate with and provide program depot activation data to AFMC for inclusion in a centralized depot activation depository.

3.88.4. The PM shall ensure product support integration throughout the system life cycle. Product support integration consists of integrating the activities of the product support providers as well as intra-system and inter-system integration with supporting systems, subsystems, end-items, components and facilities. The PM shall identify a product support integrator as a single point of contact prior to program initiation (usually MS B). The product support integrator will be military or Government civilian personnel unless otherwise approved and documented as part of program planning.

3.88.5. A performance based strategy shall be used to link product support to weapon system performance. A performance based logistics (PBL) strategy shall be used in accordance with the PBL guidance section in this AFI.

3.88.6. Condition Based Maintenance Plus (CBM+), as an extension of the maintenance design program executed during development, shall be used to improve maintenance agility and responsiveness, increase operational availability, and reduce life cycle total ownership costs. The goal is to perform maintenance only upon evidence of need by employment of technologies, processes, and procedures to improve maintenance/logistics. Enabling technologies and concepts include prognostics, diagnostics, portable maintenance aids, interactive electronic technical manuals, interactive training, data analysis, integrated information systems, automatic identification, reliability-centered maintenance, and joint total asset visibility. See DODI 4151.22, *Condition Based Maintenance Plus (CBM+) for Materiel Maintenance*, for more details.

3.89. Depot Source of Repair (DSOR). The DSOR process is the method by which the DOD postures its depot level maintenance workloads – organic or contract. It applies to workloads for hardware, software, new acquisitions and fielded systems, whether the Government or private contractor manages the system or subsystem. Source of repair (SOR) processes are also utilized to reassess prior DSOR decisions when major changes occur that could potentially affect previous DSOR decisions (e.g., changes in the length of a program's life cycle; capability and sustainment modifications; increases greater than 20% in labor-hours, cost or quantities of fielded systems). For fielded systems, the process will be initiated as soon as the change in posture is considered. DSOR planning shall be initiated early in the life cycle.

3.89.1. DSOR determinations for specific programs, systems, sub-systems, and end items are processed and approved through AFMC.

3.89.2. The overall DSOR decision for a program is a compilation of the results of the individual DSOR determinations that are based on the combined Source of Repair Assignment Process (SORAP) and the depot maintenance interservice (DMI) recommendations. The overall DSOR decision shall be approved by the MDA at MS-B (program initiation) and MS-C. MDA approval is normally accomplished by including the DSOR decision in the LCMP.

3.89.3. The PM, PGM and Air Logistics Center (ALC) Commander shall ensure appropriate subject matter experts and stakeholders are involved in developing the DSOR decision package, validating and implementing DSOR decisions. DSOR packages shall be submitted with lead time sufficient to include the outcome of the determination in any acquisition

strategy development supporting a program initiation approval MS B and/or the award of any contracts for subsequent acquisition and sustainment phases. If a DSOR is required in less than 90 days from the date the initiating official submits the request to HQ AFMC, the request will include the rationale for the need and the required date. The following are responsible for the DSOR decision package submittal:

3.89.3.1. The PM for weapon-system specific acquisitions.

3.89.3.2. The PGM for product group acquisitions.

3.89.3.3. The managing ALC Commander for common commodities not managed by a PM or PGM.

3.89.4. DSOR packages shall be processed through use of the DSOR Electronic Manager (DSOR-EM). HQ AFMC shall manage the DSOR-EM and processes/procedures consistent with DOD/AF DSOR guidance. Initiators of DSOR packages shall adhere to the HQ AFMC established DSOR processes and procedures.

3.89.4.1. HQ AFMC is designated the AF executive manager for DSOR and will:

3.89.4.1.1. Develop and/or provide DSOR-EM user guidance, access management, training, user functional support, operation, and sustainment of the DSOR-EM.

3.89.4.1.2. Develop and/or coordinate on forms required for DSOR processes.

3.89.4.1.3. Develop DSOR processes/procedures for processing DSOR packages through SORAP, DMI, and if applicable the strategic source of repair (SSOR) activities (SSOR determination is addressed later in this section). DSOR processes/procedures shall be integrated within the DSOR-EM to the maximum extent practical.

3.89.4.1.4. Manage the process for all initiated DSOR decision packages through all actions (SORAP, DMI, and, as needed, SSOR determination).

3.89.4.1.5. Maintain up-to-date status on DSOR packages.

3.89.4.1.6. Ensure DSOR-EM entry for completion (approval) of a SORAP, DMI, SSOR (if applicable), and DSOR decision is restricted to appropriate management personnel and the entry is linked to a digital signature for accountability.

3.89.4.1.7. Coordinate with HQ AFSPC on all space DSOR packages.

3.89.4.1.8. Be the AF interface with the Joint Depot Maintenance Activities Group (JDMAG).

3.89.4.1.9. Develop and publish needed documentation, agreements, processes, and guidance as needed for effective operations between HQ AFMC and the JDMAG, consistent with DOD and AF policy and guidance.

3.89.4.1.10. Accomplish an SSOR determination if required, utilizing the information from the pending DSOR package.

3.89.4.2. The DSOR process considers a broad range of factors but at a minimum shall consider: public law (e.g. Title 10 USC §2464, *Core Logistics Capabilities* and §2466, *Limitations on the Performance of Depot-level Maintenance of Materiel*); long-term

depot strategy; overall cost to the DOD; mission assignment alignment, environmental impacts (to comply with AFI 32-7061, *The Environmental Impact Analysis Process*, and Title 32 Code of Federal Regulations Part 989), and specific weapon system requirements. DSOR packages shall be prepared at the highest level practicable e.g., system or subsystem and be a collaborative process that includes Government stakeholders' participation in determining the most beneficial SOR. The SORAP portion of the DSOR should be viewed as a decision point based on multiple factors rather than a competition between an organic depot and a contractor source.

3.89.4.2.1. Joint acquisition programs require the DSOR to be executed for new items entering the AF inventory, regardless of decision rendered or degrees of commonality of the items being acquired by other DOD components. This does not preclude the use of data available from the other DOD components in the preparation of an AF DSOR recommendation. When the AF is the lead DOD Component, the other DOD Components' core needs are to be considered prior to any AF DSOR decisions.

3.89.4.2.2. The DSOR initiator (SPM/PM, PGM or ALC OPR) is responsible to complete, validate, and implement the total DSOR package. The initiator of the DSOR shall also ensure all viable sustainment options are considered before deciding on a SOR recommendation for the DSOR package. The DSOR initiator is responsible for submitting the DSOR package in time to support milestone decisions, RFP releases, and other programmatic needs. RFPs shall include requirements for technical data which are necessary to set up AF determined needed organic repair capabilities.

3.89.4.2.3. The DSOR initiator shall review DSOR decisions:

3.89.4.2.3.1. Every three years to document continued validity of the DSOR in the DSOR-EM.

3.89.4.2.3.2. As requested by HQ AFMC when depot activation plans are accomplished or new depot capability is activated.

3.89.4.3. There are five situations when a DSOR is required:

3.89.4.3.1. New acquisitions. A new acquisition includes any weapon system, item, component, system, subsystem, or software that will result in a new requirement for depot-level maintenance. DSORs for new acquisitions shall be accomplished on the total anticipated inventory to be acquired.

3.89.4.3.1.1. For new acquisitions, the DSOR requirements shall be initiated during the Technology Development Phase in sufficient time to obtain a DSOR decision or an SSOR determination prior to program initiation. If only an SSOR determination is accomplished at program initiation, the DSOR requirements must be accomplished prior to the Production and Deployment life cycle phase. The PM initiates the DSOR by identifying the requirement. While there may not be firm programmatic data available in the pre-acquisition inception phase, the identification may use information based on a system or systems that are currently satisfying the same or similar requirement. In the absence of a comparable source of data, conceptual data may be used. The submission must be of sufficient depth

to allow for identification of candidate organic depots and completion of a core capability assessment.

3.89.4.3.1.2. The PM will consider core and partnered workloads in their development of DSOR packages and resolve any inconsistencies with the candidate depots.

3.89.4.3.1.3. The PM is responsible for review of the results of the solicitation and sorting workloads into two categories: (1) core and partnered workload decisions that were made but need to be reviewed, relative to the equipment and software selected. The earlier decision will either be validated or the workload will be placed in the contract repair candidate category. (2) Workloads, which also include the contract candidates, will be postured using a cost-based approach. These workloads may be deferred until more mature data is available.

3.89.4.3.2. New work. New work, as related to requiring a DSOR, is a change (hardware or software) to a previously postured system, end-item, or component that will result in a change greater than 20% to the depot maintenance workload hours or cost.

3.89.4.3.3. Modification follow-on workloads. Modification follow-on workloads are depot maintenance workloads generated as a result of a modification installation. When a modification installation introduces one or more new acquisition, as defined above, it generates a need for the DSOR to determine the destination of the workload. DSOR packages for modification follow-on workloads are prepared and must meet the same requirements as for a new acquisition.

3.89.4.3.4. Overseas Workload Program (OWLP). DSORs are required for any new, modified, or shift in a SOR that involves the potential for accomplishment of depot-level maintenance by a source outside of the United States. Information required to make an informed DSOR decision is generally available. DSOR packages will be prepared and submitted in the same manner as for new start packages. This is applicable even in those instances where the results of the assessments appear to be obvious.

3.89.4.3.5. Workload Shifts. Permanent change in the officially designated SOR or source of modification can only be accomplished through a DSOR process when such change involves an organic depot. Changes from one contract repair source to another or consolidating several contract workloads does not require a DSOR. A DSOR is required for a workload shift when there is a proposed change in the SOR that results in one of the following types of SOR shifts: from assigned organic depot to another organic depot; from assigned organic depot to a contract; or from contract SOR to an organic depot. DSOR package actions for workload shifts are the same as for OWLP.

3.89.5. There is no waiver to the DSOR for depot-level maintenance workloads meeting the criteria above, although certain categories of workloads may be excluded from DSOR requirements. Categories of workloads meeting the exclusion criteria include:

3.89.5.1. DELETED.

3.89.5.2. Workloads generated by Industrial Plant Equipment located exclusively within the depot maintenance complex and funded through the industrial fund.

3.89.5.3. Modifications that are to be performed in conjunction with scheduled depot maintenance at the assigned SOR.

3.89.5.4. Modifications to components that do not change the form, fit, or function of the component modified and do not change the basic part number, only the version (dash number change), as long as the SOR of the end-item does not change.

3.89.5.5. Foreign Military Sales (FMS) programs.

3.89.5.6. United States Special Operations Command (USSOCOM) workloads which are Major Force Program (MFP)-11 funded.

3.89.5.7. Systems and equipment under special access programs.

3.89.5.8. Automated data processing equipment workloads that are not for national security systems (including payroll, finance, logistics, and personnel management applications).

3.89.5.9. Department of Energy special design military spares. (Examples include but are not limited to nuclear weapon trainers, nuclear weapons test or handling equipment, and use control equipment.)

3.89.6. While cost is a consideration in any posturing decision, a formal costing effort may not always be necessary, e.g., a review of the potential cost drivers is sufficient to allow for a SOR recommendation when considered with other, more salient criteria. In those instances where a costing effort is required, the PM (who may utilize DSOR team) will determine the scope and methodology. The primary consideration is the cost to the Government and not to individual acquisition programs. Costs incurred by an individual acquisition program composed of elements that would accrue costs to the Air Force regardless of the posturing decision are not relevant to the posturing decision. However the costs associated with the shift in workload shall be identified as quickly as possible so that these activities may be programmed and budgeted.

3.89.7. Upon approval of the SORAP recommendation, HQ AFMC will introduce the DSOR package for DMI study/review. This DMI study/review is required regardless of the SORAP decision, organic or contract.

3.89.8. When a DSOR decision cannot be accomplished for program initiation approval (MS B), HQ AFMC will accomplish an SSOR determination. The SSOR determination, defined as a determination of the anticipated SOR (organic or commercial and probable organic depot(s) considering all Services) is based on the best available information during the Technology Development Phase (non-space programs) or Concept Development Phase (space programs) or during the first applicable acquisition phase.

3.89.8.1. The SSOR determination is to identify anticipated SORs early in the acquisition process so that defense acquisition planning and programming documents, and resulting contracts, contain the appropriate sustainment elements needed to support the acquisition strategy. The determination will also support Title 10 USC §2464, *Core Logistics Capabilities* (Core) and §2466, *Limitations on the Performance of Depotlevel Maintenance of Materiel* (50/50) requirements, mission assignment alignment, and guide

the DSOR initiator in accomplishing timely and efficient product support activities needed for operational capability. The documentation submitted for a DSOR, for both SORAP and DMI decisions, is used for making a SSOR determination with the understanding that the level of information is not sufficient to make a full DSOR decision.

3.89.8.2. The AFMC/CC shall be the SSOR determination approval authority.

3.89.8.2.1. For ACAT I, IA and II programs, the approval for the SSOR determination may not be delegated.

3.89.8.2.2. For ACAT III programs, the approval for the SSOR determination may be delegated by the AFMC/CC.

3.89.8.3. HQ AFMC shall determine the need for an SSOR determination within 90 days from the date that the initiating official submits the DSOR package. If an SSOR determination is required, HQ AFMC shall provide the documented approved SSOR determination to the DSOR package initiator at least 45 days prior to the projected or scheduled date for the MS B, or program inception decision.

3.89.8.4. The SSOR determination documentation shall include at a minimum:

3.89.8.4.1. Identification of AF and/or other Services' candidate depot(s) which possess the needed organic technical repair capability.

3.89.8.4.2. A brief summary of the required Core capabilities, identification of Core capability gaps, organic workload needed, and why these organic workloads are necessary to alleviate the applicable identified Core gaps.

3.89.8.4.3. Identification, from a strategic perspective, of workload projections (for hardware and software) required for 50/50 compliance and direction to the PM/PGM to plan for organic depot maintenance to satisfy the projections.

3.89.8.4.4. A specific statement that stresses to the PM the requirement that the RFP include appropriate technical data rights clauses and necessary deliverables, or options for technical data and equipment deliverables required to support an organic SOR determination.

3.90. Data Rights. Ensuring access to technical data (recorded information used to define a design and to produce, support, maintain, or operate a system) is critical to life cycle sustainment of a system. The PM will ensure decisions made early in the acquisition process address data needs over the entire life cycle of the system.

3.90.1. The PM shall assess long term data rights requirements and corresponding acquisition strategies prior to initiating a request for proposal to acquire systems, subsystems, or end-items to ensure they provide for rights, access, or delivery of technical data that the Government requires for systems' total life cycle sustainment. The PM shall address the acquisition of technical data and associated rights at ASPs, reviews, and document the strategy in the LCMP and associated data planning documents for all ACAT programs. Source selections shall consider Government rights to technical data. Data rights assessments and requirements shall:

3.90.1.1. Consider the product support life cycle strategy, which support plans for such areas as materiel management, training, cataloging, CM, engineering, Diminishing Manufacturing Sources/Material Shortages (DMSMS), technology refreshment, maintenance/repair within the technical order (TO) limits and specifically engineered outside of TO limits, and reliability management.

3.90.1.2. Collaborate and/or support other associated activities/elements such as: source of repair and supply decisions, core capability requirements, limitations on the performance of depot-level maintenance, and preservation of competition.

3.90.2. The PM shall ensure the performance work statement/statement of work (PWS/SOW) for development, production, deployment, and sustainment (for all applicable acquisition and sustainment phases) includes appropriate technical data rights requirements and necessary deliverables, or options for technical data and equipment deliverables required to support:

3.90.2.1. Organic source of repair and/or supply decisions.

3.90.2.2. Government Core depot maintenance capability requirements.

3.90.2.3. Expeditionary logistics footprint requirements.

3.90.2.4. Engineering data requirements needed for such activities as OSS&E assurance, integrity programs, sustaining engineering, and configuration management.

3.90.2.5. Technical orders (TOs).

3.90.2.6. Reprocurement/modification/upgrade.

3.90.3. For specific guidance and regulations concerning minimum government specific license rights, technical data and computer software, follow the regulations and guidance found in DFARS 227.7102, 227.7103 and 227.7202. (Reference Title 10 USC §2302, 2305, 2320, 2321 and 2325.) The burden of proof that data is proprietary lies with the contractor.

3.91. Engineering Data.

3.91.1. The PM shall ensure development and acquisition of engineering data sufficient for the acquisition, modification, maintenance, spares, repair, and demilitarization of the weapon system.

3.91.1.1. The PM shall require the use of International Standards Organization (ISO) 10303, *Standard for Exchange of Product (STEP*) *Model Data*, AP239, *Product Life Cycle Support*, for engineering data.

3.91.1.2. Legacy system modifications shall implement ISO 10303 for new engineering data to the maximum extent feasible. Conversion to ISO 10303 for the entire legacy system is encouraged when supported by a positive business case analysis (BCA).

3.91.2. The PM shall ensure acquired engineering data is compatible with the Joint Engineering Data Management Information and Control System (JEDMICS) to the maximum extent feasible.

3.91.3. When acquiring Computer Aided Design (CAD) data, the PM shall require delivery in both native format and neutral format.

3.91.4. The PM shall ensure the SEP includes detailed planning for management of government and contractor technical data throughout the product/system life cycle.

3.91.4.1. Obtain data that fully supports the product data repository (currently the Product Lifecycle Management System (PLMS) operating on the Global Combat Support System-Air Force (GCSS-AF)). PLMS is open AF wide for use to capture and manage product data throughout the life cycle.

3.91.4.1.1. The PLMS is being transitioned to the Expeditionary Combat Support System (ECSS) and additional data needed for ECSS shall be coordinated with the PM. PMs shall support additional ECSS requirements as approved and funded by the appropriate programmatic authority.

3.91.4.2. Evaluate existing and commercial data for adequacy in supporting program requirements in conjunction with estimated costs of upgrading or supplementing that data when necessary to establish or sustain stated support requirements. This includes modeling and simulation data.

3.91.4.3. Assess claimed restrictions on the use of engineering data and the cost effectiveness of securing or obtaining unlimited rights or Government Purpose License Rights (GPLR) for limited rights data.

3.91.4.4. Incorporate government and contractor-release validation controls when a contractor is required to develop and deliver government drawings.

3.91.4.5. Perform in-process reviews of engineering data to assess contractor efforts to develop quality data that conforms to requirements.

3.91.5. The PM shall coordinate with the primary Engineering Data Support Center (EDSC) (see Attachment 4 of this document) to:

3.91.5.1. Accomplish final drawing reviews to determine whether legibility, format, and completeness conform to contract requirements.

3.91.5.2. Utilize top-down breakdown assessments, using the guidelines in MIL-HDBK-288, *Review and Acceptance of Engineering Drawing Packages*.

3.91.5.3. Resolve missing and inadequate data issues.

3.91.6. Deliver engineering data only to the Primary EDSC for completion of DD Form 250, *Material Inspection and Receiving Report* or submission through the Wide Area Workflow (WAWF) process (**https://wawf.eb.mil**/). Delivery includes a Letter of Technical Acceptance by the PM, or other designated authority.

3.91.7. Electronic and non-electronic procedures for requesting engineering data from a Primary EDSC are provided in Attachment 4 of this publication.

3.91.8. The PM will make maximum use of the Military Engineering Data Asset Locator System (MEDALS), **https://www.dlis.dla.mil/medals**/, to determine if usable data can be located within the DOD. Additional sources to aid in data searches include: D043, *Logistics Remote User's Network*; D086, *Logistics Maintenance Engineering Management Assignments*; *Federal Logistics Information System (FLIS)*; *Defense Logistics Information Service Commercial and Government Entity (CAGE) Code* (**http://www.dlis.dla.mil/cage_welcome.asp**).

3.91.9. The PM may obtain data from an alternate source when engineering data is not available from a primary EDSC. The PM shall ensure the data reflects the correct configuration and is so maintained until delivered to the primary EDSC.

3.91.10. The PM shall utilize engineering change orders to alter, change, revise, etc., an item of engineering data.

3.92. Technical Orders (TO). Air Force technical orders (TO) provide clear and concise instructions for safe and reliable operation, inspection and maintenance of centrally acquired and managed AF systems and commodities. The PM shall field up-to-date, technically accurate and user-friendly TOs. The terms "Technical Manual (TM)" and "manual" are used interchangeably with the terms "Technical Order" and "TO".

3.92.1. Air Force TOs are published under the authority of the SECAF. Compliance with TOs is mandatory, except as explained in TO 00-5-1, *AF Technical Order System.* Military personnel who do not comply, including members of the Air Force Reserve Command on active duty and Air National Guard in Federal status, face punishment under Article 92 of the Uniform Code of Military Justice.

3.92.2. AFMC is designated the executive agent for the AF TO System. To ensure the integration of the various system activities, AFMC shall assign an AF TO System Director who shall:

3.92.2.1. Represent the AF for TO technical and management issues with DOD, other Government agencies, industry, and other AF activities.

3.92.2.2. Develop processes and procedures for implementation, management and execution of the AF Technical Order System.

3.92.2.3. Develop requirements for the operation, modernization, and maintenance of the AF Standard TO Management System, and integration of the system with other AF management systems.

3.92.3. The PM shall provide verified TOs for fielded AF systems (hardware or software) that are operated and maintained by military or government civilian personnel, unless exceptions are listed in TO 00-5-1.

3.92.3.1. In the absence of verified TOs for fielded AF systems that are operated and maintained by military or government civilian personnel, the PM shall provide interim contract support until the required TOs are delivered.

3.92.3.2. TOs contain instructions for the installation, operation, maintenance, inspection, training, and support of weapon systems, to include components, mission and support equipment.

3.92.3.2.1. TOs must address equipment and special tools substitutions. Substitutions of equipment and tools used with nuclear weapons shall not be made without the approval of the AF Nuclear Weapons Center (AFNWC).

3.92.3.2.2. TO procedures to be used with nuclear weapons shall be nuclear safety certified in accordance with AFI 91-103, *Air Force Nuclear Safety Design Certification Program*, and AFI 63-125, *Nuclear Certification Program.*

3.92.3.2.3. TOs may contain classified information only up to and including Secret-Restricted Data, IAW AFI 31-401, *Information Security Program Management*.

3.92.3.2.4. Unclassified TOs shall be marked, controlled and distributed in accordance with AFI 61-204, *Dissemination of Scientific and Technical Information.*

3.92.3.3. Flight manuals are a type of TO and direction for managing and using flight manuals is in AFI 11-215, *USAF Flight Manuals Program (FMP).*

3.92.3.4. Air Force 00-series TOs are either TO management or procedure-oriented and contain unique functions such as acquisition, numbering, change, inter-servicing, and security assistance.

3.92.3.5. The Joint Computer-Aided Acquisition and Logistics Support (JCALS), and Enhanced Technical Information Management System (ETIMS) shall be used in accordance with TO 00-5-1 and TO 00-5-3, *AF Technical Order Life Cycle Management*, unless waived by AF/A4/7.

3.92.3.6. TOs for specific military systems and commodities shall take precedence over general TOs. (Reference TO 00-5-1)

3.92.3.7. New techniques or concepts relating to the TO system shall be proposed and justified through AFMC/A4 to AF/A4/7 for approval.

3.92.3.7.1. AFMC, as the AF executive agent for TOs, shall advise AF/A4/7 on TO issues, including waiver requests, through a Centralized Technical Order Management (CTOM) Committee.

3.92.3.7.2. MAJCOMs shall support the CTOM as requested by AFMC.

3.92.3.8. TOs shall be distributed at the direction of the applicable TO Manager listed in the Air Force TO Catalog. Provide TOs in the formats (digital or paper) required by authorized users. Updates to TOs shall be produced in the same distribution format as the basic TO.

3.92.3.9. Review available manuals from other DOD components to determine adequacy and application to particular programs. Joint-use technical manuals shall be integrated into the TO system, assigned TO numbers, indexed, distributed, stored, reprinted and rescinded in the same manner as any other Air Force TO (Reference AFJI 21-301, *Interservicing of Technical Manuals and Related Technology*).

3.92.3.10. Pre-production or non-configured items in the AF inventory shall be operated and maintained according to the latest verified technical data that is compatible with the specific configuration of the equipment.

3.92.3.11. Technical data extracted from a parent TO shall not change the context of the TO and must include applicable warnings, cautions, notes, tables, and figures. Extracts shall include the parent TO title page and shall be controlled IAW all TO title page notices and statements.

3.92.3.12. The PM shall provide copies of all TOs and updates to the Air Force Archives at Tinker AFB, OK. A compatible viewing application shall also be provided when archiving digital TOs (electronic TMs [ETM] and/or interactive electronic TMs [IETM]) managed by the PM when not already available for use at the Archive.

3.92.3.13. Rescinded, superseded, or re-numbered TOs shall be retained within the Air Force TO Archive (Repository) for at least six years after the equipment supported has left the inventory.

3.92.3.14. General and Methods and Procedures TOs (MPTOs) available on the Internet shall only be reproduced and distributed locally in paper if the TO cannot be used digitally at the point of maintenance (POMx).

3.92.3.15. Issue documentation, in coordination with the Chief Engineer and using Command, that provides data beyond the scope of authorized TOs or provides authorization to deviate from published TO parameters (TO 00-25-107, *Maintenance Assistance*, and TO 00-25-108, *Communication-Electronic [C-E] Depot Support*).

3.92.4. Develop all TOs IAW approved Government Technical Manual Specifications and Standards (TMSS) listed in the Technical Manual Contract Requirements (TMCR) document, TM-86-01.

3.92.4.1. The TMSS Preparing Authority (PA) is the AF approval authority for deviation from the use of military TMSS.

3.92.4.2. The PM must coordinate use of non-government (commercial) standards (NGS) instead of military approved TMSS for TO development with the TMSS PA and the Lead Command.

3.92.4.3. Recommended changes to existing TMSS documents shall be submitted to the PA IAW DOD 4120.24-M.

3.92.5. TOs shall be acquired IAW the guidance in DOD 5010.12-M, *Procedures for the Acquisition and Management of Technical Data;* and TO 00-5-3.

3.92.6. TOs for new systems and equipment shall be acquired and received in digital formats IAW Air Force TMSS TO 00-5-3. The preferred TO format is a Type II (non page based) IETM database, which may include, but is not limited to, hard copy, audio and visual displays and discs.

3.92.7. Existing COTS operating instructions, part breakdown handbooks, and repair manuals shall be acquired instead of developing new TOs if no degradation in OSS&E will result. COTS manuals shall be assigned unique TO numbers and managed within the Standard TO Management System unless covered by the exclusions identified in TO 00-5-1.

3.92.7.1. COTS manuals shall be reviewed and approved IAW MIL- PRF-32216, *Evaluation of Commercial Off-the-Shelf (COTS) Manuals and Preparation of Supplemental Data,* TO 00-5-1 and TO 00-5-3.

3.92.7.2. The PM shall request at a minimum Government Purpose Rights for COTS manuals; unlimited rights are preferred.

3.92.8. The PM shall ensure TOs and Preliminary TOs (PTO) are verified in accordance with TO 00-5-3.

3.92.8.1. Formatted PTOs shall be verified during Air Force DT&E, Time Compliance Technical Order (TCTO) verification and trial equipment installations to the maximum extent possible. Formal TOs or verified PTOs shall be used during OT&E. If DT&E and

OT&E have been combined, PTO verification may be accomplished during OT&E with Lead Command concurrence and approval of the PM.

3.92.8.2. PTOs may be used for initial development of training plans and course syllabuses.

3.92.8.3. Verification status pages (VSP) shall be included in all TOs and PTOs that contain unverified procedures (MIL-STD-38784, *Standard Practice for Manuals, Technical: General Style and Format Requirements*). Digital TOs shall also include a VSP or verification status screen. Non-procedural TOs (MPTOs, Illustrated Parts Breakdowns, Work Unit Code manuals, etc.) do not require VSPs.

3.92.8.4. Using organizations may use preliminary data for hands-on training, operations, or maintenance when verified and authorized by the PM or representative along with concurrence from the Lead Command. Authorization for the use of preliminary data shall not exceed 180 days unless readdressed. The authorization memorandum must accompany the data at all times.

3.92.8.5. The PM shall require that contracts for the development and delivery of Air Force TOs task the contractor to certify preliminary TOs (PTO) IAW TO 00-5-3.

3.92.9. All procedural tasks contained in TOs, TO updates and Air Force supplements to commercial manuals shall be 100 percent verified using Lead Command Government technicians of the same skill level expected to use the procedures in the field IAW TO 00-5-3.

3.92.9.1. Verification shall be performed, using one of the accepted methods specified in TO 00-5-3, on production-configured assets in the operational environment. Exceptions for the use of substitute non-production items may be approved IAW TO 00-5-3.

3.92.9.2. Unverified flight manual data shall not be placed on an aircraft for operational use.

3.92.9.3. Non-procedural data are verified IAW TO 00-5-3 using Desk Top Analysis.

3.92.9.4. TCTOs shall be verified IAW TO 00-5-15, *Air Force Time Compliance Technical Order Process*.

3.92.9.5. Technical data used for interim contract support (ICS) need not be verified. Verification of technical data for Contractor Logistics Support (CLS) shall be determined by the PM based on the life cycle sustainment plan.

3.92.9.6. A MAJCOM that requires use of an unverified TO procedure may, with concurrence of the PM, accomplish verification IAW TO 00-5-1, *Using Command Verification Process*.

3.92.10. The PM shall issue TCTOs to control and manage the modification of production systems and equipment IAW TO 00-5-15. The PM may issue waivers to TCTO compliance on aircraft, missiles, and equipment undergoing test and evaluation if the TCTO affects the system and subsystem being evaluated.

3.92.11. AFMC shall develop a Comprehensive Air Force Technical Order Plan (CAFTOP) that identifies mutual agreements between PMs and MAJCOMs relative to management and

funding of a specific list of TOs. The PM and MAJCOMs shall support the CAFTOP process as required.

3.92.12. Responsibilities related to Air Force TO development and management:

3.92.12.1. The DCS, Logistics, Installations and Mission Support (AF/A4/7):

3.92.12.1.1. Has approval authority for 00-series TOs; this may be delegated.

3.92.12.1.2. Issue AF guidance for TO development and management.

3.92.12.1.3. Ensure the AF Standard TO Management System is interoperable with other DOD/AF automated information systems.

3.92.12.1.4. Be the approval authority for adoption of new concepts and technologies for use with TOs and the AF Standard TO Management System.

3.92.12.2. AFMC/CC:

3.92.12.2.1. Operates and maintains a standard AF TO Management System that automates TO management and use procedures. The TO system should provide real-time availability of current TOs electronically through a single point of access, viewable at the point of use using electronic tools.

3.92.12.2.2. Plans, programs and budgets for the AF Standard TO Management System, interfacing/legacy subsystems, and sustainment of TOs.

3.92.12.2.3. Establishes and manages the AF CTOM Committee.

3.92.12.2.4. Develops, in coordination with MAJCOMs, and publishes AF Standard TO Management System practices, processes and procedures.

3.92.12.2.5. Manages the AF-assigned segment of the DOD TMSS program.

3.92.12.2.6. Assists PMs with pre-contract planning to determine appropriate digital formats for TOs when requested.

3.92.12.2.7. Represents the AF for development of procedures for interservice and joint use of technical data and TMs between military departments.

3.92.12.3. PM :

3.92.12.3.1. Coordinates TO activities with the AF TO System Director.

3.92.12.3.2. Provides TO management for the life cycle of assigned system/commodity TOs. Manages TO changes IAW TOs 00-5-1 and 00-5-3, within the timelines specified in the TOs and AFI 11-215.

3.92.12.3.3. Provides inputs to the CAFTOP for assigned system/commodity.

3.92.12.3.4. Ensures IETMs are developed in an Air Force standard, interoperable format, compatible with the TO Management System.

3.92.12.3.5. Ensures TO index, configuration, distribution, warehouse inventory information and content data, etc. for assigned system/commodity are maintained current in the Air Force Standard TO Management System.

3.93. Packaging, Handling, Storage, and Transportation (PHS&T). The PM shall address the resources, processes, procedures, design considerations, classifications and methods to ensure that assets are packaged/preserved, handled, stored, and transported properly. The related analysis includes determination of environmental considerations, classification of material, preservation requirement for short- and long-term storage, transportability requirements, and other methods to protect and ensure elimination/minimization of damage to the defense system and its necessary support infrastructure. For more detailed direction refer to AFPD 24-2, *Preparation and Movement of Air Force Materiel*; AFI 24-203, *Preparation and Movement of Air Force Cargo*; AFI(I) 24-210, *Packaging of Hazardous Material*; and AFJMAN 23-210, *Joint Service Manual for Storage and Materials Handling*.

3.94. Contractor Logistics Support. The PM will consider Contractor Logistics Support (CLS) applications as part of the Life Cycle Sustainment Plan included in the LCMP. CLS applications include pre-operational support (POS), interim contract support (ICS), contract sustainment support (CSS), and total contract training (TCT).

3.94.1. POS may be used to support test and evaluation efforts; system risk reduction and demonstration; production readiness, or other temporary periods during the acquisition or modification of a system, equipment or end-item.

3.94.2. ICS is a temporary support method for an initial period of the operation of the system, equipment or end-item. This strategy is utilized for controlling capital investment costs while design stability is being achieved and complex logistics support elements are being developed.

3.94.2.1. If ICS is planned, the PM shall include in the LCMP a plan for transition of ICS to organic or contract or a combination of contract and organic sustainment and identify the beginning and ending dates of the ICS. ICS does not negate the PM's responsibility to achieve an organic and/or a CSS capability as early as practicable or the requirement for testing and/or demonstrating the adequacy of a system, equipment, or end-item.

3.94.2.2. Contractor Supported Weapon System (CSWS) is a supply support approach applied during ICS for integrating contractor inventory control points into the AF'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. More information can be found on the CSWS Community of Practice website.

3.94.3. CSS can be used for materiel management, configuration management, data management, supply, distribution, repair, calibration, depot maintenance, operating command organizational maintenance (and other levels as negotiated), and many other operations and maintenance tasks normally performed by an organic support activity for all or part of the logistics support required by a system, sub-system, equipment, or end-item. Applications include the support of government-owned systems, sub-systems, equipment, end-items, research and development (R&D) prototypes converted to operational use, and other instances where organic life cycle logistics support is not planned. Support decisions shall be

based on analyses (such as a Business Case Analyses (BCA)) and the ability to meet users' capabilities requirements and must be in the over-all best interest of the AF.

3.94.4. TCT, as applied in this AFI, is to provide a contractor-operated performance based training system. TCT may be utilized when the lead command, after coordination with the PM and validation by the using commands, specifies the desired level of training, objectives, and learning outcomes (to include metrics for assessing the accomplishment of objectives and outcomes). The PM shall ensure the supported system's TCT is defined and that its devices and logistics support elements will provide students with the appropriate training to meet the users' defined objectives.

3.94.4.1. The PM, with collaboration from the lead command, shall accomplish the analysis for determining the use of TCT or organic support. This analysis shall be coordinated with and provided to the appropriate functional office for systems training at HQ AETC and HQ AFMC. The lead command, in collaboration with using commands, shall document in the operational requirements the numbers of persons or crews to train and the required skill level or qualifications of the students at training completion. The acquiring organization shall implement the lead command's documented defined level of training and the desired learning outcome(s).

3.94.4.2. Other than Government Furnished Property (GFP) and/or Government Furnished Information (GFI), the PM shall ensure provisions are made for the TCT contractor to provide the management, instructors, curriculum, courseware, facilities, trainers, and logistics support required to meet requirements. For GFP/GFE/GFI provided through the TCT contract, the PM shall ensure provisions are made to maintain and make Government approved changes (e.g., engineering and software updates) to GFP and for control of intelligence GFI IAW AFI 14-303, *Release of Intelligence to US Contractors.*

3.94.5. CLS and other Support requirements shall be programmed for and executed using the types of funds and funding level approved by the lead/using commands and/or AF Centralized Asset Management (CAM) Executive Agent (AFMC). The PM shall provide lead/using commands and/or AF CAM Executive Agent applicable copies of obligation documents and expense reports as agreed to and/or as stipulated by the AF CAM Executive Agent. Reference AFI 65-601, Vol 1 for more information.

3.94.5.1. The lead command and using commands will plan and advocate for programming and budgeting for their portion of the CLS costs and any associated CLS requirements for the sustainment of weapon systems.

3.94.5.2. When the funding is for the direct mission support of a program using multiple sustainment elements, the source of funds is operation and maintenance (O&M) appropriations using the Air Force Element of Expense (AFEE) 578, CLS. Note, AFEE 578 CLS funds can only be used for applications as identified in AFI 65-601, Vol 1, not all CLS applications.

3.94.5.3. When support is for a single sustainment element, the source of funds is the one for the specific element, such as AFEE 583 for sustaining engineering by contract, AFEE 594 for contract technical data, AFEE 560 or 54x (depending on the commodity) for

depot maintenance provided through the Depot Purchased Equipment Maintenance (DPEM) program.

3.94.6. CLS O&M requirements shall be programmed through the AF CAM Executive Agent or HQ AFSPC/A4/7 for space programs. The AF CAM Executive Agent shall provide CAM implementation/execution processes and procedures guidance. HQ AFSPC/A4/7 will provide tailored CAM implementation/execution guidance for space programs to standardize processes to the greatest extent possible. The PM shall provide actual and projected requirements over a nine-year period (i.e., current year, planning year, plus seven projected years). Projections' content shall include the split of contractor and public-private partnership (PPP) workload to support the "50/50" depot maintenance workload reporting requirements.

3.94.7. CLS contracts will be written based on characteristics for performance based logistics. The PM shall establish flexible performance and funding ranges commensurate with targets developed in conjunction with the lead commands, industry partners, and other relevant agencies across the acquisition, logistics, and user communities. These contracts will link contract incentives to performance outcomes while allowing the Air Force to make sound enterprise-wide, capabilities based resource decisions when deciding where to accept risk. The PM shall balance affordability, flexibility, and required operational capability within the program funds available.

3.94.7.1. CLS contracts should be crafted to identify ranges of outcome performance with thresholds and objectives, and the target price (cost to the user) for each level of capability. The contract should also delineate any constraints or boundary conditions and will reflect normal operations. The execution performance level will be dictated by the allocation of funds to a weapons system during the execution year. It must include specific terms and conditions related to surge and warfighting operations that will be considered 'over-and-above' activity.

3.94.7.2. Generally, a focus on a few performance based outcome metrics — such as weapons system availability, mission reliability, logistics footprint, and/or overall system readiness levels — will lead to more effective solutions. However in developing the actual support arrangements, it may not be possible to directly state the warfighter performance objectives as support metrics because of lack of support provider control of all support activities necessary to produce the warfighter performance (e.g., availability).

3.94.7.3. The PM, in collaboration with stakeholders, shall identify the needed CLS requirements and make provisions in the RFP, SOW, and contracts to ensure visibility of direct contractor costs for each type of support material and service that is being provided.

3.94.7.3.1. The PM will ensure contract data requirements for tracking and reporting of contractor/organic (50/50) costs are established.

3.94.7.3.2. The PM shall report all contract support costs in accordance with AFI 65-601, Vol. 1

3.94.7.4. CLS activities shall be consistent with AF format standards and be compatible with AF management and data collection systems to the maximum extent feasible.

3.94.7.5. CLS contracts should be flexible enough to address a range of support requirements, so as to accommodate changes in operational tempo (OPTEMPO) or execution year funding, including surge or contingency requirements to the extent that they can be defined. Agreements should clearly articulate cost versus price considerations, attendant risks associated with requirements definition, performance failure, etc., and should capture alternatives.

3.94.7.6. The PM shall obtain the Air Force Metrology and Calibration (AFMETCAL) PGM approval prior to contracting for commercial calibration services or when deviating from currently established calibration support plans IAW AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL) Program*

3.94.7.7. When making logistics sustainability decisions, the PM shall consider the impact of geographic Combatant Commander specific contractor policies and requirements in existing Operation Plans/Operation Orders (OPLAN/OPORD) (including as a minimum: restrictions imposed by applicable international and host nation support agreements; contractor-related deployment, theater reception and accountability reporting; operational security plans and restrictions; force protection; personnel recovery; medical support; and redeployment) upon any proposed CLS arrangement. Reference DODI 3020.41, *Contractor Personnel Authorized to Accompany US Armed Forces* for additional information.

3.94.8. The PM shall apply quality assurance to CLS material and services. For additional guidance, refer to AFI 63-501, *Air Force Acquisition Quality Program*.

3.94.9. The lead command and using commands will plan, program and budget for their portion of the CLS costs and any associated CLS requirements for the sustainment of weapon systems.

3.94.10. The PM shall coordinate and obtain MAJCOM agreement on unit, base, or MAJCOM support requirements and ensure the agreed-to support requirements are included in the CLS contract. If the contractor is operating a support site at a base (installation) location, the PM shall ensure the contract identifies the support elements associated with the site for which the AF is responsible (e.g., facility maintenance, data, utility, security). If the base (installation) maintains the GFP, clearly identify the procedures to the contractor to obtain maintenance and GFI necessary for proper equipment operation. The PM shall identify ESOH practices that must be complied with that are specific to the AF installation. The PM shall identify the GFP to be maintained by the contractor and require the maintenance be completed in accordance with appropriate technical orders and the GFP to be returned in serviceable condition unless otherwise contractually specified".

3.94.11. CLS for commercial derivative/hybrid aircraft shall adhere to Federal Aviation Administration (FAA) maintenance standards, directives, and bulletins to the maximum extent practical for commercial derivative aircraft, IAW respective manufacturer's maintenance manuals, military technical manuals, approved maintenance concept, and the maintenance contract. For further information, see AFI 21-107, *Maintaining Commercial Derivative Aircraft*; AFPD 62-5, *Standards of Airworthiness for Commercial Derivative Hybrid Aircraft*; and AFPD 62-4, *Standards of Airworthiness for Passenger Carrying Commercial Derivative Transport Aircraft*. OSS&E product baseline shall be preserved.

Support for Air Traffic Control and Landing Systems (ATCALS) shall adhere to the requirements of AFI 13-204, *Functional Management of Airfield Operations*.

3.94.12. For training systems that use CLS, the PM is responsible to ensure the CLS maintains the configuration for training devices functionally equivalent to the system, equipment, or program they serve.

3.95. Industrial Base Constraints. All programs shall identify and manage industrial base constraints throughout all phases of the life cycle, from requirements definition to disposal. Industrial base constraints include, but are not limited to, critical raw materials, sources of strategic materials, diminishing manufacturing sources and material shortages (DMSMS), manufacturing technologies and capabilities, the supply chain, parts obsolescence, depot capacity, and industrial workforce.

3.95.1. The PM shall address industrial base constraints in the LCMP. This should address mitigation to ensure that the system(s) can be supported during its life cycle. Open systems design, including Modular Open Systems Approach (MOSA), can help mitigate the risks associated with technology obsolescence and diminishing manufacturing capabilities by avoiding being locked into proprietary technology or by relying on a single source over the life of a system. Incremental development also should be considered to alleviate obsolescence concerns.

3.95.2. The PM must ensure that PBL product support efforts include an active DMSMS process to anticipate occurrences and take appropriate actions. Actively addressing DMSMS will ensure effective support throughout the system life cycle and prevent adverse impacts on readiness or mission capability. The Services and Defense Logistics Agency (DLA) have DMSMS efforts that can assist the PM in addressing DMSMS. For further information See *DOD Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook*, and SAF/AQ - Policy Homepage for DOD PBL guide, and DOD 4140.1-R.

3.96. Support Equipment/Automated Test Systems (SE/ATS). Application of standardized Support Equipment/Automatic Test Systems (SE/ATS) is preferred to provide efficiency and reduce cost. The PM shall minimize the proliferation of system-unique equipment at all levels while ensuring the maintenance and deployment requirements of existing and developing systems are met.

3.96.1. The PM shall acquire SE/ATS which is to the maximum extent possible common and interoperable with other Services and across multiple weapon systems and munitions. Peculiar SE/ATS shall be developed only as a last alternative. Additionally, the PM shall:

3.96.1.1. Select SE/ATS based on cost benefit analysis over the system life cycle; reliability; CBM+ compliance; standardization, and field hardness, size, mobility and environmental needs.

3.96.1.2. Request the documentation or obtain validation of the current DOD process guidance from the AFMC SE/ATS PGM. Selection process for all Automated Test Systems (ATS) required for organic support, during any portion of the life cycle of a system, subsystem, or end-item shall follow the DOD ATS Executive Directorate process guidance.

3.96.1.3. Submit waivers to the SE/ATS PGM and obtain approval prior to acquiring COTS SE/ATS. In the event of waiver disputes, the PEO/DAO and ALC/CC will jointly resolve prior to procurement.

3.96.1.4. Endeavor to design systems, subsystems and end-items to minimize new SE/ATS development while still optimizing the life cycle users' operational capabilities and product support requirements.

3.96.1.5. Utilize support equipment recommendation data (SERD) to the maximum extent possible and coordinate the SERD with the SE/ATS and AFMETCAL PGMs.

3.96.1.6. Obtain SE/ATS PGM SERD approval prior to procurement of peculiar SE/ATS. In the event of SERD disputes, the PEO/DAO and ALC/CC will jointly resolve prior to procurement.

3.96.1.7. Document requirements for new ATS, replacement ATS or modifications to existing ATS and coordinated as identified in AFI 10-601. HQ AFMC shall designate a PGM for SE/ATS commodities who shall:

3.96.2.1. Develop AF-wide SE/ATS life cycle management processes and codify in official publications.

3.96.2.2. Develop and champion AF-wide research and development initiatives/programs for SE/ATS to optimize standardization, capabilities, and technology insertion.

3.96.2.3. Serve as the AF designated voting member on the DOD ATS Management Board.

3.96.2.4. Maintain and disseminate current DOD ATS Executive Directorate process guidance needed by PMs.

3.96.2.5. Develop and document agreements, processes, and guidance as needed for effective interface and operations with the DOD ATS Executive Directorate consistent with DOD/AF policy and guidance.

3.96.2.6. Serve as the AF designated voting member on industry standards writing committees.

3.96.2.7. Coordinate Joint Service projects that have an AF involvement and represent the AF on the various SE/ATS integrated product teams (IPTs), including Joint Service R&D IPTs.

3.96.2.8. Provide assistance to PMs and other PGMs for SE/ATS matters and monitor acquisition and modernization planning for SE/ATS policy and guidance compliance.

3.96.2.9. Make SE/ATS acquisition and modernization recommendations to PMs.

3.96.2.10. Process required waivers for selection of ATS that is not in the DOD approved family of testers, to include approval from the DOD ATS Management Board.

3.96.2.11. Establish SE/ATS commodity families and serve as the approval authority for family designation requests.

3.96.2.12. Develop a strategy for moving legacy capabilities to a Family of Testers. Establish an AF ATS family of testers to include AF legacy ATSs that will remain in the AF inventory and new ATS requirements not currently in the AF inventory.

3.96.2.13. Adjudicate requested SE/ATS guidance deviations received from PMs.

3.96.2.13.1. Inform PEOs, or ALC Commanders of cases when PMs are non-compliant with policy/guidance or waiver disputes regarding SE/ATS.

3.97. Weapon System Support Program (WSSP). AF participation in this DLA managed program is key to receiving the appropriate level of support to AF weapon systems from DLA. The AF identifies all weapon systems that use DLA consumables, how important the system is to the AF mission, the National Stock Numbers (NSNs) assigned to each weapon system and how critical each NSN is to a weapon system. DLA uses this information to plan, program, and budget for support to weapon systems. This program applies to all organic and contractor supported weapon systems that utilize DLA supported items, including classified systems. The implementation guidance for this program is contained in AFMAN 23-110, Volume 1, Part 1. Each PM with systems that use DLA NSNs shall fulfill the Weapon System Support Program (WSSP) responsibilities. These responsibilities begin prior to the first provisioning conference and end when DLA parts are no longer required to support the weapon system and the weapon system is removed from the WSSP database.

3.98. Air Force Global Logistics Support Center (AFGLSC). RESERVED

3.99. Depot Maintenance / Sustainment Cost Reporting (50/50). The concept of depot-level maintenance applies to work performed by both government and contractor personnel. It includes all types of contracts (CLS, ICS, requirements contracts) and Partnership arrangements (Workshare Agreements, Direct Sales Agreements, and contract work excluded under the terms of 10 USC §2474), regardless of the source and type of funding and where the work is performed. The organic versus contract sustainment decisions must ensure compliance with public law (e.g. Title 10 USC §2464, *Core Logistics Capabilities* and §2466, *Limitations on the Performance of Depot-level Maintenance of Materiel*).

3.99.1. AFMC shall develop, implement, and sustain depot maintenance procedures and processes for compliance with Title 10 USC §2464 (Core) and §2466 (50/50) statutory requirements.

3.99.1.1. Develop processes and publish procedures to track AF Title 10 USC §2464 (Core) and §2466 (50/50) data and report this data to HQ AF pursuant to data calls from OSD through HQ AF. Computation of core data shall be accomplished IAW DODI 4151.20, *Depot Maintenance Core Capabilities Determination Process*.

3.99.1.2. Types of depot maintenance include Programmed Depot Maintenance (PDM), Analytical Condition Inspection (ACI), Speedline, major overhaul and repair, repair of reparable, contract/depot field teams, over and above, storage, extended/negotiated warranty costs, software maintenance, and disposal (decommissioning and/or demilitarization). In accordance with OSD 50/50 reporting direction, all maintenance and repair performed in DOD maintenance depots is considered depot-level maintenance. The term “in DOD maintenance depots” is designated by the AF as workload funded through the working capital fund, and accomplished by employees of the SECAF designated Centers of Industrial and Technical excellence.

3.99.1.3. All factors of production cost to include labor, material, maintenance, engineering, and the depot maintenance portion of general contract costs such as award fees, over-and-above, and program management.

3.99.1.4. Financial systems, requirements documents, budget records, and contract records from which the PM should obtain obligations.

3.99.1.5. Procedures for PMs to document the rationale and methodology for estimating ICS and CLS depot maintenance expenditures when contracts do not provide for detailed depot maintenance accounting.

3.99.1.6. Partnerships excluded from 10 USC §2466 which meet the 10 USC §2474 *Centers of Industrial and Technical Excellence: Designation; Public-Private Partnerships,* requirements for exclusion.

3.99.2. The PM shall support AFMC, IAW AFMC developed procedures by:

3.99.2.1. Tracking obligated depot maintenance funds for their programs, regardless of the source of funds, for the purpose of reporting these obligations to AFMC.

3.99.2.2. Documenting rationale and methodology for tracking obligated depot maintenance funds.

3.99.2.3. Ensuring contracts for depot maintenance include requirements to document and report upon request funds obligated for depot level maintenance.

3.99.3. The first time a weapon system or other item of military equipment described in subsection (a)(3) Title 10 USC §2464 is determined to be a commercial item for the purposes of exception the PM shall document the justification for the determination and include at a minimum:

3.99.3.1. The estimated percentage of parts commonality of the item version that is sold or leased in the commercial marketplace and the Government's version of the item.

3.99.3.2. The value of unique support, test equipment, and tools that is necessary to support the military requirements if the item were maintained by the Government.

3.99.3.3. A comparison of the estimated life cycle logistics support costs that would be incurred by the Government if the item were maintained by the private sector with the estimated life cycle logistics support costs that would be incurred by the Government if the item were maintained by the Government.

3.100. Public-Private Partnerships. Public-Private Partnerships (PPPs) are a logistics sustainment philosophy involving a cooperative agreement between DOD and private sector entities. A PPP for depot maintenance is an agreement between the buying authority (e.g. PM or PGM), one or more organic maintenance activities (including geographically separated organizations/units of a depot/center), and one or more private industry entities to perform work or utilize facilities and equipment. The purpose of PPP is to leverage the optimal capabilities of both the public and private sectors in order to enhance depot support to the warfighter. Goals of partnering are more responsive product support, improved facility utilization, reduced cost of ownership, more efficient business processes, and improved AF 50-50/Core posture.

3.100.1. The PM shall identify potential public-private partnerships (PPP) as early as possible in the acquisition life cycle. New weapon systems that are establishing their support

concept shall require consideration of PPP in the RFP for Engineering and Manufacturing Development (EMD) Phase. Fielded weapon systems changing their depot maintenance support shall proactively consider use of the organic depots as part of a public-private partnership (PPP) strategy.

3.100.2. The PM shall capture cost data for all factors of production related to PPPs (e.g., direct labor, overhead, materiel, G&A). The cost data shall be quantifiable and measurable utilizing generally accepted accounting practices.

3.100.3. The PM in collaboration with candidate depots, lead/using commands and other stakeholders will develop a depot maintenance strategy that addresses both the requirement to conduct organic repair and to pursue a PPP approach, where feasible. The information necessary to implement the strategy will be included as part of the RFP for the EMD Phase to ensure depot posturing requirements are addressed.

3.100.4. Statutory authorities used to support depot maintenance partnerships are listed in Table 3.2 Depot Maintenance Partnership Authorities.

Table 3.2. Depot Maintenance Partnership Authorities.

Authority	Description
10 USC §2208(j)	Permits depots financed through Working Capital Funds to sell articles or services
10 USC §2474	Requires Military Services to designate depots as Centers of Industrial and Technical Excellence (CITE) and authorizes and encourages public-private partnerships
10 USC §2539(b)	Authorizes the sale of service for testing of materials, equipment, models, computer software and other items.
10 USC §2563	Authorizes the sale of articles or services outside the DOD under specified conditions.
10 USC §2667	Allows leasing of equipment and facilities.
22 USC §2754	Allows sale of articles or services to friendly countries with certain conditions.
22 USC §2770	Allows sale of articles or services to a U.S. company for incorporation into an end item scheduled to be sold to a friendly country or international organization under specific conditions.
FAR, Subpart 45.3	Permits provision of government-furnished equipment, materials and facilities to contractors.
FAR, Subpart 45.4	Provides for contractor use and rental of government property.

3.100.5. There are three types of PPPs: direct sales agreement (DSA), work share arrangement, and leases.

3.100.5.1. In a DSA dollars flow from the Government buying activity directly to the contractor. The contractor in turn funds the depot by funds transfer to the Department of Treasury for the goods/services supplied by the depot. Those funds received for work performed in support of a PPP are credited to the depot's Working Capital Fund rather than getting deposited into a general US fund account. The contractor may also supply materiel to the depots in support of the PPP.

3.100.5.2. A work share is a partnership where the buying activity determines the best mix of work that capitalizes on each partner's capabilities. The workload is then shared between the contractor and the organic repair entity. The contractor is funded through a contract, and the organic depot is funded through a project order. The partnering arrangement between the organic repair entity and contractor focuses on the roles and responsibilities of each partner, and both jointly work to accomplish the overall requirement.

3.100.5.3. Leases allow private industry access to facilities/equipment located at a Center of Industrial and Technical Excellence (CITE). Facilities or equipment located at a CITE may be made available to private industry to perform maintenance or produce goods, as long as it does not preclude the CITE from performing its mission. The goal is to make those Government owned facilities more efficient and ensure that a workforce with the necessary manufacturing and maintenance skills are available to meet the needs of the armed forces.

3.101. Centralized Asset Management (CAM). This paragraph does not apply to the National Guard Bureau (NGB), Air Force Reserve Command (AFRC) or space programs. CAM is the management and execution of sustainment funding by one AF process owner. AFMC is the designated AF CAM Executive Agent and shall designate a CAM Director for CAM-associated funding, requirements determination, and integrated wholesale supply and depot maintenance operations to satisfy the user's operational needs. Reference AFPD 10-9 for more information.

3.101.1. The AFMC CAM Director shall:

3.101.1.1. Develop, coordinate with MAJCOMs and publish procedures required for CAM execution that are standardized, repeatable, and consistent methods for identifying and prioritizing requirements, reporting expenditures, and tracking outcomes. To the maximum extent, he will use AF automated processes and IT systems.

3.101.1.2. Plan, budget, and execute Depot Purchased Equipment Maintenance (DPEM); air vehicle related depot-level reparable (DLR); sustainment engineering; TOs), CLS; aviation petroleum, oil and lubricants (AVPOL); flying hour (FH) consumables; and O&M support equipment. CAM shall apply to area base (organic) manufacturing, aircraft, missiles, engines, other major end-items, Materiel Support Division (MSD) exchangeables, non-MSD exchangeables, software, and storage.

3.101.1.3. Administer CAM funding to users.

3.101.1.4. Collaborate with lead commands and PMs on changes to weapon systems' requirements/funding prioritization.

3.101.1.5. Coordinate with appropriate functional support offices prior to reprogramming when statute mandated or reporting requirements, including 50/50 and Core, may be negatively impacted.

3.101.2. MAJCOMs and PMs shall utilize the HQ AFMC developed CAM procedures, meet established timeframes/suspense, and support associated reviews.

3.101.3. MAJCOMs and PMs shall collaborate with HQ AFMC to advocate and ensure all requirements associated with weapon systems' support receive equitable consideration under CAM.

3.102. Provisioning. The PM of new weapon systems, subsystems, modifications to existing systems, or sustainment of activities of existing weapons systems shall determine and acquire as applicable, the range and quantity of support items necessary to operate and maintain an end-item of materiel for an initial period of service in time to meet/accommodate the operational need date. Support items are items subordinate to, or associated with, an end item (i.e., spares, tools, test equipment and sundry materials) and required to operate, service, repair, or overhaul an end item. The acquisition of provisioning items must be integrated with other elements such as production, support equipment, technical manuals, training, and facilities. The PM shall ensure that the logistics business processes implemented within their applicable programs are aligned with provisioning guidance. Reference DOD 4140.1-R, AFPD 23-1, *Materiel Management Policy and Procedures*, MIL-PRF-49506, and the AF Initial Provisioning Performance Specification (IPPS) for more information.

3.103. Performance Based Logistics (PBL). Performance based logistics (PBL) is a strategy that applies to new programs; capability and sustainment modifications; and re-procurement of systems, subsystems and commodities that are procured beyond the initial production contract award. The strategy employs an integrated and affordable performance package that is designed to optimize system readiness and reduce the demand on the logistics tail of a system. It is intended to meet performance goals through a support structure based on long-term performance agreements with clear lines of authority and responsibility. Figure 3.2 depicts relationships of a PBL strategy for a weapon system.

3.103.1. The PM shall utilize and implement a PBL strategy for new acquisition category ACAT I, IA and II systems, unless otherwise justified by a BCA and approved by the MDA. A PBL strategy is preferred on new ACAT III, fielded systems, end items, or commodity acquisition.

3.103.2. For all cases where PBL is being considered as the support strategy, the PM shall perform a BCA to validate that PBL is cost effective, financially feasible and optimizes system readiness. The strategy decision rationale shall be documented and retained by the PM. Reference AFI 65-501, *Economic Analysis* and AFI 65-509, *Business Case Analysis* (when published) for more information.

3.103.3. A PBL strategy may provide various levels of support as illustrated below in Figure 3.3, Performance Based Logistics Relationships.

3.103.4. A PBL strategy shall be tailored to fit the individual system/component in the intended operational environment(s) for the duration of its projected service life. The product support planning and execution process supports translation of performance requirements into system design and is implemented in conjunction with the overall systems

engineering approach. The PBL strategy shall define performance in terms of military objectives using criteria such as: operational availability, operational reliability, total cost, logistics footprint, and logistics response time.

Figure 3.2. Performance Based Logistics Relationships.

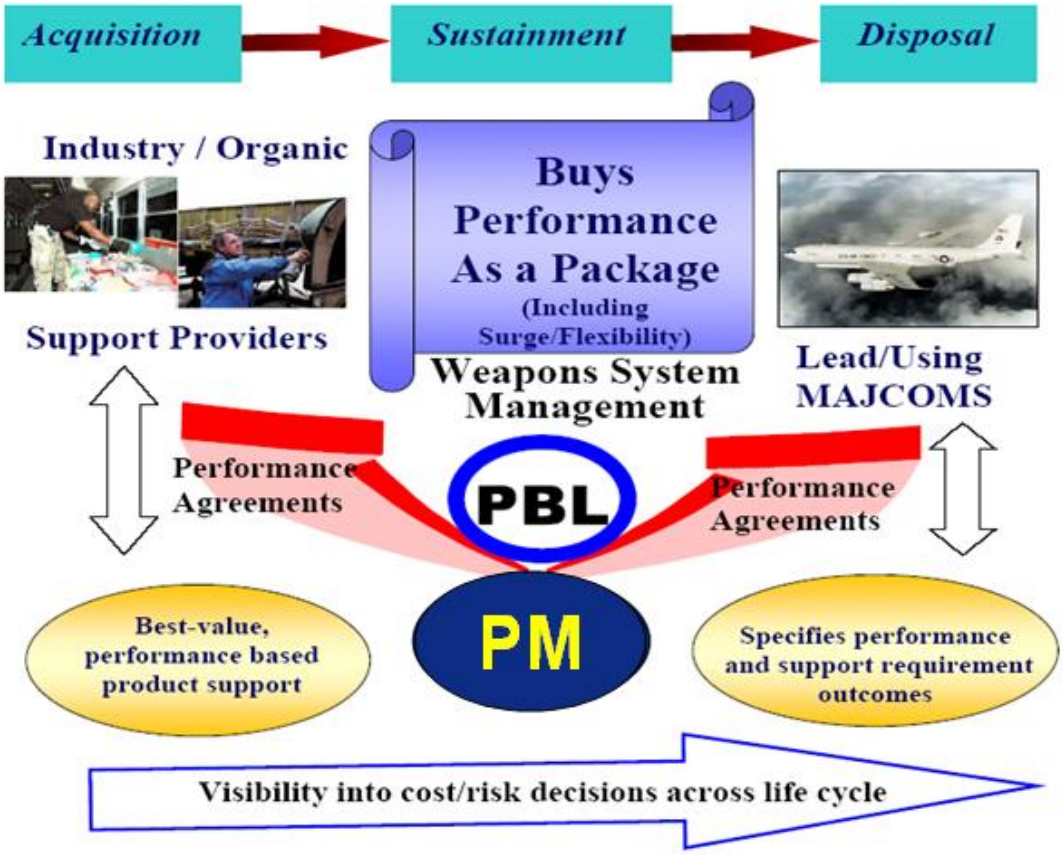
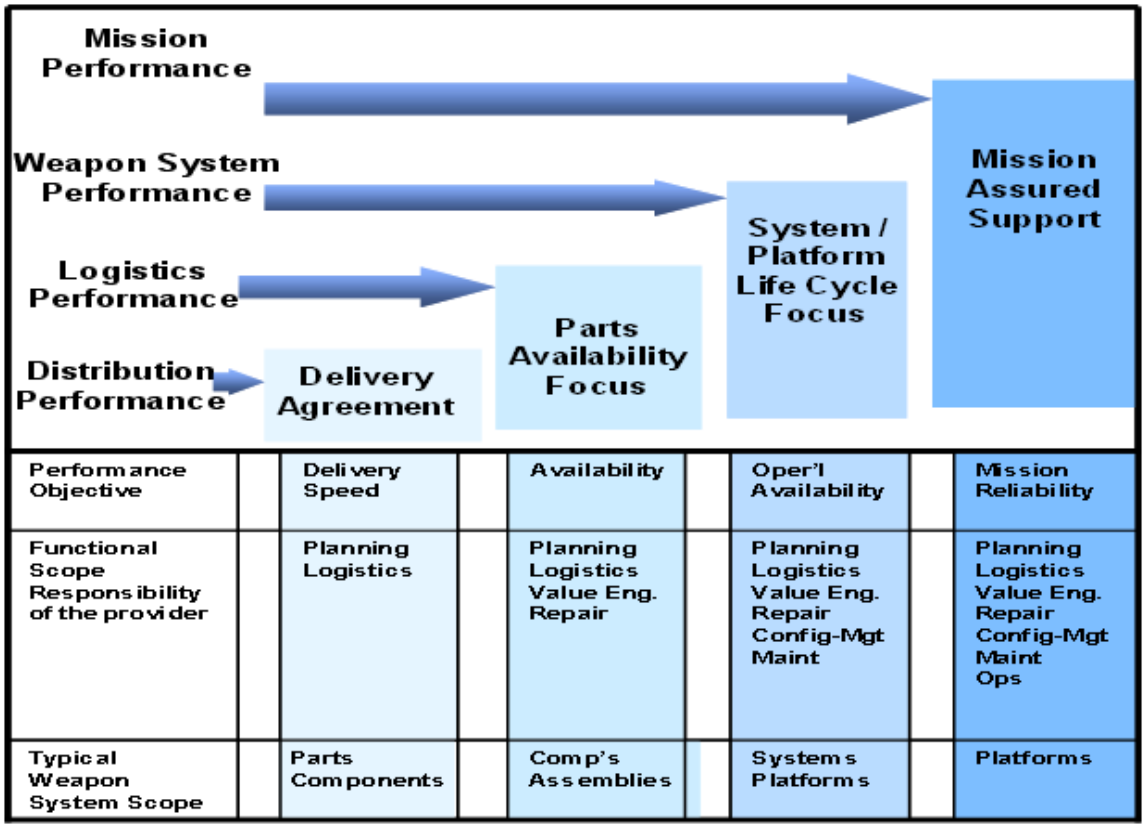


Figure 3.3. PBL Levels



3.103.5. A PBL strategy shall be tailored to fit the individual system/component in the intended operational environment(s) for the duration of its projected service life. The product support planning and execution process supports translation of performance requirements into system design and is implemented in conjunction with the overall systems engineering approach. The PBL strategy shall have the following characteristics:

3.103.5.1. Performance defined in terms of military objectives using criteria such as operational availability, operational reliability, total cost, logistics footprint, and logistics response time.

3.103.5.2. Performance measures that reflect the specific service definitions and unique circumstances of the PBL arrangements.

3.103.5.3. Focus on system performance outcomes versus individual support elements.

3.103.5.4. Best use of public and private sector capabilities through PPP initiatives.

3.103.5.5. Long-term agreements with support providers, which may be organic, commercial, and/or a PPP, which empower and provide incentives to meet overarching performance requirements to improve product support effectiveness while reducing TOC.

3.103.6. BCAs, for new acquisitions, shall have detailed MS C baselines that consider reliability and maintainability projections at the major system repairable level. These individual estimates will be instrumental in providing the basis for contractual actions leading to the implementation of the acquisition product support strategy. PBL strategies and

implementation will be re-evaluated at appropriate decision points in the life cycle process. Therefore, BCAs will continue to be used throughout the life cycle process with oversight to ensure reassessment at appropriate times, such as life cycle cost (LCC) updates, reduction in total ownership cost (R-TOC) activities and continuous improvement actions.

3.103.7. The PM is accountable to accomplish product support objectives, including development and implementation of sustainment strategies. The management and sustainment responsibility for commodities not peculiar to a single weapon system belongs to the AFMC/CC. (NOTE: Accountability for accomplishment of logistics objectives for common commodities may be assigned by AFMC/CC to PGMs. PMs and PGMs shall consider supportability, total life cycle costs, and performance throughout the system life cycle. As part of the product support strategy, planning for operations and support and the estimation of TOC shall begin prior to MS B.)

3.103.8. The initial product support strategy for new ACAT I, IA, and II programs shall be developed prior to MS B, including definition of metrics that will be used to define a program's ability to meet future logistics and operational performance requirements. For ACAT I, IA, and II programs, PMs shall, in collaboration with the product support stakeholders and providers (Government and industry), form a team to assess applicability of a PBL strategy to the program. The assessment shall include, as a minimum, consideration of and/or potential for achievement of the following:

3.103.8.1. Existing sustainment strategy through organic or commercial means of same or similar systems and/or end items.

3.103.8.2. Logistics requirements for the program to include long term technical data needs, Core, and 50/50 requirements and long term software maintenance support and upgrade planning to sustain depot requirements and Operational Flight Program (OFP) operational requirements in response to new threats, emergent operational environment and requirements.

3.103.8.3. Lead/using MAJCOMs' stated capability requirements and the potential for increased system performance.

3.103.8.4. Capability to reduce the cost per operational unit of performance through the application of a PBL approach.

3.103.8.5. Accomplishment of a detailed BCA prior to MS C.

3.103.8.6. Linkage of lead/using MAJCOM's metrics to contract incentives for commercial PBL. For organic PBL support, linkage of MAJCOMs requirements to performance based agreements (PBAs) between the PM and the organic product support providers.

3.103.9. PBAs shall delineate measurable performance outcomes that correspond to support requirements and the resources to achieve both. Weapon system PBAs between the PM and the lead/using MAJCOMs should be consistent with the applicable system PMA/EMAs. PBAs are to support established performance baselines and define required metrics necessary to achieve the performance requirements. They may be used as a basis for support arrangements or contracts and as a tool to ensure accountability in meeting requirements by defining the expectations, range of support requirements, and roles and responsibilities.

3.103.10. For ACAT I, IA and II programs the PM will accomplish a BCA that shall:

3.103.10.1. Be based on performance requirements, which should be documented in PMA/EMAs and PBAs.

3.103.10.2. Reflect the operational requirements and DOD guidance for contractors on the battlefield, ability to synchronize with the Defense Transportation System, and the flexibility to support contingencies and surges.

3.103.10.3. Consider the full range of minimum and maximum essential logistics capabilities (peacetime to full mobilization requirement), existing infrastructure, and common consumables support.

3.103.10.4. Assess changes from existing product support strategies for legacy systems to support the product support strategy for new weapon systems.

3.103.10.5. Evaluate all services or activities needed to meet lead/using MAJCOMs' performance requirements using best value assessments (with "best value" meaning the expected outcome that provides the greatest overall benefit in response to requirements).

3.103.10.6. Include risk assessment of expected performance and supply chain responsiveness. Performance and cost risk shall explicitly consider contract versus organic risk management, financial accountability, and recovery actions.

3.103.10.7. Use information provided by product support stakeholders, including government and industry providers. A competitive environment shall be maintained; therefore industry participation shall be determined IAW the Federal Acquisition Regulation.

3.103.10.8. Address the cost per output, performance measures, capitalization/asset ownership, size of logistics footprint, reliability growth, system life cycle costs, diminished manufacturing sources management, obsolescence, technology insertion, risk management, unique identification, and mitigation plan.

3.103.11. For the total life cycle of a program, a funding stream must be programmed, budgeted, and executed in accordance with applicable AF policy/guidance and a funding strategy for the program's sustainment must be established.

3.103.11.1. The AF Working Capital Fund (WCF) may be used to fund CSS arrangements if: (1) The weapon system/modification is currently supported organically; (2) There is a defined customer base; (3) A well-defined and established buyer and seller relationship exists; (4) The assets are currently managed and paid for by the WCF, no exceptions. (If the assets are not already managed and paid for by the WCF, it is not appropriate to move the items into the WCF for the purpose of establishing a PBL arrangement.)

3.103.11.2. Appropriated funds will not be merged to fund CSS arrangements without Congressional approval; e.g., 3400 (O&M) funds cannot be merged with 3010 (Aircraft Procurement) funds.

3.103.11.3. The PM shall ensure the strategy and execution of CSS funding is documented within the program's financial plans.

3.103.11.4. The PM planning shall ensure that the product support concept is integrated with other logistics support and combat support functions to provide agile and robust combat capability. The PM shall identify a single point of contact responsible for integrating the activities of the product support providers. Product support integration includes intra-system and inter-system integration with supporting systems, subsystems, end-items, components, and facilities.

3.103.11.5. PMA/EMAs and PBAs with lead/using MAJCOMs shall provide the objectives that form the basis of the PBL effort.

3.103.11.5.1. Once mutually agreed to in PMA/EMAs, realistic expectations are set and changes that impact those expectations must be communicated to the leadership and PMA/EMAs updated to reflect the new expectations.

3.103.11.5.2. To meet revised requirements for expectations and drive performance-based outcomes, new PBAs and/or updates to existing PBAs between stakeholders likewise are to be accomplished.

3.103.11.5.3. For support provided by commercial organizations, the contract in most cases serves as a PBA.

3.103.11.5.3.1. One of the characteristics of PBL contracts with commercial product support providers shall be based on "pay for performance". Inherent in purchasing a level of performance, rather than discrete goods and services, is a shift of risk to the product support provider.

3.103.11.5.3.2. While the AF cannot completely delegate risk for system operational performance, PBL strategies move the level of risk away from the AF to the product support provider commensurate with the scope of the support responsibility.

3.104. Demilitarization, Disposal, Reclamation, and Migration. Migration planning shall be an integral part of weapon system life cycle planning as an element in the inventory management of AF assets, which is addressed in AFPD 164, *Accounting for Units, Installations and Aerospace Vehicles*. Upon award of the final production contract the PM shall develop a migration plan in accordance with AFI 16402, *Aerospace Vehicle Programming, Assignment, Distribution, Accounting, and Termination.* Demilitarization, reclamation, and disposal guidance is contained in AFMAN 23-110, Volume 6.

3.104.1. For aircraft programs, the migration plan shall address reclamation and disposal for each mission design series (MDS), to include peculiar end items associated with the MDS. The plan shall be updated to maximize the value of reclaimed assets; provide for the orderly flow of inactive storage aircraft from the most restrictive category to the least restrictive in order to reduce spare parts costs to support active fleets; and ensure viability of the aircraft disposition plan.

3.104.2. Demilitarization (DEMIL) Code Determination/Procedures and Execution of DEMIL Plans. Demilitarization code determination must be performed as soon as material designs are documented. DEMIL requirements for items such as prototypes and tooling, end items, and each NSN must be documented as well as how to procedures for demilitarizing the

items. The PM shall ensure demilitarization and disposal of end items are addressed in the program budget.

3.104.3. For system not designated as MDS, the plan shall address migration to the system or end item level as appropriate.

3.104.4. The migration plan shall be documented in the LCMP and periodically reviewed. The LCMP documents an assessment of when the initial AFI 16-402 Migration Plan is due. Generally, this would be when retirements of the weapon system are scheduled in the Future Years Defense Program (FYDP).

Section 3E—Networks and Information Integration Requirements.

3.105. Networks and Information Integration Requirements Overview. The PM shall ensure Information Technology (IT) system development adheres to mandated IT standards outlined in the Defense Information Technology Standards Registry (DISR), AF unique standards in the Infostructure Technology Reference Model (i-TRM), DODI 8510.01, *Department of Defense Information Assurance Certification and Accreditation Process (DIACAP)*, AFPD 33-2, *Information Assurance (IA) Program*, AFI 33-401, *Implementing Air Force Architecture*, AFI 33-200, *Information Assurance (IA) Management*, and AFI 33-210, *Air Force Certification and Accreditation (C&A) Program (AFCAP)*. 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 are produced, which are necessary to address program needs, support all capabilities, meet joint architectural requirements, and support the Air Force Enterprise Architecture. PMs shall 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*.

3.106. Clinger-Cohen Act (CCA). CCA compliance and reporting applies to the acquisition, management, operation, and closure of all Air Force IT investments, as well as to all programs that acquire IT. This includes National Security Systems (NSS), Space and non-space weapon systems and IT systems acquisition programs, defense business systems, infrastructure, and intelligence systems.

3.106.1. AF IT programs, regardless of ACAT or tier, must be Clinger-Cohen Act compliant at all times.

3.106.1.1. All Major Automated Information Systems (MAISs) (ACAT IAM and ACAT IAC) programs must be confirmed compliant at milestone reviews by the AF CIO and the DOD CIO.

3.106.1.2. All ACAT I, ACAT II, and ACAT III programs must be confirmed compliant at milestone reviews by the AF CIO.

3.106.2. The PM shall initiate a CCA compliance and certification package at program initiation or the earliest point possible for all IT.

3.106.2.1. The PM shall prepare a matrix identifying the eleven compliance items (See Table 8 located in Enclosure 5 of DODI 5000.02). This package should be a coordinated effort with the appropriate functional operator or user.

3.106.2.2. The completed CCA package will be forwarded to the AF CIO (SAF/XC) to confirm compliance back to the MDA. ACAT IAM or IAC programs require additional certification of compliance with the CCA by the DOD-CIO (OASD/NII).

3.106.3. For additional information, reference the CCA CoP:

3.107. Information Technology Systems Registration and Support of AF IT Portfolio Management Process. The Enterprise IT Data Repository (EITDR) is the AF's officially designated IT data repository used to collect IT system information at the AF level for both internal compliance and reporting to DOD and OSD.

3.107.1. The PM shall register all IT and NSS in EITDR. Information entered into EITDR supports AF CIO Compliance and Reporting on multiple laws, regulations and directives.

3.107.1.1. EITDR supports the following processes: IT system registration, Clinger-Cohen Act, AF IT Budget and Capital Investment Reporting (CIR), National Defense Authorization Act (NDAA) certification, Federal Information Security Management Act (FISMA) compliance, Certification & Accreditation (C&A) compliance, E-Authentication, Internet Protocol v.6 compliance, Privacy Impact Assessment (PIA), System of Records Notices (SORN), Social Security Number (SSN) reduction in records and forms, Enterprise Sequence Plan, Records Management (scheduling of records in IT systems for disposition), and other processes.

3.107.2. The PM shall initiate program entry into EITDR database as early as possible but no later than MS A. The PM shall ensure that EITDR is maintained with current and accurate data which is consistent with other program documentation.

3.107.3. Additional information can be found at the EITDR CoP.

3.107.4. In accordance with AFI 33-141, *Air Force Information Technology Portfolio Management and IT Investment Review*, the PM shall support the IT portfolio management process by reviewing and correcting program budget data, maintaining supporting documentation, and periodically reviewing EITDR data for accuracy and completeness.

3.107.5. The PM shall support Capital Investment Report (CIR) development and reporting. For additional information reference OMB Cir A-130 *Management of Federal Information Resources* and DODI 8115.02, *Information Technology Portfolio Management*.

3.108. Management of Defense Business Systems. The program manager shall follow the policies and processes described in DODI 5000.02 for the management of Defense Business System programs. AF Business Capability Lifecycle (BCL) guidance may be found in AFPAM 63-128.

3.108.1. **Defense Business System.** An information system, other than a national security system, operated by, for, or on behalf of the Department of Defense, including financial systems, mixed systems, financial data feeder systems, and information technology and information assurance infrastructure, used to support business activities, such as acquisition, financial management, logistics, strategic planning and budgeting, installations and environment, and human resource management.

3.108.2. Major Automated Information Systems (MAIS) Defense Business System programs and Major Defense Acquisition Program (MDAP) Defense Business System programs will follow OUSD (AT&L) interim BCL guidance at the Business Transformation Agency website.

3.108.3. The Defense Business Systems Management Committee (DBSMC) replaces the Information Technology Advisory Board (ITAB) and functions associated with the OSD Overarching IPT process are replaced by a standing Investment Review Board for Defense Business Systems.

3.108.4. Certification of Defense Business Systems. Any IT system that is designated as a defense business system with a total modernization or development funding exceeding $1 million must be certified by the designated Investment Review Board (IRB) and approved by the Defense Business Systems Management Committee (DBSMC) prior to obligating funds. Per 10 USC §2222, failure to obtain DBSMC approval may result in an Anti-Deficiency Act violation. For additional information refer to DTM 08-020, *Investment Review Board (IRB) Roles and Responsibilities, DoD IT Defense Business Systems Investment Review Process Guidance* or AFI 33-141, *Air Force Information Technology Portfolio Management and IT Investment Review*.

3.108.5. To obtain certification, systems must be in compliance with the DOD Business Enterprise Architecture (BEA) and be either

3.108.5.1. Necessary to achieve a critical national security capability or address a critical requirement in an area such as safety or security, or

3.108.5.2. Necessary to prevent a significant adverse effect on a project that is needed to achieve an essential capability, taking into consideration the alternative solutions for preventing that adverse effect.

3.108.6. Certification approvals expire based on the date set by the DBSMC provided scope, cost, and schedule are maintained and any conditions contained in the approval memorandum are met. All business systems require annual review by an IRB.

3.108.7. Details of the AF's certification process are found in the AF IT Investment Review Guide. More information on the DOD BEA can be found on the Business Transformation Agency website.

3.108.8. For ACAT 1AM programs that are defense business systems, the SAE shall provide a written statement to the MDA through the cognizant IRB per DTM 08-020.

3.109. Directed Use of Joint Integrated Architectures. The PM shall ensure integrated architectures for IT and NSS are developed in accordance with CJCSI 3170.01, CJCSI 6212.01 and AFI 33-401, *Implementing Air Force Architectures* and ensure that the architectures are aligned with the Air Force Enterprise Architecture (AF-EA). The USD(AT&L), (OASD/NII), DOD Chief Information Officer (CIO), Joint Staff, Military Departments, Defense Agencies, Combatant Commanders, and other appropriate DOD Components work collaboratively to develop joint integrated architectures for capability areas as agreed to by the Joint Staff.

3.110. The Global Information Grid (GIG) Integrated Architecture. The integrated architecture should comply with the Global Information Grid (GIG), which is led by the DOD CIO 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. For additional information reference DODD 8100.01, *Global Information Grid Overarching Policy.*

3.111. Internet Protocol Version 6 (IPv6). Internet Protocol (IP) is the "language" and set of rules computers use to communicate over the Internet. IPv6 is the standard that enables the DOD to support a greater networking capacity. All GIG IP based network assets are required to be IP version 6 (IPv6) capable (in addition to maintaining interoperability with IP version 4 (IPv4) systems/capabilities).

3.111.1. The PM shall ensure that all GIG IP based network assets being developed, procured, or acquired are IPv6 compliant.

3.111.2. The PM shall initiate efforts to transition IPv4 systems and applications to support IPv6 and determine the IPv6 impact. The PM shall conduct an analysis to determine cost and schedule impacts necessary to modify the system. The PM shall include IPv6 requirements in program acquisition and technology refresh budget and POM submissions.

3.111.3. The PM shall ensure that accurate and complete IPv6 data is recorded in the AF's officially designated IT data repository, currently EITDR.

3.111.4. AF guidance on IPv6 process information is available in the AF IPv6 Transition Plan and IPv6 Process Guidance in the AF IPv6 Transition Site.

3.111.5. Additional guidance for defining IPv6 capable is available in the current version of the DOD IPv6 Standard Profiles for IPv6 Capable Products, available at the DOD Information Technology Standards Registry (DISR) on-line website: (**https://disronline.disa.mil/a/DISR/index.jsp**).

3.112. Interoperability of IT and NSS. The PM shall 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*, CJCSI 6212.01, *Interoperability and Supportability of Information Technology and National Security Systems*, and DODI 4630.09, *Wireless Communications Waveform Development and Management*.

3.113. Net-Ready Key Performance Parameter (NR-KPP). CJCSM 3170.01 requires all CDDs and CPDs for IT and NSS systems to include a Net-Ready Key Performance Parameter (NR-KPP) for interoperability based on the information exchange of the proposed system. NR-KPP assesses information needs, information timeliness, information assurance, joint interoperability and supportability, and net-ready attributes required for both the technical exchange of information and the end-to-end operational effectiveness of that exchange. To accomplish this, the NR-KPP consists of measurable, testable, or calculable characteristics or performance metrics required for the timely, accurate, and complete exchange and use of information.

3.113.1. Requirement. Inclusion of the NR-KPP is mandatory for all acquisition IT and NSS programs for systems used to enter, process, store, display, or transmit DOD information,

regardless of classification or sensitivity and regardless of acquisition category. The only exception is for those IT or NSS systems that do not communicate with external systems. Non-acquisition programs must also comply in accordance with DODD 4630.5, DODI 4630.8, and AFPD 33-4. Documentation of the four NR-KPP components (as defined in CJCSI 6212.01) is required for Interoperability and Supportability Certification. Architecture requirements for JCIDS, NR-KPP, and ISP documentation can also be found in CJCSI 6212.01.

3.113.2. Timeline. The NR-KPP is included as part of the CDD, CPD, and ISP documents that are approved at MS B and C. The NR-KPP is developed to a level commensurate with the information available at each milestone.

3.113.3. Certification. The NR-KPP is a key product used by J6 (Joint Staff) to certify systems for interoperability and supportability at MS B and C. See CJCSI 6212.01, Table 1 for certification requirements.

3.113.4. Construct. The NR-KPP consists of four elements:

3.113.4.1. Integrated architecture products (see CJCSI 6212.01, table D-1 for a listing of the required architecture products).

3.113.4.2. Compliance with the Net-Centric Operations and Warfare Reference Model (NCOW-RM) (including use of the lexicon and taxonomy in the Activity Model – OV-5).

3.113.4.3. Compliance with applicable Key Interface Profiles (to include locating the key interface points within the architectural views).

3.113.4.4. Compliance with DOD IA requirements.

3.113.5. Further information on how to develop and document the NR-KPP can be found in the following references:

3.113.5.1. For General Information on the NR-KPP – CJCSI 6212.01

3.113.5.2. For JCIDS requirements – CJCSI 3170.01

3.113.5.3. For ISP requirements – DODD 4630.8, CJCSI 6212.01 and the AF Information Support Plan Community of Practice.

3.114. Integrated Architecture Data. Integrated architecture data, including the joint integrated architecture, is used to assess the impacts of trades from an operational context and to support strategy development and testing.

3.114.1. The PM shall ensure the RFP and contracts provide the needed architectural data to support development of the T&E strategy and realistic operational testing according to AFI 99-103.

3.114.2. 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.

3.114.3. The PM should ensure that each review point includes an architecture-based assessment to confirm that the system development remains aligned to its operational requirements with an architecture-based assessment. Any changes to the solution should be negotiated with the users and other programs that are affected as depicted in the joint integrated architecture.

3.115. Information Assurance (IA). IA is a risk management activity that refers to the measures that protect and defend information and information systems by ensuring their availability, integrity, confidentiality, authentication, and non-repudiation. These measures include providing for restoration of information systems by incorporating protection, detection, and reaction capabilities. The objectives of the Air Force IA program will be met through the effective employment of the Air Force's core IA disciplines of Communications Security (COMSEC), Computer Security (COMPUSEC), and Emissions Security (EMSEC). AFPD 33-2, *Information Assurance (IA) Program*, AFI 33-200, *Information Assurance (IA) Management*, and AFI 33-210, *Air Force Certification and Accreditation (C&A) Program (AFCAP)* establish the AF IA program framework.

3.115.1. PM shall ensure an IA strategy is documented and IA requirements are implemented at all phases of the life cycle. The IA strategy is done to ensure compliance with the statutory regulations of the CCA. The IA strategy is done early in a program lifecycle (pre-milestone A) and is required for Milestone Reviews.

3.115.1.1. The IA strategy applies to all IT including NSS per DODI 5000.02, Enclosure 4, Table 3. Refer to DoDI 8580.1 for submission and review process information.

3.115.1.2. The IA strategy describes the program approach to IA including interfaces with other systems, impacts to the security posture of the program, Mission Assurance Category (MAC), Confidentiality Level, and the integration of IA requirements into the life cycle management of the program (i.e. integration of IA testing into the program test strategy).

3.115.2. IA policy is based on fact-based operational risk assessments. Total risk avoidance is not practical in many cases; therefore, risk assessment and management is required.

3.115.3. IA shall be a visible element of all investment portfolios and acquisition programs incorporating AF-owned or AF-controlled information systems.

3.115.4. Using fact-based operational risk management, AF systems and networks will be protected using a "deny all, permit by exception" approach.

3.115.5. The PM shall ensure that IA Manager responsibilities are designated to an individual.

3.115.6. The PM shall review Air Force Specialized IA Publications to determine applicability to their program, refer to AFI 33-200 for listing of publications.

3.115.7. Additional information is located on the AFIA CoP

3.116. Information Technology Lean and SISSU Processes. The Information Technology Lean (IT Lean) process is a tailored version of the DOD 5000 series acquisition process specifically designed for small IT programs. With proper approval and when used in conjunction with the Security, Interoperability, Supportability, Sustainability and Usability (SISSU) process using EITDR, this tailored process can be used to manage the acquisition

process and is required for system security certification and accreditation. The requirements of DOD 5000 acquisition series, CJCSI 3170, and AFI 10-601 still apply.

3.116.1. The program scope for the IT Lean process is limited to programs that meet all of the following criteria:

3.116.1.1. Must be an Information Technology program as defined in DODI 5000.02.

3.116.1.2. Designated Acquisition Category (ACAT) III or Non-ACAT, with a value of $15M or less in development or enhancement costs.

3.116.1.3. Must have a Joint Potential Designator (JPD) of "Independent" (programs with no JPD are assumed to be "independent"-see CJCSI 3170.01 for definition of JPD).

3.116.2. A modified IT Lean/SISSU process can be considered for commercial off-the-shelf (COTS) and government off-the-shelf (GOTS) products being integrated into the AF Enterprise Network that meet the above criteria.

3.116.3. The PM shall receive approval for a program to enter the IT Lean process from the appropriate acquisition authority for that program (MDA for ACAT programs).

3.116.4. Security, Interoperability, Supportability, Sustainability, and Usability (SISSU) process. All IT programs including ACAT and MAIS designated programs can benefit from the SISSU process to assist in the early identification of derived SISSU requirements. Starting with requirements development and continuing throughout the program, the continuous use of this tool will assist the PM in creating an efficient and effective development environment.

3.116.5. Detailed information on the IT Lean process and the SISSU process is provided in the IT Lean Guidebook.

3.117. Certification and Accreditation. Certification and accreditation is a process that ensures that systems and major applications adhere to formal and established security requirements. Certification and accreditation is required by the Federal Information Security Management Act (FISMA) of 2002. The PM for Air Force information systems must ensure the system is certified and accredited in accordance with DODI 8510.01, *DoD Information Assurance Certification and Accreditation Process (DIACAP)*, AFPD 33-2, *Information Assurance (IA) Program* and AFI 33-210, *Air Force Certification and Accreditation (C&A) Program (AFCAP)*.

3.117.1. The PM shall initiate DIACAP planning prior to MS B (or as early as possible) by developing the System Identification Profile (SIP) and DIACAP Implementation Plan (DIP).

3.117.2. The PM shall ensure that the system is certified and accredited before fielding of the system and that all DIACAP requirements have been fulfilled. An accreditation decision is issued by a Designated Accrediting Authority (DAA) and is expressed as an authorization to operate (ATO), interim authorization to operate (IATO), interim authorization to test (IATT), or denial of authorization to operate (DATO).

3.117.3. The PM shall ensure the systems; plan of action and milestones are documented and tracked, annual security testing (contingency plan and security controls) is completed and documented, reviews are conducted and documented, and recertification and reaccreditation is completed in order to maintain the IA posture of the system.

3.118. Spectrum Management. Spectrum management is the planning, coordinating, and managing of the joint use of the electromagnetic spectrum through operational, engineering, and administrative procedures. The objective of spectrum management is to enable electronic systems to perform their functions in the intended environment without causing or suffering unacceptable interference. Systems using or impacting the electromagnetic spectrum must obtain spectrum certification to comply with national and international laws as well as established treaties. Spectrum supportability is an assessment as to whether the electromagnetic spectrum necessary to support the operation of a spectrum-dependent equipment or system during its expected life cycle is, or will be, available in specified environments or locations. Reference DODD 4650.1, *Policy for Management and Use of the Electromagnetic Spectrum* AFI 33-118, *Electromagnetic Spectrum Management* and AFMAN 33-120, *Electromagnetic Spectrum Management* and supporting information for a additional information and definitions of spectrum management terms.

3.118.1. The PM shall address spectrum supportability and requirements as early as possible in the acquisition life cycle to mitigate programmatic risk but no later than MS B. The PM shall then review spectrum requirements throughout the life cycle of the program. Spectrum supportability can be a lengthy process and should begin during concept development for programs and technologies that may require spectrum certification. Spectrum supportability must also address Equipment Spectrum Certification (ESC) for applicable countries where the equipment/system may be expected to operate as well as electromagnetic compatibility (EMC) with other systems.

3.118.2. The PM shall ensure system documents (including contract deliverables) properly address characteristics required by the equipment spectrum certification process described in AFI 33-118 and AFMAN 33-120. The PM shall obtain Stage 3 (Developmental) approval for spectrum-dependent systems prior to MS B. No spectrum-dependent systems being developed shall proceed into the Engineering and Manufacturing Development Phase or the Production and Deployment Phase without such a spectrum supportability determination unless specific authorization to proceed is granted by the Milestone Decision Authority (MDA). No spectrum-dependent “off the shelf” or other non-developmental system shall be purchased or procured without such a spectrum supportability determination. Spectrum certification must be obtained through the U.S. national-level spectrum planning process, and respective host nation process (if overseas use/deployment is required). Program managers shall send their requests through their respective product center and/or MAJCOM to the Air Force Frequency Management Agency (AFFMA) for review and submission to the national and international communities. Program managers shall ensure spectrum requirements are properly documented in Information Support Plans (ISPs), a regulatory requirement at MS B and C.

3.118.3. The PM shall ensure electronic and electrical systems, subsystems, and equipment, including ordnance, procured for U.S. forces are mutually compatible in the operational electromagnetic environment in accordance with DODD 3222.3/AFSUP1, *Electromagnetic Compatibility Program (Air Force Electromagnetic Environmental Effects Program)*. The collective term defined by the DOD to address and manage compatibility issues is Electromagnetic Environmental Effects (E3). E3 control requirements must be considered during all phases of equipment planning, research, development, acquisition, logistic support, deployment, operation and disassembly. Each organization and person who participates in

the generation of operational requirements, system design, development, testing, acquisition, off-the-shelf purchase, site surveys, logistics support and operation of Air Force electrical, electronic, or communications equipment must consider the requirement to achieve control of E3 in the intended operating environment.

3.118.4. Users of radio frequency radiating systems, including experimental, developmental, and operational systems and technologies, must obtain authority (license) to radiate in the electromagnetic environment. The authorization is obtained from the cognizant frequency management authority in the area of operation and must be obtained before the system is placed in operation.

3.119. Joint Tactical Radio System (JTRS) Waivers/Notifications. OSD policy requires all services to minimize non-Joint Tactical Radio System (JTRS) purchases and develop migration strategies for existing radios.

3.119.1. The PM shall complete a JTRS waiver or notification prior to initiating contracting activity to develop, modify, or procure non-JTRS radios. A waiver is needed for programs procuring or modifying non-JTRS approved single-channel tactical handheld radios. A notification is required for all other radio procurements.

3.119.2. The PM shall forward JTRS waiver/notifications to the Air Force Lead Command for JTRS, currently the Air Force Global Cyberspace Integration Center (GCIC), for entry into the Air Force JTRS waiver/notification process. Following GCIC review and coordination the Assistant Secretary of the Air Force for Acquisition (SAF/AQ) coordinates and sends a waiver/notification letter to OUSD/NII. The typical process takes 6 weeks from initial GCIC contact, although this can be accelerated for validated urgent operational needs. Due to this timeline, all waivers/notifications that require approval before the end of a fiscal year must be submitted to AF GCIC prior to 1 August. For further information on JTRS waivers, contact the Air Force Global Cyberspace Integration Center (AF GCIC).

3.120. AF IT Standards Waiver Process. When an AF organization identifies a need for a new or emerging standard to be added to the DISR, or to update a version of or retire an existing DISR standard, the DISR change request (CR) process must be followed, whether the CR is for a joint mandated standard or for an AF-unique standard. For ACAT programs, this must be done prior to MS B or an IT standards waiver must be obtained.

3.120.1. The PM shall request a waiver to use an IT standard not approved for use in the DISR or when a decision is made not to use a DOD-mandated IT standard. Waivers must also be requested for use of a standard listed in DISR as emerging or retired. Requests for waivers will be submitted to the Air Force Network Integration Center (AFNIC) Technical Architecture Division for review and coordination to ensure there are no interoperability issues, in accordance with AFI 33-401. AFNIC can provide a waiver request template to be used when submitting the request. SAF/XC is the AF IT Standards Waiver Approval Authority. Additional information can also be found on the DISR website at **https://disronline.disa.mil**.

3.121. AF Automated Computer Program Identification Number System. When developing new Computer Software Configuration Items (CSCIs) for AF Weapons Systems and Automatic Test Equipment, the AF Automated Computer Program Identification Number

System (ACPINS) will be considered for use in numbering each CSCI and related documentation and in ordering and tracking software.

3.122. Privacy. The PM shall ensure information assurance controls are implemented that protect privacy act and personally identifiable information (PII). The PM will ensure privacy impact assessments (PIA),system of records notices (SORN), and SSN reduction in records and forms, are conducted, documented, and coordinated in accordance with DOD 5400.11-R, *DoD Privacy Program* and AFI 33-332, *Privacy Act Program*.

3.123. Cyberspace Infrastructure Planning System (CIPS). The PM shall ensure applicable use of and updates to the CIPS. CIPS is the AF enterprise-wide communications and information equipment, systems and infrastructure planning tool. CIPS includes downward directed enterprise solutions, MAJCOM, base and in-theatre planning. Additional information can be found at the CIPS CoP.

3.124. Section 508. Section 508 of the Rehabilitation Act of 1973, as amended, was enacted to eliminate barriers in information technology, to make available new opportunities for people with disabilities, and to encourage development of technologies that will help achieve these goals. The PM shall consider Section 508 requirements specified in AFI 33-393, *Electronic and Information Technology Accessible to Individuals with Disabilities, Section 508*.

Chapter 4

ACQUISITION OF SERVICES

4.1. Purpose. Contracted services are a growing portion of Air Force staffing resources. Proper management of these contracted resources from requirements determination through contract execution is critical to Air Force mission success and maximizing Air Force resources. This chapter defines the framework and expectations for acquiring and ensuring delivery of promised performance of contracted services. As used herein, "Services Designated Officials" has the same meaning as "Decision Authority" in DODI 5000.02 Enclosure 9, dated December 8, 2008, referred to hereafter as USD(AT&L) Acquisition of Services Policy. Related references include Title 10 United States Code §2330; §2330a and §2463, FAR Part 37; Service Contracting, DFARS Part 237; *Service Contracting*, DOD Instruction (DODI) 1100.22, *Guidance for Determining Workforce Mix*, AFFARS Part 5337, *Service Contracting*, AFI 63-124; *Performance-Based Services Acquisition (PBSA)*, AFI 38-203, *Commercial Activities Program* and SECAF memorandum of 9 March 2006, *Contractor Support Approval Policy Memo 06A-002*.

4.1.1. In addition, this instruction defines approval processes to ensure services requirements are properly vetted and periodically re-validated in order to maximize Air Force use of scarce resources consistent with evolving mission requirements, technology, and concepts of operations.

4.2. Acquisition of Services Objectives. Acquisitions of services shall support and enhance the warfighting capabilities of the Air Force and the Unified Commands.

4.2.1. All acquisitions of services shall be based on clear, performance-based requirements; include identifiable and measurable cost, schedule, and performance outcomes consistent with customer requirements; and receive adequate planning and management to achieve those outcomes.

4.2.2. Managers shall use a strategic approach for both planning and execution of the acquisition, use an enterprise-wide approach that encompasses activities, processes, data standards, business rules, operating requirements, and information exchanges, and use business arrangements that are in the best interests of the Department of Defense and the Air Force.

4.2.3. All acquisitions of services shall comply with applicable statutes, regulations, policies, and other requirements, whether the services are acquired for the Air Force or on behalf of the Department of Defense.

4.3. Acquisition of Services Applicability.

4.3.1. This policy applies to:

4.3.1.1. Services acquired with appropriated funds above the simplified acquisition threshold (SAT), from private sector entities, by or for the Air Force;

4.3.1.2. Advisory and assistance services even if those services support research and development or construction activities; and,

4.3.1.3. Acquisitions of services occurring after a weapon system, automated information system, or other acquisition category program achieves full operational capability, if those services were not subject to previous milestone reviews or are under a PEO/DAO portfolio other than that of AFPEO/CM.

4.3.2. This policy does not apply to research and development, construction activities, housing and utilities privatization, architect-engineering services, or services that are an integral part of an acquisition weapons system or automated information system program managed in accordance with DODI 5000.02 and reviewed and approved as part of that program.

4.3.3. This policy shall not impede the ability of Senior Officials and Services Designated Officials to rapidly respond to emergency situations.

4.4. Acquisition of Services Responsibilities.

4.4.1. The Senior Official is the Assistant Secretary of the Air Force for Acquisition (SAF/AQ), who serves as the Service Acquisition Executive (SAE). The SAE establishes life cycle management structures to ensure effective implementation of this policy. The SAE delegates these responsibilities to Services Designated Officials as defined in Table 4-1, *Services Acquisitions within the US Air Force.*

4.4.1.1. The SAE shall conduct an annual review of the Air Force policy for the acquisition of services within their purview and assess the Air Force progress in achieving its purpose.

4.4.2. Services Designated Officials provided authority in Table 4-1 shall:

4.4.2.1. Manage and oversee acquisitions of services in accordance with Table 4-1 and subsequent paragraphs.

4.4.2.2. Review policies within their authority for the acquisition of services and assess the organization's progress in achieving the purpose of the policy.

4.4.2.3. Evaluate and coordinate strategic sourcing objectives and the acquisitions of services.

4.4.2.4. Coordinate with AFPEO/CM for all requirements with an estimated value of $100 million or greater, and for coordination with OSD of IT requirements over $500 million and other requirements over $1 billion.

4.4.2.5. Conduct or evaluate periodic spend analyses for services acquisitions.

4.4.2.6. Conduct annual execution reviews to assess progress of the acquisition against approved cost, schedule, and performance metrics. Conduct an annual assessment of the health of the organizations acquisition and management of services and as appropriate review any risk mitigation actions.

4.4.2.7. Ensure services are being obtained at the most cost effective and efficient means and in accordance with Air Force policy.

4.4.2.8. Ensure an adequately planned and resourced management approach to monitor contractor performance including quality assurance surveillance and tracking procedures.

4.4.2.9. Ensure the performance plan effectively monitors contractor performance.

Table 4.1. Services Acquisitions within the US Air Force.

Services Category	Threshold (Notes 1,2,3)	Services Designated Official
Special Interest	As designated by USD(AT&L), OASD(NII)/ CIO, or Senior Official	SAE; AFPEO/CM; or other PEO/DAO
Services Category I	Acquisitions >= $1B(Note 4)	AFPEO/CM or other PEO, Delegable with USD(AT&L) DPAP Review
	Acquisitions >=$100M <$1B	AFPEO/CM or other PEO, Delegable
	A-76 >= 300 FTEs or >= $100M	AFPEO/CM, Delegable
	IT Services >= $500M(Note 4)	AFPEO/CM or other PEO, with OASD(NII) Review
Services Category II	Acquisitions >= $10M but <$100M A-76 < 300 FTEs or < $100M	MAJCOM/DRU/CC or designee.
Services Category III	Acquisitions >= Simplified Acquisition Threshold but < $10M	MAJCOM/DRU/CC or designee.

NOTES:

1. Dollar amounts are in Fiscal Year 2006 constant year dollars.
2. The threshold is the cost/price estimate for the total planned acquisition.
3. Related task orders and/or options within an ordering vehicle shall be viewed as one effort for the purpose of determining the appropriate thresholds.
4. If a proposed acquisition includes both hardware and services, and the estimated value of the services portion exceeds $1B for services or $500M for IT acquisitions, the provisions of paragraph 3.6.2 shall apply.

4.4.3. The Program Executive Officer for Combat and Mission Support (AFPEO/CM) shall:

4.4.3.1. Manage and oversee the acquisitions of services equal to or greater than $100 million, and A-76 actions with 300 or more full-time equivalent employees.

4.4.3.2. Dedicate full-time program directors to coordinate acquisitions of services, delegations of responsibilities, enterprise level analyses, and policy guidance.

4.4.3.3. Determine key categories of services for the Air Force.

4.4.3.4. Evaluate annual execution reviews for the acquisitions of services to assess progress against approved cost, schedule, and performance metrics.

4.4.4. Major Commands (MAJCOM/CC) and Direct Reporting Units (DRU/CC) shall:

4.4.4.1. Provide guidance for Services Categories for which they are the Services Designated Official (SDO) and issue MAJCOM acquisition of services supplements which address organizational roles and responsibilities, training, and reporting. Supplements will be coordinated with AFPEO/CM.

4.4.4.2. Designate a Services Advocate to be the liaison with AFPEO/CM for acquisitions of services management and reporting.

4.4.4.3. Ensure command personnel are properly resourced and trained on the acquisition of services life cycle from requirements generation through contract closeout.

4.4.4.4. Ensure validation and periodic re-validation of MAJCOM services requirements between $10 million and less than $100 million.

4.4.4.5. Ensure all MAJCOM requirements for services of $100 million or greater are forwarded through AFPEO/CM for validation by the SAE.

4.4.4.6. Ensure acquisition of services are coordinated with the Air Force manpower authority in advance of contracting for operational support services to ensure tasks and duties that are designated as inherently governmental or exempt are not contracted.

4.4.5. The MAJCOM Services Advocate shall:

4.4.5.1. Serve as the principal point of contact for acquisitions of services, actively ensuring their organization remains a learning organization with respect to changes in services acquisition processes, policies, and procedures.

4.4.5.2. Ensure that data for acquisitions of services is maintained in a tracking system.

4.4.5.3. Coordinate periodic reports and responses to data calls for acquisitions of services within their organizations.

4.5. Services Requirements Determination and Approval:

4.5.1. Valid requirements documents shall be submitted to the appropriate Requirements Authority in Table 4-2, *Requirements for Services within the US Air Force*, for review and approval in accordance with SECAF Contractor Support Approval Policy memo 06A-002 of 9 Mar 2006. Consistent with the size and complexity of the program, the following should be considered:

4.5.1.1. Explain the mission need for the requirement and the outcomes to be achieved.

4.5.1.2. How the requirement was previously satisfied.

4.5.1.3. The nature and extent of market research conducted, to include any applicable benefit analysis performed for bundling or consolidation.

Table 4.2. Requirements for Services within the US Air Force.

Services Category	Threshold	Decision Authority
Contracted Services Requirements	All Requirements ≥ $100M	SAE
	MAJCOM/DRU/FOA Requirements between $10M and less than $100M	MAJCOM/DRU/FOA/CC
	MAJCOM/DRU/FOA Requirements <$10M	Delegable by MAJCOM/DRU/FOA/CC to Wing Commander/Director or equivalent
NOTE: Requirements submissions should support the goal of reducing contractor support in accordance with SECAF policy of 9 March 2006		

4.5.2. The Requiring Activity, the organization responsible for obtaining funding or developing the Program Objective Memorandum (POM), shall notify the appropriate requirements approving authority (based on total planned acquisition value) as soon as new or changes to recurring requirements are identified.

4.5.2.1. Requirements for new contracts shall be validated and approved prior to the Acquisition Strategy Panel (ASP).

4.5.2.1.1. For new acquisitions of services with a total estimated value of $100 million or more, the Requiring Activity is responsible for obtaining MAJCOM/DRU/FOA/CC/CV approval and for staffing the requirement through AFPEO/CM for SAE review and approval.

4.5.2.1.2. Requirements approval for new programs valued at $10 million or more and less than $100 million rests with the MAJCOM/DRU/FOA responsible for the execution of the associated funding or POM.

4.5.2.2. Approval is required for any proposed action(s) that result in a change of more than 10 percent of the total estimated value and/or which would change the requirements approval authority level as defined in Table 4-2. .

4.5.2.3. Requirements for contracts for existing services acquisitions shall be validated prior to exercising options IAW FAR 17.207. .

4.5.2.4. If there are multiple requiring activities, a Memorandum of Agreement (MOA) shall be executed under MAJCOM/DRU/FOA guidance identifying the lead activity and, if appropriate, the lead MAJCOM for execution of the acquisition.

4.6. Services Acquisition Review and Approval

4.6.1. The Service Designated Official is responsible for acquisitions based on the services categories and thresholds in Table 4-1. Information Technology (IT) must comply with the Clinger-Cohen Act of 1996.

4.6.2. The following procedures shall apply to all services that require OSD approval (see **Table 4.1**):

4.6.2.1. MAJCOM/DRU/FOA focal points shall, before the final solicitation is issued or for other than full and open competition, before negotiations commence, coordinate with AFPEO/CM and assist in the preparation of AF notification to USD(AT&L). The notification shall include the expected value of the acquisition of services for the projected life (base year and options) of the contract, along with a copy of the acquisition strategy briefing. A Justification and Approval (J&A) and an acquisition plan will be submitted if the acquisition strategy uses a sole source approach or if directed by the AFPEO/CM.

4.6.2.2. Per USD (AT&L) policy, within 10 working days after receipt of the notification, the USD(AT&L) or OASD/NII /DOD CIO or designee may direct a review of the proposed acquisition to be accomplished within 30 days of such direction. Issues arising from the review shall be resolved in accordance with procedures specified by the USD(AT&L), OASD/NII /DOD CIO, or designee, in direct coordination with the SAE through AFPEO/CM. If the Director, DPAP, or the Director, Acquisition, does not notify the SAE within 10 working days, the acquisition may proceed.

4.7. Data Collection. The collection of the following data shall be automated, and the data may be requested by the SAE or AF PEO/CM at any time. For all services acquisitions greater than or equal to $100M, including those with delegations, this data shall be provided to AFPEO/CM upon contract award.

4.7.1. Contract identification

4.7.1.1. Program name

4.7.1.2. Contract number(s)

4.7.1.3. Prime and first-tier subcontractors by contract number

4.7.1.4. Award Date

4.7.1.5. Mobilization and Performance Start Date

4.7.1.6. Contract End Date

4.7.1.7. Base Year and Option Years

4.7.1.8. Points of Contact (Contracting Activity, Procuring Contracting Officer (PCO) name, e-mail and phone

4.7.1.9. Initial performance evaluation date (projected)

4.7.1.10. Annual Execution Review date (projected)

4.7.2. The type of services purchased.

4.7.3. The total estimated value (base year(s) and options) of the contract/task order/interdepartmental purchase request.

4.7.4. The total dollars obligated.

4.7.5. The type of contract action used to make the purchase (i.e., fixed price type, cost type, or time and materials task order/contract). If multiple contract action types, list each type.

4.7.6. The extent of competition in making the purchase and the number of offerors.

4.8. AFPEO/CM A cquisition and Management Authority for Air Force Services Delegations.

4.8.1. Delegations of select AFPEO/CM acquisition and management authorities (e.g. SDO, SSA, Acquisition Plan approval, FDO) may be granted to MAJCOM officials. Delegation decisions shall include consideration of leadership commitment, acquisition maturity toward continuous process improvement, the qualifications and experience of the proposed designee, and the force structure in place to support the management and oversight of the services acquisition. The basis for delegations is an Expectation Management Agreement between the Decision Authority and the responsible organization; e.g. between AFPEO/CM and the MAJCOM/CC, MAJCOM/CV or MAJCOM/CA.

4.8.2. Delegations will be specific to responsibilities for acquisitions of services under the AFFARS, as applicable; e.g. ASP Chairperson; SSA; Services Designated Official (SDO) for the acquisition; Fee Determining Officials (FDO) for Award Fees; or for post award management and oversight.

4.9. Initial Contract Performance Review. The initial evaluation of contractor performance is a joint determination by the multi-functional team that the contractor has successfully started performance, completed transition, is fully operational, and is within the estimated cost, schedule, and performance parameters of the contract. The SDO may waive the initial evaluation for contractors that have continued performance under a successor contract award (prior incumbent), or for contractors which have otherwise demonstrated full compliance with contract start-up. Separate initial contract performance reviews are not required when they would duplicate reviews held and reported under Award Fee or Award Term Plan provisions.

4.9.1. Scheduling: The initial performance review criteria shall be included in the Performance Plan and the review shall take place within 30 days after the contractor assumes full performance responsibilities. (i.e. after completion of transition/mobilization).

4.9.2. Reports: For acquisitions greater than or equal to $100 million, results of the initial performance review shall be reported by plain text e-mail or other expedient means to the AFPEO/CM. Negative variations in cost, schedule, staffing, and/or performance shall be reported with an assessment of the root causes and corrective action plan. The report shall include an assessment of schedule, management, technical, and cost performance. Special interest items to be included in the initial performance report are significant modifications to the contract made since contract award.

4.9.3. Assessment values:

4.9.3.1. Green--No issues.

4.9.3.2. Yellow--Issue(s) but contractor has an adequate mitigation or corrective action plan in place.

4.9.3.3. Red--Issue(s) with inadequate or no contractor's mitigation or corrective action plan. Any "red" assessment shall include the government proposed actions with respect to the failing contractor.

4.10. Annual Execution Reviews. The Annual Execution Review shall, at a minimum, assess annual execution reviews for progress against approved performance metrics and review the summary of evaluations from the Contractor Performance Assessment Reporting System (CPARS).

4.10.1. Review Requirements:

4.10.1.1. For acquisition of services acquisitions greater than or equal to $100 million, including those that have been delegated in whole or in part, an annual execution review is required for services acquisitions in pre-award phases and those on contract, and shall be performed by the program manager, procuring contracting officer, and/or functional staff as applicable. Electronic reports of execution reviews conducted in each fiscal year should be sent to the respective AFPEO/CM Program Director. The cutoff date for submission of all reports of Annual Execution Reviews conducted in the prior fiscal year is the last working day of December. The format for reports is available from the AFPEO/CM website under the Annual Execution Review Template.

4.10.1.2. For services acquisitions below $100M, the SDO is responsible for conducting and documenting annual execution reviews.

4.10.2. Pre-award. The focus in the pre-award phase is progress-to-schedule, and issues for the attention of the SDO and Air Force leadership. The format for templates on programs in the pre-award phase is available from the AFPEO/CM website.

4.10.3. Post-award. The focus of the post-award phase is fulfillment of requirements by comparison of outputs and outcomes to requirements by using cost, schedule, and performance metrics. The format for templates on programs in the post-award phase is available from the AFPEO/CM website.

4.10.4. Report content. Report content for acquisitions above the simplified acquisition threshold and less than $100 million shall be determined by the respective SDO. The format for reports is available from the AFPEO/CM website.

4.11. Acquisition of Services Definitions.

4.11.1. Acquisition of Service. The execution of one or multiple contracts or other instruments committing or obligating funds (e.g., funds transfer, placing orders under existing contracts) for a specified requirement. Acquisition begins at the point when agency needs are established and includes all functions directly related to the process of fulfilling those needs by contract, agreements or funds transfer.

4.11.2. Information Technology (IT) Services. The performance of any work related to IT and the operation of IT, including National Security Systems (NSS). This includes outsourced IT-based business processes, outsourced information technology, and outsourced information functions.

4.11.3. Multi-functional Team(s). This is a customer-focused team instituted under the authority of the senior leadership. Every functional representative within the multi-functional team brings to the table their unique area of expertise. This expertise is vital to the success of the team. However, the functional perspective each person brings to the acquisition must always be subordinate to the greater perspective of the mission. The purpose of the multi-functional team is to create an environment that shapes and executes an acquisition. The emphasis is on teamwork, trust, common sense and agility. These stakeholders are responsible for the acquisition throughout the life of the requirement. For complex, multi-functional service acquisitions, membership should include all stakeholders impacted by the services performed. This may include subgroup(s) responsible for routine tasks associated with the service acquisition process. For less complex, single-function service acquisitions, membership in this group may include as few members as: the procuring contracting officer, the administrative contracting officer, the program manager, quality assurance representatives, the functional/technical representative, and a subject matter expert. For more information refer to AFI 63-124, *Performance-Based Services Acquisition*.

4.11.4. Service. Engagement of the time and effort of a contractor whose primary purpose is to perform an identifiable task, or tasks, rather than to furnish an end item of supply, as defined in FAR Part 37.

4.11.5. Types of acquisitions of services.

4.11.5.1. Advisory and Assistance (A&AS). Management and professional support services; studies, analyses and evaluations; engineering and technical services. Also see FAR 2.101.

4.11.5.2. Base Operating Support (BOS). A broad grouping of services associated with the general day-to-day operation or functioning of an entire installation or the individual buildings and facilities on that installation. BOS activities include but are not limited to mission services, community services, housing services, physical security and force protection services, and human resource support services.

4.11.5.3. Range Operations Services. Recurring maintenance of real property; operation and management of range services and hardware systems.

4.11.5.4. Operational or Base Level Maintenance Services. Maintenance, overhaul, repair, management, modernizations, supplies, and systems servicing at unit level.

4.11.5.5. Sustainment and Mission Support Service. Maintenance, overhaul, repair, management, modernization, supplies, and systems servicing of equipment.

4.11.5.6. Information Technology. Communications services integral to support and improvement of operations or effective and efficient operations of information systems.

4.11.5.7. Contingency Operations and Support. Services related to emergencies involving military forces, caused by natural disasters, terrorists, subversives, or required military operations.

4.11.5.8. Environmental Support Services. Services associated with remediation or restoration of environmental conditions.

4.11.5.9. Contractor Logistics Support (CLS). Support services used to provide all or part of the logistics support for a system, subsystem, or equipment item, generally for the entire life cycle. CLS may include Interim Contractor Support (ICS).

4.12. Points of contact for additional information:

4.12.1. AFPEO/CM web site (AF Portal).

4.12.2. AFPEO/CM Director of Operations and Policy; DSN 425-7069/7068, (703) 588-7069/068; e-mail: **afpeo_cm-shared@pentagon.af.mil.**

Chapter 5

ACQUISITION WORKFORCE MANAGEMENT AND PROFESSIONAL DEVELOPMENT

5.1. Purpose. The purpose of this chapter is to identify acquisition workforce management and professional development requirements and responsibilities. The 1990 Defense Acquisition Workforce Improvement Act (DAWIA), Chapter 87, Title 10, United States Code (U.S.C.), provides specific minimum qualification standards of those personnel performing functions integral to the acquisition process and defines critical acquisition positions. The law requires DOD to formalize career paths for personnel who wish to pursue careers in acquisition to develop a skilled, professional workforce. This chapter defines the Air Force's implementation of this law as required by DODD and DODI.

5.2. Acquisition Workforce. For the purposes of this publication, the acquisition workforce is defined as those individuals assigned to positions having predominantly acquisition functions as defined by DODD 5000.01, DODI 5000.02, and DODD 5000.52. These positions shall be designated by acquisition coding in the manpower and personnel systems of record.

5.3. Responsibilities and Authorities. The Assistant Secretary of the Air Force for Acquisition, SAF/AQ, establishes policy and provides Service oversight for acquisition workforce management and professional development, and in accordance with DODD 5000.52, is responsible for implementing the Defense Acquisition, Technology and Logistics Workforce Education, Training and Career Development Program in the AF on behalf of the Secretary of the Air Force (SECAF).

5.3.1. AF Director, Acquisition Career Management (DACM). The DACM is designated by SAF/AQ with authority to assist the SAEs for space and non-space programs with oversight and execution of acquisition workforce responsibilities. Responsibilities of the DACM shall include:

5.3.1.1. Developing, implementing and overseeing policies and procedures for the AF Acquisition Professional Development Program (APDP).

5.3.1.2. Representing the AF as point of contact with Defense Acquisition University (DAU) and other DOD Components for matters relating to the AT&L Workforce Education, Training and Career Development Program.

5.3.1.3. Managing training matters associated with DAWIA implementation, including DAU course quotas.

5.3.1.4. Establishing programs as required to provide career development opportunities for the acquisition workforce in accordance with DAWIA, associated regulations, and AF acquisition workforce human capital strategic planning objectives.

5.3.1.5. Establishing and maintaining acquisition career management information systems for training, waivers, continuous learning, certification, and acquisition personnel records review as needed to execute acquisition workforce responsibilities.

5.3.2. Functional Managers. Air Staff Functional Managers, appointed IAW AFI 36-2640, shall advise the DACM on acquisition workforce management issues and assist in execution

of acquisition workforce responsibilities in respective acquisition functions. Air Staff Functional Managers are responsible for ensuring, in coordination with the DACM, that AF requirements for acquisition certification (education, training and experience) standards are identified to OUSD (AT&L). Air Staff Functional Managers shall appoint an APDP Functional Manager, as applicable, to manage APDP responsibilities for AF members in acquisition functional areas.

5.3.3. Supervisors of Personnel Assigned to Acquisition Positions. Supervisors are responsible for notifying personnel in their organization whose positions are designated as acquisition positions about their APDP responsibilities to include the functional category and level of required certification, and if appropriate, tenure and statutory requirements. Supervisors shall assist acquisition workforce members in developing and executing Individual Development Plans (IDP) to accomplish APDP requirements including statutory and/or assignment-specific training, certification, and professional currency / continuous learning standards.

5.3.4. Individuals Assigned to Acquisition Positions. Individuals assigned to acquisition-coded positions shall meet all APDP requirements including statutory and/or assignment-specific training/education, certification, tenure, and professional currency / continuous learning standards.

5.4. Acquisition Workforce Management. SAF/AQ shall establish strategic objectives to develop and maintain a professional acquisition workforce with the numbers and mix of people with the right education, training, skills and experience to execute effective and successful AF acquisition processes and programs.

5.4.1. Human Capital Strategic Planning (HCSP). The DACM office, in coordination with Functional Managers, shall develop, review, and coordinate Human Capital Strategic Planning for the acquisition workforce, in harmony with AF and OSD workforce strategic plans, to guide acquisition workforce accession, succession, force development and force shaping planning.

5.4.2. Review of Performance Appraisals.

5.4.2.1. Military Performance Evaluations. In accordance with AFI 36-2406, an opportunity shall be provided for review and inclusion of any comments on any appraisal of the performance of a person serving in an acquisition position by a person serving in an acquisition position in the same acquisition career field. For more information see detailed APDP guidance in the acquisition functional area of the AF Portal.

5.4.2.2. Acquisition Civilian (non-contracting) Evaluations. Civilians occupying acquisition coded positions outside of the contracting career field may request, but are not required to have an acquisition functional review of their performance appraisal. This special acquisition functional review is in addition to the normal review processes.

5.4.2.3. Contracting Career Field Evaluations. First level evaluation of individuals on contracting coded positions shall be performed within the contracting career chain. The only exception will be the performance evaluation of the senior official in charge of contracting for the organization, when this official is not the primary contracting officer for the organization.

5.5. AF Acquisition Professional Development Program (APDP). The APDP shall be designed and managed to facilitate the development and maintenance of a professional acquisition workforce. Refer to the Career/APDP section in the acquisition functional area of the AF Portal for detailed information and implementing instructions (hereafter referred to as "detailed APDP guidance.")

5.5.1. Designating Acquisition Positions. If the duties of a position are predominantly acquisition functions as defined by DODD 5000.01, DODI 5000.02, and DODD 5000.52, then the position falls under the requirements of this AFI and must be coded as an acquisition position in accordance with detailed APDP guidance.

5.5.1.1. APDP position coding shall relate functional coding to the civilian occupational (OCC) series or the military AF Specialty Code (AFSC) as outlined in detailed APDP guidance.

5.5.1.2. APDP position coding shall identify required certification levels based on authorized position grade / pay band as defined in detailed APDP guidance.

5.5.1.3. Developmental Positions, as defined in detailed APDP guidance, shall be coded Level II and may not be coded as Critical Acquisition Positions. Before designating a position as Developmental, organizations must receive approval from the DACM / Associate DACM.

5.5.1.4. Active Guard and Reserve (AGR) and permanent part-time civilian positions may be designated as acquisition positions.

5.5.1.5. Non-AGR military guard and reserve positions may not be coded as acquisition positions.

5.5.1.6. All civilian 1102 and all military 64XX and 6C0X1 positions are considered acquisition positions and shall be coded *Contracting*.

5.5.1.7. All civilian 1101 positions with predominantly acquisition management duties and all military 63XX positions are considered acquisition positions and shall be coded in accordance with the detailed APDP guidance.

5.5.2. Critical Acquisition Positions (CAPs). In accordance with DODI 5000.66 certain senior level acquisition-coded positions shall be designated as CAPs based on the criticality of the position to an acquisition program. Personnel assigned to CAPs provide needed acquisition experience as well as stability and accountability to a program. Positions that must be CAPs include:

5.5.2.1. National Security Personnel System (NSPS) Pay Band 3, General Schedule (GS)-15 (or pay equivalent), O-6, and higher grade acquisition-coded positions.

5.5.2.1.1. Commander / Director positions of acquisition organizations directly responsible for ACAT I, IA, and II programs shall be coded *Program Management Level III* and shall require completion of the training statutorily required for ACAT I, IA and II program managers.

5.5.2.2. The following positions that are a subset of NSPS supervisory Pay Band 2, GS-14 (or pay equivalent), and O-5 acquisition-coded positions:

5.5.2.2.1. All acquisition-coded squadron commander / director positions.

5.5.2.2.2. Civilian GS-14 (or pay equivalent) and NSPS supervisory Pay Band 2 acquisition coded positions that have direct responsibility and accountability on an acquisition program or on an effort or function directly supporting a program, and have duties and responsibilities that require a three-year tenure for program stability. For more information see detailed APDP guidance.

5.5.2.2.3. Military O-5 positions that have direct responsibility and accountability on an acquisition program or on an effort or function directly supporting a program, and have duties and responsibilities that require a three-year tenure for program stability. This includes all acquisition-coded positions that must be filled by officers graded at the O-5 level or above, such as O-5 positions that are filled by a board process for command, or program office O-5 positions that must be filled at the O-5 level. O-5 positions that routinely may be filled by an officer of lower rank do not require CAP designation.

5.5.2.3. Further examples of positions that should be coded CAP can be found in the detailed APDP guidance.

5.5.2.4. O-4 / GS-13 (or pay equivalent) / NSPS non-supervisory Pay Band 2 or lower grade positions will not be coded as CAPs with the following exceptions:

5.5.2.4.1. O-4 commander and NSPS supervisory Pay Band 2 positions as identified in Para. 5.5.2.2.1.

5.5.2.4.2. The PM responsible for programs on the APML.

5.5.2.5. All CAPs must be coded Level III.

5.5.2.6. Individuals assigned to CAPs shall be Acquisition Corps members (refer to paragraph 4.5.6) and shall meet AF eligibility standards as outlined in detailed APDP guidance.

5.5.2.7. Individuals being assigned to CAP positions must sign a three-year tenure agreement (DD Form 2888, *Critical Acquisition Position Service Agreement*).

5.5.3. Key Leadership Positions (KLPs). A subset of CAPs that require SAE oversight of position qualification requirements and tenure will be designated KLPs. KLPs are determined and designated by the SAEs for space and non-space programs.

5.5.3.1. The following positions shall be designated as KLPs:

5.5.3.1.1. Program Executive Officer (PEO) and Deputy PEO.

5.5.3.1.2. Designated Acquisition Official (DAO).

5.5.3.1.3. Program Manager and Deputy Program Manager for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) programs (Acquisition Category (ACAT) I/IA/IC/IAC/IAM Programs), including pre-MDAPs.

5.5.3.1.4. Program Manager of significant non-major defense acquisition programs (ACAT II Programs).Acquisition-coded General Officer (GO) / Senior Executive Service (SES) (or pay equivalent) positions.

5.5.3.1.5. Senior Contracting Official (SCO) – (Air Staff/MAJCOM level).

5.5.3.1.6. Senior Center Contracting Official (SCCO).

5.5.3.1.7. Product and Logistics Center Senior Engineer.

5.5.3.1.8. Product and Logistics Center Financial Manager.

5.5.3.1.9. Other positions identified by the SAEs.

5.5.3.2. Individuals assigned to KLPs are expected to remain in the position for a tenure period of three years or as established by the appropriate SAE and must execute a KLP tenure agreement (DD Form 2889, *Critical Acquisition Position Service Agreement Key Leadership Position*, replaces DD Form 2888 for KLPs). Early release from tenure agreement requires SAE approval (see paragraph 5.5.7.3).

5.5.4. Certification. Personnel assigned to acquisition positions are required to meet position certification requirements in accordance with DODI 5000.66. The Air Force follows DOD certification standards without modification. For implementing instructions and POCs, refer to the detailed APDP guidance.

5.5.4.1. Delegation of Certification Authority. The DACM may delegate certification authority for Level I, II and III Certification to the following (where Certifying Official criteria are met):

5.5.4.1.1. Air Staff Functional Managers.

5.5.4.1.2. MAJCOM Headquarters.

5.5.4.1.3. Others as identified in detailed APDP guidance.

5.5.4.2. As delegated by the DACM, Air Staff Functional Managers shall be the Certifying Official for GO and SES members who meet functional category acquisition certification requirements. This authority may not be re-delegated.

5.5.4.3. As delegated by the DACM, certification authority will remain with the Air Staff Functional Manager for AF personnel assigned to Direct Reporting Units (DRUs), Forward Operating Agencies (FOAs), Unified Commands, DOD Agencies, and other Components.

5.5.4.4. The DACM may delegate authority to adjudicate acquisition experience and/or approve acquisition course fulfillment for purpose of documentation in the system of record to support certification. Refer to detailed APDP guidance for further information.

5.5.4.5. Criteria for Certifying Officials. As delegated by the DACM, Certifying Officials serve as the AF approval authority for issuing acquisition professional certification credentials in accordance with DOD policy. Certifying Officials are accountable for ensuring current functional area education, training, and experience standards are met for certification. The DACM shall issue criteria for Certifying Officials. Refer to the detailed APDP guidance for further information.

5.5.5. Professional Currency.

5.5.5.1. Individuals assigned to acquisition-coded positions shall maintain professional currency in their acquisition functional area by meeting mandatory DOD and AF Continuous Learning (CL) standards and recording CL accomplishments in *Acq Now CL*, the system of record. Individuals on acquisition-coded positions who fail to meet the

professional currency requirement are considered non-current. For details on execution of CL, refer to the detailed APDP guidance.

5.5.5.2. Individuals who have not achieved the CL standard within a two month period after becoming non-current will not be eligible for acquisition commander / director positions; and will not be eligible for special acquisition career development programs or AF acquisition awards without an approved waiver. For details, refer to the detailed APDP guidance.

5.5.5.3. Learning is a job responsibility. Computer / online courses required for APDP certification and CL may be accomplished during dedicated duty time either during the normal duty day in the workplace, or through such means as organization approved alternate work schedules, or tele-commuting, subject to supervisor approval. Individuals should not be expected to accomplish required training during off-duty hours.

5.5.6. Defense Acquisition Corps. The Acquisition Corps is intended to be a pool of highly qualified members of the Acquisition Workforce from which CAPs are filled.

5.5.6.1. The Acquisition Corps is comprised of those persons who have met the grade, education, training, and experience standards prescribed by DAWIA and implementing regulations, and who have been granted admission to the Acquisition Corps by the DACM. Criteria for entrance into the Acquisition Corps are provided in the detailed APDP guidance.

5.5.6.2. New entrants to the Acquisition Corps must meet all Acquisition Corps requirements and be a Lt Col (select), GS-14 (or pay equivalent), NSPS Pay Band 3, or above. O-4 acquisition commanders or supervisory NSPS Pay Band 2 personnel meeting Acquisition Corps requirements who are selected for assignment to a CAP (in accordance with paragraph 5.5.2) will be granted Acquisition Corps membership.

5.5.6.3. Acquisition professionals shall demonstrate appropriate professional and / or military standards as well as professional development in order to qualify for and remain in the Acquisition Corps. Examples: any military member having an Unfavorable Information File (UIF) or failing to continue professional development commensurate with rank, will not be considered for, or shall be disqualified and removed from, the Acquisition Corps.

5.5.7. Waivers. DAWIA and DOD policy permit waivers for position qualification requirements or tenure requirements on a case-by-case basis when in the best interests of the Air Force. Waiver requests, coordination, and approval / disapproval must be processed via the online system of record. Refer to detailed APDP guidance for further information.

5.5.7.1. A position requirements waiver does not confer certification.

5.5.7.2. Membership in the Acquisition Corps cannot be granted via a waiver.

5.5.7.3. The appropriate AF SAE (or designated representative) must approve waivers from the approved tenure commitment for KLPs for space and non-space programs.

5.5.7.4. Delegation of Waiver Approval Authority.

5.5.7.4.1. The DACM office will receive KLP waiver requests from the field and coordinate through the appropriate Acquisition Executive for disposition.

5.5.7.4.2. Authority for Senior Contracting Official position requirements waivers is delegated to the Deputy Assistant Secretary (Contracting) (SAF/AQC). This authority may not be re-delegated.

5.5.7.4.3. The DACM or Associate DACM grants waivers for position and tenure requirements for all non-KLP CAPs.

5.5.7.4.4. The DACM may delegate waiver authority for non-CAP position requirements. Refer to detailed APDP guidance for further information.

5.5.7.4.5. The PEO or Deputy PEO is given authority to waive the requirement for a new tenure agreement when an individual is reassigned from a non-KLP CAP within the PEO portfolio to another non-KLP CAP within the same PEO portfolio. This authority does not obviate the requirement for a tenure waiver for reassignment when a tenure agreement is in effect.

Chapter 6

POLICY COORDINATION, REVIEW, AND WAIVERS

6.1. Integrated Life Cycle Management Publication Coordination. Major Command (MAJCOM) Commanders are requested to convene a high performance team (HPT)-based process for the review and coordination of official ILCM Air Force departmental publications (e.g. AFPDs, AFIs, AFMANs, and AFPAMS). These publications are the authoritative voice of the Headquarters Air Force (HAF) and document how ILCM requirements established by law, the President, the Secretary of Defense (SECDEF), and the SECAF are to be fulfilled.

6.1.1. The HPT shall consist of the appropriate subject matter expertise relevant to the content of the publication under review. The purpose of the HPT is to facilitate AFI 33-360, *Publications and Forms Management*, technical/functional staffing in order to develop a timely, adjudicated, consolidated and integrated position on behalf of the MAJCOM Commander. Additionally, the HPT will review the publication with regards to higher authority (e.g. public law, statute, DOD issuances), HAF senior leadership direction, and the ability to implement a standardized process across the MAJCOM. The HPT will provide recommendations and supporting rationale for all comments to increase the quality of the ILCM publication.

6.1.2. MAJCOM Commanders will assign a lead office responsible for staffing, identification of relevant subject matter experts and process owners to support the HPT, and act as the single point of contact between the MAJCOM and the HAF publication OPR. MAJCOM Commanders can designate a lower-level office to provide the response and sign off on the coordination form, but are responsible for ensuring the correct offices within their organization review the publication.

6.2. Waivers. Waivers from guidance must be based on a programmatic course of action approved by the Service Acquisition Executive (SAE) or Milestone Decision Authority (MDA) through the program's governance chain of authority and documented in the appropriate program documentation. Notification must be made to Headquarters Air Force (HAF) in accordance with AFPD 63-1/20-1.

6.3. Changes. Refer recommended changes and questions about this publication to SAF/AQXA using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through MAJCOM publications/forms managers.

6.4. Information Collection, Records, and Forms.

6.4.1. No information collections are created by this publication.

6.4.2. Records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, Management of Records, and disposed of in accordance with the AF Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcss-af61a/afrims/afrims/rims.cfm**.

6.4.3. Forms (Adopted and Prescribed).

6.4.3.1. Adopted Forms. DD Form 1415-1 *Reprogramming Action Form;* DD Form 250, *Material Inspection and Receiving Report*; DD Form 2888, *Critical Acquisition*

6.4.3.2. No forms are prescribed by this publication.

SUE C. PAYTON
Assistant Secretary of the Air Force (Acquisition)

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING DOCUMENTATION

References

AFDD 1-2, *Air Force Glossary*, 11 Jan 2007

AFFARS, *Air Force Federal Acquisition Regulation Supplement*

AFPD 10-6, *Capabilities-Based Planning & Requirements Development, 31 May 2006*

AFPD 10-7, *Information Operations, 06 Sep 2006*

AFPD 10-9, *Lead Command Designation and Responsibilities for Weapon Systems,* 08 Mar 2006

AFPD 16-2, *Disclosure of Military Information to Foreign Governments and International Organizations*, 10 Sep 1993

AFPD 16-4, *Accounting for Units, Installations and Aerospace Vehicles*, 07 Sep 1993

AFPD 16-5, *Planning, Programming, and Budgeting System*, 29 Jul 1994

AFPD 16-10, *Modeling and Simulation*, 10 Mar 2006

AFPD 21-2, *Munitions*, 20 Sep 1993

AFPD 23-1, *Materiel Management Policy and Procedures*, 10 Mar 2006

AFPD 23-5, *Reusing and Disposing of Materiel*, 26 Mar 2001

AFPD 24-2, *Preparation and Movement of Air Force Materiel*, 03 Sep 2003

AFPD 32-10, *Installations and Facilities*, 27 Mar 1995

AFPD 32-70, *Environmental Quality*, 20 Jul 1994

AFPD 33-1, *Information Resources Management*, 27 Jun 2006

AFPD 33-2, *Information Assurance (IA) Program*, 19 Apr 2007

AFPD 33-3, *Information Management*, 28 Mar 2006

AFPD 33-4, *Enterprise Architecting*, 27 Jun 2006

AFPD 34-1, *Air Force Services Combat Support* Programs, 01 Nov 1997

AFPD 36-4, *Air Force Civilian Training, Education, and Development*, 12 Feb 2007

AFPD 36-21, *Utilization and Classification of Air Force Military Personnel*, 01 Apr 98

AFPD 36-22, *Air Force Military Training*, 22 Mar 2004

AFPD 38-2, *Manpower*, 02 Mar 1995

AFPD 51-12, *Alternative Dispute Resolution*, 09 Jan 2003

AFPD 60-1, *Air Force Standardization Program*, 23 Oct 2006

AFPD 61-1, *Management of Science and Technology*, 13 Jun 2003

AFPD 61-2, *Management of Scientific and Technical Information*, 07 Apr 1993

AFPD 62-4, *Standards of Airworthiness for Passenger Carrying Commercial Derivative Transport Aircraft*, 01 Dec 1998

AFPD 62-5, *Standards of Airworthiness for Commercial Derivative Hybrid Aircraft*, 08 Aug 2001

AFPD 62-6, *USAF Aircraft Airworthiness Certification*, 01 Oct 2000

AFPD 63-1/20-1, *Acquisition and Sustainment Life Cycle Management*, 03 Apr 2009

AFPD 63-17, *Technology and Acquisition Systems Security Program* Protection, 26 Nov 2001

AFPD 64-1, *The Contracting System*, 07 Dec 2006

AFPD 65-1, *Management of Financial Services*, 01 Jul 1996

AFPD 65-5, *Cost and Economics*, 17 May 1993

AFPD 90-11, *Planning System*, 27 Oct 2000

AFPD 91-2, *Safety Programs*, 28 Sep 1993

AFPD 91-3, *Occupational Safety and Health*, 27 Sep 1993

AFPD 99-1, *Test and Evaluation Process*, 23 Jul 1993

AFI 10-601, *Capabilities-Based Requirements Development*, 31 Jul 2006

AFI 10-604, Capabilities-Based Planning, 10 May 2006

AFI 10-901, *Lead Operating Command—Communications and Information Systems Management*, 22 Mar 2001

AFI 10-2001, *Defensive Counterinformation Planning, Operations and Assessment*, 04 Oct 2001

AFI 11-215, *USAF Flight Manuals Program (FMP)*, 06 Apr 2005

AFI 11-301, Vol. I, *Aircrew Life Support (ALS) Program*, 19 Jul 2002

AFI 13-204, *Functional Management of Airfield Operations*, 10 Jan 2005

AFI 14-104, *Oversight of Intelligence Activities*, 16 Apr 2007

AFI 14-111, *Intelligence in Force Modernization*, 10 Jan 2005

AFI 14-201, *Intelligence Production and Applications*, 01 Dec 2002

AFI 14-205, *Geospatial Information and Services*, 04 May 2004

AFI 14-206, *Modeling and Simulation*, 14 Jan 1994

AFI 14-303, *Release of Intelligence to US Contractors*, 01 Apr 1999

AFI 16-110, *US Air Force Participation in International Armaments Cooperation (IAC) Programs*, 04 Nov 2003

AFI 16-601, *Implementation of, and Compliance With, Arms Control Agreements*, 07 Jun 2004

AFI 16-1001, *Verification, Validation and Accreditation (VV&A)*, 01 Jun 1996

AFI 16-1002, *Modeling and Simulation (M&S) Support to Acquisition*, 01 Jun 2000

AFI 20-101, *Logistics Strategic Planning Procedures*, 12 Nov 1993

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 29 Jun 2006

AFI 21-104, *Selective Management of Selected Gas Turbine Engines*, 11 Dec 2007

AFI 21-107, *Maintaining Commercial Derivative Aircraft*, 19 Jul 1994

AFI 21-113, *Air Force Metrology and Calibration (AFMETCAL) Program*, 01 Feb 2000

AFI 21-204, *Nuclear Weapons Maintenance Procedures*, 17 Jan 2008

AFI 23-501, *Retaining and Transferring Materiel*, 16 May 1994

AFI 31-401, *Information Security Program Management*, 01 Nov 2005

AFI 32-7060, *Interagency and Intergovernmental Coordination for Environmental Planning*, 25 Mar 1994

AFI 32-7061, *The Environmental Impact Analysis Process*, 12 Mar 2003

AFI 32-7086, *Hazardous Materials Management*, 01 Nov 2004

AFI 33-118, *Electromagnetic Spectrum Management*, 18 Jul 2005

AFI 33-141, *Air Force Information Technology Portfolio Management and IT Investment Review*, 23 Dec 2008

AFI 33-200, *Information Assurance (IA) Management, 23 Dec 2008*

AFI 33-204, *Information Assurance (IA) Awareness Program*, 01 Apr 2004

AFI 33-210, *Air Force Certification and Accreditation (C&A) Program (AFCAP), 23 Dec 2008*

AFI 33-324, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*, 01 Jun 2000

AFI 33-332, *Privacy Act Program*, 29 Jan 2004

AFI 33-360, *Publications and Forms Management*, 18 May 2006

AFI 33-393, *Electronic and Information Technology Accessible to Individuals with Disabilities, 09 Jan 2007*

AFI 33-401, *Implementing Air Force Architectures*, 14 Mar 2007

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

AFI 38-203, *Commercial Activities Program*, 20 Jun 2008

AFI 51-402, *Weapons Review*, 13 May 1994

AFI 60-101, *Materiel Standardization*, 23 Oct 2006

AFI 60-106, *The United States Air Force International Military Standardization Program*, 01 Dec 1997

AFI 61-204, *Disseminating Scientific and Technical Information*, 30 Aug 2002

AFI 63-103, *Nuclear Weapons Program Management*, 06 May 1994, (to be updated as *Joint Air Force-National Nuclear Security Administration (AF-NNSA) Nuclear Weapons Life Cycle Management)*

AFI 63-104, *The SEEK EAGLE Program*, 21 Jan 2005

AFI 63-114, *Rapid Response Process*, 12 Jun 2008

AFI 63-124, *Performance-Based Services Acquisition (PBSA)*, 01 Aug 2005

AFI 63-125, *Nuclear Certification Program*, 15 Mar 2004

AFI 63-501, *Air Force Acquisition Quality Program*, 31 May 1994

AFI 63-131, *Modification Program Management*, 06 Nov 2009

AFI 63-1201, *Life Cycle Systems Engineering*, 23 Jul 2007

AFI 63-1401, *Aircraft Information Program*, 06 Feb 2001

AFI 65-501, *Economic Analysis*, 10 Nov 2004

AFI 65-509, *Business Case Analysis [when published]*

AFI 65-601, Vol. 1, *Budget Guidance and Procedures*, 03 Mar 2005

AFI 90-201, *Inspector General Activities*, 22 Nov 2004

AFI 90-901, *Operational Risk Management*, 01 Apr 2000

AFI 91-101, *Air Force Nuclear Weapons Surety Program*, 19 Dec 2005

AFI 91-103, *Air Force Nuclear Safety Design Certification Program*, 16 Sep 2005

AFI 91-202, *The US Air Force Mishap Prevention Program*, 01 Aug 1998

AFI 99-103, *Capabilities Based Test and Evaluation*, 26 Feb 2008

AFJI 21-301, *Interservicing of Technical Manuals and Related Technology*, 12 May 1989

AFJMAN 23-210, *Joint Service Manual for Storage and Materials Handling*, 12 Apr 1994

AFMAN 23-110, *USAF Supply Manual*, 01 Jul 2008

AFMAN 33-120, *Electromagnetic Spectrum Management*, 19 Sep 2006

AFMAN 33-363, *Management of Records*, 01 Mar 2008

AFMAN 63-119, *Certification of System Readiness for Dedicated Operational Test and Evaluation*, 20 Jun 2008

AFMAN 65-506, *Economic Analysis*, 10 Nov 2004

AFMAN 91-201, *Explosives Safety Standards*, 18 Oct 2001

AFPAM 38-102, *Headquarters United States Air Force Organization and Functions (Chartbook)*, 01 Jan 2004

AFPAM 63-128, *Guide to Acquisition and Sustainment Life Cycle Management*, 05 Oct 2009

AFPAM 63-1701, *Program Protection Planning*, 27 Mar 2003 *(will convert to AFPAM 63-113, Program Protection Planning for Life Cycle Management)*

ANSI/EIA-748, *Earned Value Management System (EVMS) Standard*, 17 Aug 1999

Arms Export Control Act, Title 22, United States Code, §2751, et seq.

CJCSI 3170.01G, *Joint Capabilities Integration and Development System*, 01 Mar 2009

CJCSI 3312.01A, *Joint Military Intelligence Requirements Certification*, 23 Feb 2007

CJCSI 3470.01, *Rapid Validation and Resourcing of Joint Urgent Operational Needs (JUONS) in the Year of Execution*, 15 Jul 2005

CJCSI 6212.01E, *Interoperability and Supportability of Information Technology and National Security Systems*, 15 Dec 2008

The Joint Capabilities Integration and Development System (JCIDS) Manual

Committee on National Security Systems Policy (CNSSP) 11, *National Policy Governing the Acquisition of Information Assurance (IA) and IA Enabled IT Products*, July 2003

CSWS Users Guide Version 4.14, Jun 03

DCMA, *Earned Value Management Implementation Guide*, Oct 2006

Defense Acquisition Guidebook

DFARS, *Defense Federal Acquisition Regulation Supplement (DFARS)*

DIAD 5000.200, *Intelligence Threat Support for Major Defense Acquisition Programs*, 19 Jan 2005

DIAI 5000.002, *Intelligence Threat Support for Major Defense Acquisition Programs*, 30 Mar 2005

DNA-H-93-140, *Military Handbook for Hardness Assurance, Maintenance and Surveillance (HAMS)*, 1 Feb 1995

DOD 4120.24M, *DOD Standardization Program (DSP) Policies and Procedures*, 09 Mar 2000

DOD 4140.1-R, *DOD Supply Chain Materiel Management Regulation*, 23 May 2003

DOD 4160.21-M-1, *Defense Demilitarization Manual*, 01 Oct 1991

DOD 5010.12-M, *Procedures for the Acquisition and Management of Technical Data*, 14 May 1993

DOD 5105.38-M, *Security Assistance Management Manual (SAMM)*, 03 Oct 2003

DOD 5200.1-M, *Acquisition Systems Protection Program*, 01 Oct 1991

DOD 5200.1-R, *Information Security Program*, 14 Jan 1997

DOD 7000.14-R, *Department of Defense Financial Management Regulation (FMR)*, date varies by volume

DOD Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook (Ver. 2.1), 01 Nov 2006

DODD 2040.3, *End Use Certificates (EUCS)*, 14 Nov 1991

DODD 2060.1, *Implementation of, and Compliance With, Arms Control Agreements*, 09 Jan 2001

DODD 3020.49, *Orchestrating, Synchronizing, and Integrating Program Management of Contingency Acquisition Planning and Its Operational Execution*, 24 Mar 2009

DODD 3150.1, *Joint DOD-DOE Nuclear Weapon Life-Cycle Activities*, 26 Aug 2002

DODD 3216.2, *Protection of Human Subjects and Adherence to Ethical Standards in DOD-Supported Research*, 17 Apr 1995

DODD 3222.3, *DOD Electromagnetic Environmental Effects (E3) Program*, 08 Sep 2004

DODD 4140.1, *Supply Chain Materiel Management*, 22 Apr 2004

DODD 4151.18, *Maintenance of Military Materiel*, 31 Mar 2004

DODD 4630.05, *Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*, 05 May 2004

DODD 4650.1, *Policy for Management and Use of the Electromagnetic Spectrum*, 05 Dec 1991

DODD 5000.01, *The Defense Acquisition System*, 12 May 2003

DODD 5000.04, *Cost Analysis Improvement Group (CAIG)*, 16 Aug 2006

DODD 5000.35, *Defense Acquisition Regulations (DAR) Management*, 21 Jul 2004

DODD 5000.52, *Defense Acquisition, Technology, and Logistics Workforce Education, Training, and Career Development Program*, 12 Jan 2005

DODD 5025.12, *Standardization of Military and Associated Terminology*, 30 Jun 2004

DODD 5160.5, *Responsibilities for Research, Development, and Acquisition of Chemical Weapons and Chemical and Biological Defense*, 01 May 1985

DODD 5200.1, *DOD Information Security Program*, 13 Dec 1996

DODD 5250.01, *Management of Signature Support Within the Department of Defense*, 31 Jan 2008

DODD 8100.01, *Global Information Grid (GIG) Overarching Policy*, 19 Sep 2002

DODD 8320.03, *Unique Identification (UID) Standards for a Net-Centric Department of Defense*, 23 Mar 2007

DODD 8500.1E, *Information Assurance (IA)*, 24 Oct 2002

DODI 1100.22, *Guidance for Determining Workforce Mix*, 07 Sep 2006

DODI 2010.4, *U.S. Participation in Certain NATO Groups Relating to Research, Development, Production, and Logistics Support of Military Equipment*, 12 Dec 1967

DODI 2010.06, *Material Interoperability and Standardization with Allies and Coalition Partners*, 29 Jul 2009

DODI 3020.41, *Contractor Personnel Authorized to Accompany the U. S. Armed Forces*, 03 Oct 2005

DODI 3100.8, *The Technical Cooperation Program (TTCP)*, 11 Sep 1973

DODI 4151.19, *Serialized Item Management (SIM) for Materiel Maintenance*, 26 Dec 2006

DODI 4151.20, *Depot Maintenance Core Capabilities Determination Process*, 05 Jan 2007

DODI 4151.21, *Public-Private Partnerships for Depot-Level Maintenance*, 25 Apr 2007

DODI 4151.22, *Condition Based Maintenance Plus (CBM+) for Materiel Maintenance*, 02 Dec 2007

DODI 4630.09, *Wireless Communications Waveform Development and Management*, 03 Nov 2008

DODI 4630.8, *Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)*, 30 Jun 2004

DODI 5000.02, *Operation of the Defense Acquisition System*, 2 Dec 2008

DODI 5000.66, *Operation of the Defense Acquisition, Technology and Logistics Workforce Education, Training, and Career Development Program*, 21 Dec 2005

DODI 5000.67, *Prevention and Mitigation of Corrosion on DOD Military Equipment and Infrastructure*, 25 Jan 2008

DODI 5030.55, *DOD procedures for Joint DOD-DOE Nuclear Weapon Life-Cycle Activities*, 25 Jan 2006

DODI 5200.39, *Critical Program Information (CPI) Protection within the Department of Defense*, 16 Jul 2008

DODI 5240.4, *Reporting of Counterintelligence and Criminal Violations*, 22 Sep 1992

DODI 8115.02, *Information Technology Portfolio Management Implementation*, 30 Oct 2006

DODI 8320.04, *Item Unique Identification (IUID) Standards for Tangible Personal Property*, 16 Jun 2008

DODI 8500.2, *Information Assurance (IA) Implementation*, 06 Feb 2003

DODI 8510.01, *DOD Information Assurance Certification and Accreditation Process (DIACAP)*, 28 Nov 2007

DODI 8580.1, *Information Assurance (IA) in the Defense Acquisition System*, 09 Jul 2004

DOD Guide for Achieving Reliability, Availability, and Maintainability, 3 Aug 2005

DOD IT Defense Business Systems Investment Review Process Guidance, 26 Jan 2009

DOD Technology Readiness Assessment (TRA) Deskbook, Jul 2009

DOD Reliability, Availability, Maintainability, and Cost Rationale Report Manual, 1 Jun 2009

DTM 08-020, *Investment Review Board (IRB) Roles and Responsibilities*, 26 Jan 2009

E.O. 12114, *Environmental Effects Abroad of Major Federal Actions*, 04 Jan 1979

FAR, *Federal Acquisition Regulation*

Guidance for the Use of Robust Engineering in Air Force Acquisition Programs, Guide Final, Jan 2004

HOI 63-1, *Headquarters Air Force Guidance for Preparing Program Management Directives (PMD)*, 20 Nov 2003

Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*12 Apr 2001

Joint Pub 5-00.1, *Joint Doctrine for Campaign Planning*, 25 Jan 2002

Life Cycle Management Plan Guide, 4 Mar 2005 *[delete when superseded by AFPAM 63-128]*

Memorandum of Understanding Between the National Nuclear Security Administration and the Department of the Air Force Regarding Joint Testing and Assessment of the Nuclear Weapons Stockpile, 16 Feb 2001

MIL-HDBK-237D, *Electromagnetic Environmental Effects and Spectrum Certification Guidance for the Acquisition Process*, 20 May 2005

MIL-HDBK-288B, *Review and Acceptance of Engineering Drawing Packages*, 14 Jan 1991

MIL-HDBK-515, *Weapon System Integrity Guide (WSIG)*, 29 Jun 2007

MIL HDBK-881A, *Work Breakdown Structure*, 30 Jul 2005

MIL-HDBK-1783B (2), *Engine Structural Integrity Program (ENSIP)*, 22 Sep 2004

MIL-HDBK-1798A, *Mechanical Equipment and Subsystem Integrity Program*, 15 Apr 2008

MIL-PRF-32216, *Evaluation of Commercial Off-the-Shelf (COTS) Manuals and Preparation of Supplemental Data*, 17 Oct 2006

MIL-PRF-49506, *Logistics Management Information*, 18 Jan 2005

MIL-STD-129P(4), *Military Marking for Shipment and Storage*, 19 Sep 2007

MIL-STD-130N, *Identification Marking of U.S. Military Property*, 17 Dec 2007

MIL-STD-882D, *Standard Practice for System Safety*, 10 Feb 2000

MIL-STD-1530C, *Aircraft Structural Integrity Program (ASIP)*, 01 Nov 2005[1]

MIL-STD-3018, *Parts Management*, 15 Oct 2007

MIL-STD-3024, *Propulsion System Integrity Program*, 15 Apr 2008

MIL-STD-38784, *Standard Practice for Manuals, Technical: General Style and Format Requirements*, 01 Dec 2000

Office of Management and Budget, Circular A-11, *Preparation, Submission and Execution of the Budget*, 29 Oct 1992

Office of Management and Budget, Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, 29 Oct 1992

Office of Management and Budget, Circular A-130 *Management of Federal Information Resources*, 28 Nov 2000

OSD Cost Analysis Improvement Group (CAIG), *Operating and Support Cost-Estimating Guide*, May 1992

OSD(AT&L), IBR Handbook, The Program Manager's Guide to the Integrated Baseline Review Process, Apr 2003

OUSD(AT&L) Systems Engineering Plan (SEP) Preparation Guide, Version 2.01, Apr 08

PL 190-163, Division A, Title III, Subtitle G, Section 372(a)

[1] Converted from MIL-HDBK-1530B (USAF), General Guidelines For Aircraft Structural Integrity Program (ASIP)

Probability of Program Success (PoPs) Operating Guide, Version 9.6, Jul 2007

Risk Management Guide for DOD Acquisition, Aug 2006

SD-2, Buying Commercial and Nondevelopmental Items - A Handbook, Apr 1996

Title 10, United States Code, *Armed Forces*, §139, §2366, §2399, §2400, §2350a(g) [Additional Title 10, United States Code references are provided in Attachment 2]

Title 10, United States Code, Chapter 27, *Defense Acquisition Workforce*

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

Title 10, United States Code, §2451-2457

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

Title 22, United States Code, §2751, et seq.

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

Title 32 Code of Federal Regulation Part 989.3(c)(3) *Environmental Impact Analysis Process*

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

TM 86-01, *Air Force Technical Manual Contract Requirements (TMCT)*

TO 00-5-1, *AF Technical Order System*

TO 00-5-3, *AF Technical Order Life Cycle Management*

TO 00-5-15, *Air Force Time Compliance Technical Order Process*

TO 00-25-107, *Maintenance Assistance*

TO 00-25-108, *Communication-Electronics [C-E] Depot Support*

TO 00-35D-54, *USAF Deficiency Reporting, Investigation, and Resolution*

TO 00-105E-9, *Aerospace Emergency Rescue and Mishap Response Information (Emergency Services)*

Embedded Web Links and E-Mail Addresses

Note: *Some websites and Communities of Practice (CoP) require Air Force Portal sign-on or membership to gain access.*

Acquisition Community Connection, **https://acc.dau.mil**

Air Force EITDR CoP: (**https://wwwd.my.af.mil/afknprod/ASPs/docman/DOCMain.asp?Tab=0&FolderID=OO-TR-MC-16&Filter=OO-TR-MC-16**

Air Force e-Publishing website: **http://www.e-publishing.af.mil**/.

Air Force Privacy Office e-mail: **af.foiapa@pentagon.af.mil**

Air Force Program Manager's Guide for Developing, Processing, and Approving ISPs: **https://afkm.wpafb.af.mil/ASPs/CoP/OpenCoP.asp?Filter=OO-AQ-AF-18**

Air Force Records Disposition Schedule (RDS): **https://www.my.af.mil/gcss-af61a/afrims/afrims/rims.cfm**.

AF EVM IPT CoP website: **https://afkm.wpafb.af.mil/ASPs/CoP/ClosedCoP.asp?Filter=OO-FM-IP-EV**

AFFARS Part 5325: **http://farsite.hill.af.mil/VFAFFARA.HTM**

AF Information Support Plan Community of Practice: **https://wwwd.my.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-AQ-AF-18**

AF IPv6 Transition Site: (**https://www.my.af.mil/afknprod/ASPs/CoP/EntryCoP.asp?Filter=OO-SC-CA-04)AF** IT Investment Review Guide: **https://wwwd.my.af.mil/afknprod/ASPs/docman/DOCMain.asp?Tab=0&FolderID=OO-SC-AF-27-36-3-6-1-1&Filter=OO-SC-AF-27**

AFPEO/CM website: **https://www.my.af.mil/gcss-af/afp40/USAF/ep/globalTab.do?command=function&pageId=681742&channelPageId=-1968762&parentCategoryId=-1968762**

Anti-Tamper OPR: e-mail to: **USAFATServiceLead@pentagon.af.mil**

Business Transformation Agency website: **http://www.defenselink.mil/bta/products/bea.html**

Career/APDP Section of the AF Portal: **https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?channelPageId=-2061051&command=function&parentCategoryId=-2061051**

CIPS CoP: **https://afkm.wpafb.af.mil/ASPs/CoP/OpenCoP.asp?Filter=AN-SC-00-11**

Cost Realism and Uncertainty: **https://www.my.af.mil/gcss-af/USAF/ep/browse.do?programId=t6925EC2EA8DC0FB5E044080020E329A9&channelPageId=s6925EC13537B0FB5E044080020E329A9** .

CSWS Community of Practice website: **https://wwwd.my.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-LG-AF-22**

Defense Acquisition Guidebook: **https://akss.dau.mil/dag/DoD5000.asp?view=document**

Defense Logistics Information Service Commercial and Government Entity (CAGE) Code (**http://www.dlis.dla.mil/cage_welcome.asp**).

DFARS Part 225: **http://www.acq.osd.mil/dpap/dars/dfars/html/current/225_0.htm**

DISR website at **https://disronline.disa.mil**

DOD Anti-Tamper website: **http://at.dod.mil**/

DOD ATS Executive Directorate: **http://www.acq.osd.mil/ats**

DOD Corrosion and Prevention Guidebook (Home - CorrDefense): **http://www.corrdefense.org**/

DOD Diminishing Manufacturing Sources and Material Shortages (DMSMS) Guidebook: **http://www.dmsms.org**/

DOD Financial Management Regulation (FMR) Volume 4, Chapter 6: **http://www.defenselink.mil/comptroller/fmr/04/04_06.pdf**

DOD FMR Volume 4: **http://www.dod.mil/comptroller/fmr/04/index.html**

DOD Guide to Uniquely Identifying Items:
http://www.acq.osd.mil/dpap/UID/attachments/DoDUIDGuide.pdf

DOD Information Technology Standards Registry (DISR) on-line website:
(**https://disronline.disa.mil/a/DISR/DISR_dev_ipv6.jsp**)

DoD IT Defense Business Systems Investment Review Process Guidance:
http://www.bta.mil/products/bea/html_files/irb.html

DOD Item Unique Identification of Government Property Guidebook:
http://www.acq.osd.mil/dpap/pdi/uid/guides.html

DSOR Electronic Manager (DSOR-EM):
https://afkm.wpafb.af.mil/ASPs/cop/opencop.asp?filter=OO-LG-MC-10

Earned Value Management Implementation Guide: **http://www.acq.osd.mil/pm**/

HOI 63-1, *HQ AF Guidance for Preparing Program Management Directives:*
https://www.my.af.mil/gcss-af/USAF/AFP40/Attachment/20070206/HOI63-1_PublishedVersion_20Nov03.pdf

Information Support Plan Policy CoP:
https://wwwd.my.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-AQ-AF-18

IT Lean Guidebook:
https://wwwd.my.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-SC-AF-47

JCIDS Manual: **https://www.intelink.gov/wiki/JCIDS_Manual**

JCTD webpage: **http://www.acq.osd.mil/jctd/index.htm**

LCMP Community of Practice (CoP):
https://wwwd.my.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-AQ-AF-51

Military Engineering Data Asset Locator System (MEDALS), **https://www.dlis.dla.mil/medals**/

Office of Management and Budget Circular A-11, Part 7:
http://www.whitehouse.gov/omb/circulars/a11/current_year/part7.pdf

OSD's military equipment website: **http://www.acq.osd.mil/me**/

Public Law 107-314, Section 803: **http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=107_cong_public_laws&docid=f:publ314.107.pdf**

SAF/FM New Start Homepage (on AF Portal): **https://www.my.af.mil/gcss-af/afp40/USAF/ep/browse.do?programId=407864&pageId=1073762823&channelPageId=-351617&parentCategoryId=-351659**

Risk Management Guide for DOD Acquisition. :
http://www.acq.osd.mil/sse/docs/2006RMGuide4Aug06finalversion.pdf

Wide Area Workflow (WAWF) process: **https://wawf.eb.mil**/

Abbreviations and Acronyms

A&AS—Advisory and Assistance Services

AAIP—Aircraft Availability Improvement Program

ACAT—Acquisition Category

ACE—Acquisition Center of Excellence

ACPAT— Air Force C4I Program Assessment Tool

ACPINS—Automated Computer Program Identification Number System

ACPO—Acquisition Chief Process Office

ACTD—Advanced Concept Technology Demonstration

ADM—Acquisition Decision Memorandum

AEF—Air and Space Expeditionary Force

AEP—Accrued Expenditures Paid

AETC—Air Education and Training Command

AEU—Accrued Expenditures Unpaid

AF—(U.S.) Air Force

AF/A2—Deputy Chief of Staff, Intelligence

AF/A3/5—Deputy Chief of Staff, Operations, Plans and Requirements

AF/A4/7—Deputy Chief of Staff, Logistics, Installations, and Mission Support

AF/A6—Chief of Warfighting Integration and Chief Information Officer (CIO) (also identified as SAF/XC)

AF/A8—HQ AF, Strategic Plans and Programs

AF/TE—Directorate of Air Force Test and Evaluation

AFCAP— Air Force Certification and Accreditation Program

AFCESA—Air Force Civil Engineer Support Agency

AFDD—Air Force Doctrine Document

AFDPO—Air Force Departmental Publishing Office

AF—EA—Air Force Enterprise Architecture

AFEE—Air Force Element of Expense

AFFARS—Air Force Federal Acquisition Regulation Supplement

AFFMA—Air Force Frequency Management Agency

AF GCIC—Air Force Global Cyberspace Integration Center

AFGLSC— Air Force Global Logistics Support Center

AFI—Air Force Instruction

AFIT—Air Force Institute of Technology

AFKN—Air Force Knowledge Now

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFMETCAL—Air Force Metrology and Calibration

AFMSRR—Air Force Modeling and Simulation Resource Repository

AFNIC—Air Force Network Integration Center

AFNWC— Air Force Nuclear Weapons Center

AFOSH—Air Force Office of Safety and Health

AFOSI—Air Force Office of Special Investigations

AFOTEC—Air Force Operational Test and Evaluation Center

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFPEO/CM—Air Force Program Executive Officer/Combat and Mission Support

AFRB—Air Force Review Board

AFRC—Air Force Reserve Command

AFRL—Air Force Research Laboratory

AFROC—Air Force Requirements Oversight Council

AFSC—Air Force Specialty Code

AFSPC—Air Force Space Command

AGR—Active Guard and Reserve

AIS—Automated Information Systems

AIT—Automatic Identification Technology

ALC—Air Logistics Center

AMARG—Aerospace Maintenance and Regeneration Group

ANG—Air National Guard

AoA—Analysis of Alternatives

APB—Acquisition Program Baseline

APDP—Acquisition Professional Development Program

APML—Acquisition Program Master List

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

ASD—Acquisition Strategy Development

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

ASIP—Aircraft Structural Integrity Program

ASP—Acquisition Strategy Panel

AS Tool Kit—Acquisition and Sustainment Tool Kit

AT—Anti-Tampering

AT&L—Acquisition, Technology and Logistics

ATCALS— Air Traffic Control and Landing Systems

ATD—Advanced Technology Demonstration (or Development)

ATE—Automatic Test Equipment

ATO—Authorization to Operate

ATS—Automatic Test System

AVIP— Aviation Integrity Program

AVPOL—Aviation Petroleum, Oil, and Lubricants

BAA—Buy American Act

BCA—Business Case Analysis

BCL—Business Capability Lifecycle

BCS—Baseline Comparison System

BEA—Business Enterprise Architecture

BES—Budget Estimate Submission

BOS—Base Operating Support

C&A—Certification and Accreditation

C4I—Command, Control, Communications, Computers, and Intelligence

C4ISR—Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance

CA—Deputy for Acquisition

CAD—Computer Aided Design

CAE—Component Acquisition Executive

CAFTOP—Comprehensive Air Force Technical Order Plan

CAIG—Cost Analysis Improvement Group

CAM—Centralized Asset Management

CAP—Critical Acquisition Position

CARD—Cost Analysis Requirements Description

CBDP—Chemical Biological Defense Program

CBM+—Condition Based Maintenance Plus

CBP—Capability Based Planning

CBRN—Chemical, Biological, Radiological, and Nuclear

CC—Commander

CCA—Clinger-Cohen Act

CCCA—Common Core Compliance Area

CCD—Combat Capability Document

CCP—Command Control Points

CD—Capability Director

CDD—Capability Development Document

CDR—Critical Design Review

CDRL—Contract Data Requirements List

CFO—Chief Financial Officer

CFP—Capabilities Focused Planning

CI—Counterintelligence

CIO—Chief Information Officer

CIR—Capital Investment Report

CIPS—Cyberspace Infrastructure Planning System

CISP—Counterintelligence Support Plan

CITE—Center(s) of Industrial and Technical Excellence

CJCSI—Chairman of the Joint Chiefs of Staff Instruction

CJCSM—Chairman of the Joint Chiefs of Staff Manual

CL—Continuous Learning

CLIN—Contract Line Item Number

CLS—Contractor Logistics Support

CM—Configuration Management

COA—Course of Action

COLISEUM—Community On-Line Intelligence System for End Users and Managers

CoN—Certificate of Networthiness

CONOPS—Concept of Operations

CoP—Community of Practice

COTS—Commercial Off-The-Shelf

CPARS— Contractor Performance Assessment Reporting System

CPD—Capability Production Document

CPI—Critical Program Information

CPI—Crash Position Indicator

CR—Change Request

CRDA—Cooperative Research and Development Agreement

CR6+— Hexavalent Chromium

CRRA—Capabilities Review and Risk Assessment

CS—Contractor Support

CSAF—Chief of Staff of the Air Force

CSAG—Consolidated Sustainment Activity Group

CSB—Configuration Steering Board

CSCI—Computer Software Configuration Items

CSE—Center for Systems Engineering

CSI—Critical Safety Item

CSO—Commodity Strategy Official

CSR— Critical System Resources

CSS—Contract Sustainment Support

CSWS—Contractor Supported Weapon System

CT—Critical Technology

CTE—Critical Technology Element

CTIC—Contractor Technical Information Code

CtO—Certificate to Operate

CTOM—Centralized Technical Order Management

CUI—Controlled Unclassified Information

CUMI—Controlled Unclassified Military Information

CV—Vice Commander

D,ARA— Director, Acquisition Resources and Analysis

D,CAPE— Director, Cost Assessment and Program Evaluation

D&F—Determination and Findings

DAA—Designated Accrediting Authority

DAB—Defense Acquisition Board

DACM—Director, Acquisition Career Management

DAE—Defense Acquisition Executive

DAES—Defense Acquisition Executive Summary

DAF—Department of the Air Force

DAO—Designated Acquisition Officials

DAG—Defense Acquisition Guidebook

DARPA—Defense Advanced Research Projects Agency

DATO—Denial of Authorization to Operate

DAU—Defense Acquisition University

DAWIA—Defense Acquisition Workforce Improvement Act

DBSMC—Defense Business Systems Management Committee

DCMA—Defense Contract Management Agency

DCS—Deputy Chief of Staff

DDT&E— Director, Developmental Test and Evaluation

DFARS—Defense Federal Acquisition Regulation Supplement

DIA—Defense Intelligence Agency

DIACAP—DOD Information Assurance Certification and Accreditation Process

DID—Data Item Description

DIP—DIACAP Implementation Plan

DISR—DOD (Department of Defense) Information Technology Standards Registry

DITSCAP—DOD (Department of Defense) Information Technology Security Certification and Accreditation Program

DLA—Defense Logistics Agency

DLR—Depot-Level Repairable

DMI—Depot Maintenance Interservice

DMSMS—Diminishing Manufacturing Sources/Material Shortages

DNAD—Domestic Non-Availability Determination

DOD—Department of Defense

DODD—Department of Defense Directive

DODI—Department of Defense Instruction

DODIPP—Department of Defense Intelligence Production Program

DODISS—Department of Defense Index of Specifications and Standards

DOT&E—Director, Operational Test and Evaluation

DOTMLPF—Doctrine, Organization, Training, Material, Leadership and Education, Personnel, and Facilities

DP—Development Planning

DPAP—Director of Procurement and Acquisition Policy

DPEM—Depot Purchased Equipment Maintenance

DRMO—Defense Reutilization Marketing Office

DRR—Design Readiness Review

DRU—Direct Reporting Unit

DS&TI—Designated Science and Technology Information

DSA—Direct Sales Agreement

DSM—Development System Manager

DSOR—Depot Source of Repair

DSOR—EM—Depot Source of Repair Electronic Manager

DT&E—Developmental Test and Evaluation

DTD—Data Type Definition

DUSD—Deputy Under Secretary of Defense

E3—Electromagnetic Environmental Effects

E-Tools—Electronic Tools

EA—Evolutionary Acquisition

EA—Executing Authority

ECSS—Expeditionary Combat Support System

EDGC—Engineering Data Guidance Conference

EDSC—Engineering Data Service Center

EEIC—Element of Expense Investment Code

EIAP—Environment Impact Analysis Process

EIEMA—Enterprise Information Environment Mission Area

EITDR—Enterprise Information Technology Data Repository

ELT—Emergency Locator Transmitter

EMA—Expectations Management Agreement

EMC—Electromagnetic Compatibility

EMD—Engineering and Manufacturing Development

ENSIP—Engine Structural Integrity Program

EOA—Early Operational Assessment

EOD—Explosive Ordnance Disposal

ESC—Electromagnetic Spectrum Certification

ESOH—Environment, Safety and Occupational Health

ETIMS—Enhanced Technical Information Management System

ETM—Electronic Technical Manual

EUC—End Use Certificate

EVM—Earned Value Management

EVMS—Earned Value Management System

F3I—Form, Fit, Function, or Interface

FAA—Federal Aviation Administration

FAA—Functional Area Analysis

FAR—Federal Acquisition Regulation

FAT—First Article Testing

FCB—Functional Capabilities Board

FCT—Foreign Competitive Testing

FDE—Force Development Evaluation

FDO—Fee Determining Official

FDB—Final Evaluation and Decision Brief

FDDR—Full Deployment Decision Review

FDR—Final (or Formal) Design Review

FH—Flying Hours

FISMA—Federal Information Security Management Act of 2002

FM—Financial Management

FM—Functional Manager (Workforce)

FMM—Flight Manual Manager

FMP—Flight Manuals Program

FMS—Foreign Military Sales

FNA—Functional Needs Analysis

FOA—Field Operating Agency

FOC—Full Operational Capability

FOIA—Freedom of Information Act

FoS—Family of Systems

FOT&E—Follow-on Operational Test and Evaluation

FOUO—For Official Use Only

FPDS—NG—Federal Procurement data System-Next Generation

FPR—Final Pricing Report

FPR—Final Proposal Revision

FRP—Full Rate Production

FRRB—Functional Requirements Review Board

FSA—Functional Solution Analysis

FSC—Federal Supply Classification

FTE—Full Time Equivalent

FY—Fiscal Year

FYDP—Future Years Defense Program

G&A—General and Administrative (Expense)

GCIC— Global Cyberspace Integration Center

GCSS—AF—Global Combat Support System – Air Force

GFE—Government Furnished Equipment

GFI—Government Furnished Information

GFP—Government Furnished Property

GIG—Global Information Grid

GLSC—Global Logistics Support Center

GO—General Officer

GOTS—Government Off-the-Shelf

GPLR—Government Purpose License Rights

GS—General Schedule

HAF—Headquarters Air Force

HAMS—Hardness Assurance, Maintenance, and Surveillance

HCA—Head of Contracting Activity (or Agency)

HCSP—Human Capital Strategic Plan

HPT—High Performance Team

HQ—Headquarters

HSI—Human Systems Integration

CRRA—Integrated Capabilities Review and Risk Assessment

IA—Information Assurance

IATO—Interim Authorization to Operate

IATT—Interim Authorization to Test

IAW—In Accordance With

IBR—Integrated Baseline Review

ICD—Initial Capabilities Document

ICS—Interim Contractor Support

IDL—Indentured Data List

IEB—Initial Evaluation Briefing

IETM—Interactive Electronic Technical Manual

IFM—Intelligence in Force Modernization

ILCM—Integrated Life Cycle Management

ILS—Integrated Logistics Support

IM—Insensitive Munitions

IMET—International Military Education and Training

IMP—Integrated Master Plan

IMS—Integrated Master Schedule

IMT—Information Management Tool

IO—Information Operations

IOC—Initial Operational Capability

IOT&E—Initial Operational Test and Evaluation

IPR—In-Process Review

IPSS—Initial Provisioning Performance Specifications

IPT—Integrated Product Teams

IRB—Investment Review Board

ISA—International Standardization Agreement

ISO—International Standards Organization

ISP—Information Support Plan

ISP—Integrated Support Plan

ISP—Intelligence Support Plan

ISR—Intelligence, Surveillance, and Reconnaissance

ISWG—Intelligence Support Working Group

IT—Information Technology

IT Lean—Information Technology Lean

ITA—Interface Test Adapter

ITAB—Information Technology Acquisition Board

ITC—Integrated Test Concept

TRM—Infostructure Technology Reference Model

ITT—Integrated Test Team

IUID—Item Unique Identification

J&A—Justification and Approval

JCALS—Joint Computer-Aided Acquisition and Logistic Support

JCIDS—Joint Capability Integration and Development System

JCPAT—E—Joint C4I Program Assessment Tool Empowered

JCTD—Joint Capability Technology Demonstration

JDMAG—Joint Depot Maintenance Activities Group

JEDMICS—Joint Engineering Data Management Information and Combat System

JP—Joint Publication

JPD—Joint Potential Designator

JRAC—Joint Rapid Acquisition Cell

JRMET—Joint Reliability and Maintainability Evaluation Team

JROC—Joint Requirements Oversight Council

JS—Joint Staff

JTRS—Joint Tactical Radio System

JUON—Joint Urgent Operational Need

KLP—Key Leadership Position

KN—Knowledge Now

KPP—Key Performance Parameter

KSA—Key System Attributes

LCC—Life Cycle Cost

LCCE—Life Cycle Cost Estimate

LCMP—Life Cycle Management Plan

LFT&E—Live Fire Test and Evaluation

LOA—Letter of Offer and Acceptance

LRIP—Low Rate Initial Production

LRT—Logistics Response Time

LSI—Lead Systems Integrator

LSI—Large Scale Integration

M&S—Modeling and Simulation

MAIS—Major Automated Information System

MAC—Mission Assurance Category

MAJCOM—Major Command

MAR—Monthly Acquisition Report

MDA—Milestone Decision Authority

MDAP—Major Defense Acquisition Program

MDD—Materiel Development Decision

MDS—Mission Design Series

MDT—Mean Down Time

MECSIP—Mechanical Subsystems Integrity Plan

MEDALS—Military Engineering Data Asset Locator System

MEFL—Mission Essential Functions List

MER—Manpower Estimate Report

ME/SE—Maintenance Engineering/Sustaining Engineering

MESL—Minimum Essential Subsystems List

MEV—Military Equipment Valuation

MFOQA—Military Flight Operations Quality Assurance

MFP—Materiel Fielding Plan

MFP—Major Force Program

MFT—Multi-Functional Team

MIL—DTL—Military Detail (Specification)

MIL—PRF—Military Performance (Specification)

MIL—STD—Military Standard

MIPR—Military Interdepartmental Purchase Request

MNS—Mission Needs Statement[2]

MOA—Memorandum of Agreement

MOASP—Air Force Management and Oversight of Acquisition Services Process

MOSA—Modular Open Systems Approach

[2] Obsolete. Use ICD – Initial Capabilities Document

MP—Mission Profile

MPS—Master Program Schedule

MPTO—Methods and Procedures Technical Order

MRA—Manufacturing Readiness Assessment

MRL—Manufacturing Readiness Level

MRRB—Maintenance Requirement Review Board

MS—Milestone

MUA—Military Utility Assessment

NBC—Nuclear, Biological, and Chemical

NCOW—RM—Net-Centric Operations and Warfare Reference Model

NDAA—National Defense Authorization Act

NDI—Non-Developmental Item

NEPA—National Environmental Policy Act

NGA—National Geospatial-Intelligence Agency

NGS—Non-Government Standard (commercial)

NR—KPP—Net Ready Key-Performance Parameter

NSN—National Stock Number

NSPS—National Security Personnel System

NSS—National Security System

O&M—Operation and Maintenance

O&S—Operation and Support

OA—Operational Assessment

OASD/NII—Office Assistant Secretary of Defense/Network and Information Integration

OCC—Occupational Specialty Code

OCR—Office of Collateral Responsibility

OCR—Operational Capability Requirement

OE—Operational Effectiveness

OFP—Operational Flight Program

OIPT—Overarching Integrated Product Team

OMB—Office of Management and Budget

OMS—Operational Mission Summary

OND—Operational Need Date

OPLAN—Operations Plan

OPORD—Operations Order

OPR—Office of Primary Responsibility

OPTEMPO—Operational Tempo

ORD—Operational Requirements Document[3]

ORM—Operational Risk Management

OS—Operational Suitability

OSD—Office of the Secretary of Defense

OSS&E—Operational Safety, Suitability, and Effectiveness

OT&E—Operational Test and Evaluation

OTA—Operational Test Agency

OTD—Open Technology Development

OUSD—Office of the Under Secretary of Defense

OV—Operational View

OWLP—Overseas Workload Program

PA—Partnering Arrangement

PA—Preparing Activity / Preparing Authority

PAR—Proposal Analysis Report

PB—President's Budget

PBA—Performance Based Acquisition

PBA—Performance Based Agreements

PBL—Performance-Based Logistics

PCC—Program Control Chief

PCO—Procuring Contracting Officer

PDM—Program Decision Memorandum

PE—Program Element

PEM—Program Element Monitor

PEO—Program Executive Officer

PESHE—Programmatic Environment, Safety, and Occupational Health Evaluation

PGM—Product Group Manager

PHS&T—Packaging, Handling, Storage, and Transportation

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[3] Obsolete. Use CDD (Capability Development Document) and CPD (Capability Production Document).

PIA— Privacy Impact Assessment

PII—Personally Identifiable Information

PIR—Post-Implementation Review

PL—Public Law

PLMS—Product Lifecycle Management System

PM—Program Manager

PMA—Program Management Agreement

PMB—Performance Measurement Baseline

PMD—Program Management Directive

PML—Program Management Listing

PM/MFT—Program Management or Multi-Functional Team

PMT—Program Manager's Tool

PO—Program Office

POA&M—Plan of Actions and Milestones

POC—Point of Contact

POM—Program Objectives Memorandum

POMx—Point of Maintenance

PoPS—Probability of Program Success

POS—Pre-Operational Support

PPBE—Planning, Programming, Budgeting, and Execution

PPP—Program Protection Plan

PPP—Public-Private Partnership

PPR—Post-Publication Review

PSIP—Propulsion Systems Integrity Program

PSMP—Product Support Management Plan

PSN—Publication Stock Number

PSR—Program Support Review

PTO—Preliminary Technical Order

PWS—Performance Work Statement

R&D—Research and Development

R&M—Reliability and Maintainability

RAMPOD—Reliability, Availability, Maintainability for Pods and Integrated Systems

RAMS— Reliability, Availability, Maintainability and Supportability

RC—Recommended Changes

RCM—Reliability Centered Maintenance

RDS—Records Disposition Schedule

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

REMIS—Reliability and Maintainability Information System

RF—Radio Frequency

RFID—Radio Frequency Identification

RFP—Request for Proposal

RMP—Risk Management Plan

RSR—Requirement Strategy Review

RTO—Responsible Test Organization

R-TOC—Reduction of Total Ownership Cost

S&T—Science and Technology

SA—Security Assistance

SA—System Administrator

SAE—Service Acquisition Executive

SAF—Secretary of the Air Force

SAF/AQ—Assistant Secretary of the Air Force (Acquisition)

SAF/FM—Assistant Secretary of the Air Force (Financial Management)

SAF/GC—General Counsel of the Air Force

SAF/IE—Assistant Secretary of the Air Force (Installations, Environment, and Logistics)

SAF/IG—Inspector General of the Air Force

SAF/LL—Assistant Secretary of the Air Force (Legislative Affairs)

SAF/US—Under Secretary of the Air Force

SAF/XC—Secretary of the Air Force Directorate (Warfighting Integration and Chief Information Officer)

SAP—Security Assistance Program

SAP—Special Access Program

SBIR—Small Business Innovation Research

SCM—Supply Chain Manager

SCO—Senior Contracting Official

SDD—System Development and Demonstration

SDO—Services Designated Official

SE—Support Equipment

SE—Systems Engineering

SE/ATS—Support Equipment/Automatic Test System

SECAF—Secretary of the Air Force

SECDEF—Secretary of Defense

SEP—Systems Engineering Plan

SERD—Support Equipment Recommendation Data

SES—Senior Executive Service

SIAO—Senior Information Assurance Official

SIM—Serialized Item Management

SIO—Senior Intelligence Officer

SIP—System Identification Profile

SISSU—Security, Interoperability, Supportability, Sustainability, and Usability

SLIN—Sub-Line Item Number

SM—Service Manager

SMART—System Metric and Reporting Tool

SOCOM—Special Operations Command

SOR—Source of Repair

SORAP—Source of Repair Assignment Process

SORN—System of Record Notice

SoS—System of Systems

SOW—Statement of Work

SPM—System Program Manager

SPML—Sustainment Program Master List

SPT—Systems Planning Team

SRD—Software (or Systems) Requirements Document

SSA—Source Selection Authority

SSD—Source Selection Decision

SSDD—Source Selection Decision Document

SSE—Systems Security Engineering

SSET—Source Selection Evaluation Team

SSM—System Sustainment Manager

SSN—Social Security Number

SSOR—Strategic Source of Repair

SSWG—Systems Security Working Group

STA—System Threat Assessment

STEP—Standard for Exchange of Product

STINFO—Scientific and Technical Information

STP—System Training Plan

STT—Strategy-To-Task

SV—Systems View

T&E—Test and Evaluation

TCT—Total Contract Training

TCTO—Time Compliance Technical Order

TD—Technology Director

TDP—Technical Data Package

TDS—Technology Development Strategy

TEMP—Test and Evaluation Master Plan

TM—Technical Manual

TMCR—Technical Manual Contract Requirement

TMDE—-Test Measurement Diagnostic Equipment

TMSS—Technical Manual Specifications and Standards

TNMCM—Total Not Mission Capable - Maintenance

TNMCS— Total Not Mission Capable - Supply

TO—Technical Order

TOAC—Technical Order Advisory Council

TOC—Total Ownership Cost

TODO—Technical Order Distribution Office

TPS—Test Program Set

TPT—Training Planning Team

TPWG—Test Planning Working Group[4]

TRA—Technology Readiness Assessment

[4] Discontinued

TRL—Technology Readiness Level

TS—PGM—Training System Product Group Manager

TSP—Transfer Support Plan

TTCP—The Technology Cooperation Program

TTP—Technology Transition Plan

TV—Technical View

UID—Unique Identification

UIF—Unfavorable Information File

UII—Unique Item Identifier

ULB—Underwater Locator Beacon

ULO—Unliquidated Obligation

UON—Urgent Operational Need

URL—Uniform Resource Locator

U.S.—United States

USAF—United States Air Force

USC—United States Code

USD(AT&L)—Under Secretary of Defense (Acquisition, Technology and Logistics)

V&V—Verification and Validation

VE—Value Engineering

VECP—Value Engineering Change Proposal

VEP—Value Engineering Proposal

VPV—Virtual Prime Vendor

VSP—Verification Status Page

WAWF—Wide Area Workflow

WBS—Work Breakdown Structure

WCF—Working Capital Fund

WMA—Warfighting Mission Area

WRAP—Warfighter Rapid Acquisition Process

WSI—Weapon System Integration

WSI—Weapon System Integrity

WSIG—Weapon System Integrity Guide

WSIP—Weapon System Integrity Program

WSSP—Weapons System Support Program

Terms

Acquisition—The conceptualization, initiation, design, development, testing, contracting, production, deployment, and disposal of a directed and funded effort that provides a new, improved, or continued materiel, weapon, information system, logistics support, or service capability in response to an approved need.

Acquisition Center of Excellence (ACE)—A structure to provide direct program acquisition planning and execution (pre- and post-award) support to acquisition leadership and program teams. ACEs exist at SAF and field centers levels. Center ACEs focus on the "nuts and bolts" aspects of the program and documentation. The SAF-level ACE function is performed by AF PM&AE and builds on Center ACE work by adding its expertise and the perspective of the SAE, HAF functional staffs, OSD staffs, and Congress. Center ACEs focus on all programs; the SAF ACE focus is primarily on ACAT I, ACAT IA and non-delegated ACAT II programs.

Capability—The ability to achieve a desired effect under specified standards and conditions through combinations of ways and means to perform a set of tasks. It is defined by an operational user and expressed in broad operational terms in the format of a Joint or Initial Capabilities Document (ICD) or a joint Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, and Facilities (DOTMLPF) change recommendation. In the case of materiel proposals, the definition will progressively evolve to DOTMLPF performance attributes identified in the Capability Development Document (CDD) and the Capability Production Document (CPD).

Capability Directorates—Directorates under SAF/AQ responsible for policy, direction, resource allocation, and oversight of programs within their mission area as assigned by SAF/AQ. They facilitate the interaction between the SAE and the PEO/DAO and function as program focal point and conduits for interfaces with Congress, OSD, JCS, other services Air Staff, MAJCOMs, and foreign governments or international organizations. CDs provide acquisition inputs to Programming, Planning, and Budgeting Execution (PPBE) and are responsible for developing the program budget.

Center Intelligence Office—The singular focal point at each product or logistics center specifically dedicated to supporting research, development, test, evaluation and sustainment activities with analytical services and intelligence products and information.

Component Acquisition Executive (CAE)—Term used by the DOD for Service Acquisition Executive (SAE). The preferred Air Force term for this person is the Service Acquisition Executive. See Service Acquisition Executive (SAE).

Concept of Operations (CONOPS)—States broad mission areas in which the system will be expected to perform. It describes the using command's approach to the deployment, employment, and operation of a new or upgraded system or capability being advocated to meet identified tasks or missions. It need not be exclusive to a single system, command, or service, but it can rely on other systems and organizations as required.

Contract Support (CS)—A generic term for the support of a system, subsystem, training system, equipment, or end item provided by a commercial vendor pending transition to, or in lieu of, organic support.

Contract Sustainment Support (CSS)—A planned contractor support method used to provide all or part of the logistics support elements for a system, subsystem, training system, equipment, or end item for extended periods of time or for the life cycle.

Contractor Logistics Support (CLS)—A method of contract support for a program, system, subsystem, training system, equipment, or end item used to provide all or part of the sustainment elements in direct support of the approved sustainment strategy. It may include work managed and/or accomplished by the Government but for which the contracted communities are responsible for performance output.

Controlled Unclassified Information (CUI)—Unclassified information, including technical data, to which access or distribution limitations have been applied in accordance with United States laws, policies, and regulations. Examples include Unclassified Scientific and Technical Information (STINFO), Unclassified Export Controlled Information, Unclassified Proprietary (Intellectual Property), Information exempted from public release by Freedom of Information Act (FOIA) (For Official Use Only (FOUO)), Competition Sensitive, Source Selection Information, and Controlled Unclassified Military Information (CUMI).

Core Capability—Skills and resources maintained within organic repair depots to meet contingency requirements. Core comprises a minimum level of mission-essential capability either under the control of the individual DOD component or a consolidated capability under the control of a jointly determined DOD component where economic and/or strategic considerations warrant.

Course of Action (COA)—A planning and decision process that culminates in a MAJCOM decision.

Critical Program Information (CPI)—Program information, technologies, or systems which, if disclosed or compromised, would degrade combat effectiveness, shorten the expected combat effective life of the system, significantly alter technological capabilities or program direction, or require additional research, development, test, and evaluation (RDT&E) resources to counter the impact of the compromise. CPI can be classified information or controlled unclassified information (CUI) about technologies, processes, applications, or end items. CPI includes but is not limited to: system capabilities and vulnerabilities, CPI inherited from another programs and CPI identified in pre-acquisition activities or as a result if non-traditional acquisition techniques (e.g. Joint Concept Technology Development, flexible technology insertion); components, formulas, algorithms, ranges, frequencies, specialized hardware/software, programs, engineering, design, or unique manufacturing processes; system capabilities or vulnerabilities; and other information. CPI includes combinations of technologies, subsystems, and systems that individually may not be considered CPI.

Critical Technology Elements (CTE)—A technology element is “critical” if the system being acquired depends on this technology element to meet operational requirements (with acceptable development, cost, and schedule and with acceptable production and operation costs) and if the technology element or its application is either new or novel. Said another way, an element that is new or novel or is being used in a new or novel way is critical if it is necessary to achieve the successful development of a system, its acquisition, or its operational utility.

Depot Maintenance—Material and/or software maintenance or repair requiring the overhaul, upgrade or rebuild of parts, assemblies, subassemblies or software programs, regardless of

source of funds, location, or if accomplished organically or commercially. The term does not include procurement of modifications for performance improvement. It does include testing, installation of parts for modifications, and reclamation of materiel. Reference Title 10, USC, Section 2460.

Depot Maintenance Capability—The aggregation of all resources required to perform depot maintenance. These resources include facilities, skilled personnel, tools, test equipment, drawings, technical publications, ongoing training, maintenance personnel, engineering support, and spare parts.

Depot Maintenance Interservice (DMI)—The review/study process used for assignment of the final Depot Source of Repair (DSOR) for depot level maintenance. This process is intended to identify existing depot repair sources for new acquisitions programs and thereby preclude inadvertently duplicating depot maintenance workload assignments. The process also identifies opportunities for joint contracting for further cost savings and will identify alternate sources of repair for existing depot programs planned for relocation.

Depot Source of Repair (DSOR)—Combination of a two-part process (source of repair assignment process (SORAP) and the depot maintenance interservice (DMI) recommendation) that results in a final assignment of a coordinated, joint service recommendation for assignment of the depot repair source to a specific organic depot maintenance activity or to the commercial sector. The first part is done within the Air Force to determine whether to use organic or contract repair source. The second part is done within the Joint Service community to determine which specific DOD organic repair source or commercial sector will be used. It is designed to ensure compliance with all applicable factors, including public law, which merit consideration in achieving best value depot maintenance source of repair (SOR).

Designated Acquisition Official (DAO)—The individual dedicated to executive management at Air Logistics Centers of delegated ACAT II or ACAT III programs expending investment dollars. The DAO shall be chartered by and is accountable to the SAE.

Development System Manager (DSM)—The individual with functional responsibility for the development portion of a system's life cycle and in support of a PM.

Direct Sale Agreement (DSA)—When an AF program office receives funding from the customer and passes it directly to a vendor who subcontracts the workload and provides funds to the depot performing the workload.

Electromagnetic Compatibility (EMC)—The ability of systems, equipment, and devices which utilize the electromagnetic spectrum to operate in their intended operational environments without suffering unacceptable degradation or causing unintentional degradation because of electromagnetic radiation. It involves the application of sound electromagnetic spectrum management; system, equipment, and device design configuration that ensures interference-free operation; and clear concepts and doctrines that maximize operational effectiveness.

End Item—Final combination of assemblies, components, parts, and materiel that performs a complete operational function and needs no further augmentation to make it ready for its intended use.

Energetics (Energetic Materials)—Chemical compounds, or mixtures of chemical compounds, that are divided into three groups according to use: explosives, propellants, and pyrotechnics.

Energetic materials are sensitive to four external energy sources; these are impact, shock, electrostatic, and thermal.

Enterprise Architecture—A strategic information asset base, which defines the mission, the information necessary to perform the mission, the technologies necessary to perform the mission, and the transitional processes for implementing new technologies in response to changes in mission needs. An enterprise architecture includes a baseline [as-is] architecture, target [to-be] architecture, and a sequencing plan.

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. See Source Selection Plan.

Family of Systems (FoS)—A set or arrangement of independent systems that can be arranged or interconnected in various ways to provide different capabilities. A family of systems is basically a grouping of systems having some common characteristic(s). The mix of systems can be tailored to provide desired capabilities, dependent on the situation.

Fielding—Occurs when supported and supporting commands collaboratively plan and execute the delivery and bed-down of an operationally effective and suitable platform or system, or a major system modification/upgrade, from a total system capability perspective, that is sustainable over its planned life cycle.

Horizontal Protection—Common security countermeasures for protecting similar technologies used by more than one program or technology project. It may extend across military Components. Horizontal protection ensures cost-effective application of technology protection efforts.

Human Systems Integration (HSI)—The integrated and comprehensive analysis, design, and assessment of requirements, concepts, and resources for system manpower, personnel, environment, training, safety, occupational health, habitability, personnel survivability, and human factors engineering.

Increment—Militarily useful and supportable operational capability that can be effectively developed, produced, acquired, deployed, and sustained. Each increment of capability will have its own set of threshold and objective values set by the user. See Threshold Objective.

Incremental Development—Evolutionary acquisition process where using evolutionary acquisition the 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.

Information Technology—Any equipment or interconnected system or subsystem of equipment that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the executive agency. IT includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources, including National Security Systems (NSS). It does not include any equipment that is acquired by a federal contractor incidental to a federal contract.

Insensitive Munitions (IM)—Munitions which reliably fulfill their performance, readiness and operational requirements on demand, but which minimize the probability of inadvertent initiation

and severity of subsequent collateral damage to weapon platforms, logistic systems and personnel when subjected to selected accidental and combat threats.

Integrated Life Cycle Management (ILCM)—The seamless governance, transparency, and integration of all aspects of infrastructure, resource management, and business systems necessary for successful development, acquisition, fielding, and sustainment of systems, subsystems, end items, and services to satisfy validated warfighter capability needs.

Integrated Testing—The collaborative planning and collaborative execution of test phases and events to provide shared data in support of independent analysis, evaluation, and reporting by all stakeholders particularly the developmental (both contractor and government) and operational test and evaluation communities.

Interim Contract Support (ICS)—A temporary support method for an initial period of operation for a system, subsystem, training system, equipment, or end item.

Joint Capability Technology Demonstration (JCTD)—Demonstration of the military utility of a significant new technology and an assessment to clearly establish operational utility and system integrity.

Key Performance Parameters (KPP)—Those minimum attributes or characteristics considered most essential for an effective military capability.

Lead Major Command—The command that serves as operators' interface with the Program Manager for a system as defined by AFPD 10-9, *Lead Operating Command Weapon Systems Management*.

Lead System Integrator (LSI)—1) "Lead system integrator with system responsibility" means a prime contractor for the development or production of a major system if the prime contractor is not expected at the time of award to perform a substantial portion of the work on the system and the major subsystems, 2) "Lead system integrator without system responsibility' means a contractor under a contract for the procurement of services whose primary purpose is to perform acquisition functions closely associated with inherently governmental functions with regard to the development or production of a major system.

Life Cycle—The span of time associated with a system, subsystem, or end item that begins with the conception and initial development of the requirement, continues through development, acquisition, fielding, and sustainment until the time it is either consumed in use or disposed of as being excess to all known materiel requirements.

Life Cycle Management Plan (LCMP)—Document integrating both the acquisition and sustainment strategies from concept development to disposal and providing all product support requirements of a supported system, subsystem, or end item.

Low Rate Initial Production (LRIP)—Production of the system in the minimum quantity necessary to: provide production-configured or representative articles for operational tests; establish an initial production base for the system; and 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.

Maintainability—The ability 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 resources, at each prescribed level of maintenance and repair.

Milestone (MS)—Major decision points that separate the phases of an acquisition program.

Milestone Decision Authority (MDA)—The individual designated, in accordance with criteria established by the USD (AT&L), by the OASD/NII for Automated Information System acquisition programs, or by the USecAF (Space Programs) to approve entry of an acquisition program into the next phase.

Military Utility Assessment (MUA)—A determination of how well a capability or system in question responds to a stated military need, to include a determination of its potential effectiveness and suitability in performing the mission. It is a "characterization" of the capability or system as determined by measures of effectiveness, measures of suitability, measures of performance, and other operational considerations as indicators of military utility, as appropriate, and answers the questions, "What can it do?" and "Can it be operated and maintained by the user?"

Mission Assignment—Process that results in the designation of the product and air logistics centers that will be responsible for acquisition and sustainment management of weapon systems or programs. Mission assignment designates initial assignments, realignments, mission transfers, terminations, rescissions, and disposal of weapon systems, support systems, technology groupings, Federal Supply Classification (FSC) items, special programs, and special projects. The Strategic Mission Assignment process during materiel solution analysis initiates the planning process for program resources (i.e. manpower, facilities, etc).

Mission Critical System—System whose operational effectiveness (OE) and operational suitability (OS) are essential to successful mission completion or to aggregate residual combat capability. If this system fails, the mission most likely will not be completed. Such a system can be an auxiliary or supporting system, as well as a primary mission system.

Modification—For the purposes of this instruction, a modification is defined as a change to the form, fit, function, or interface (F3I) of an in-service, configuration-managed AF asset. Modifications are primarily defined by their purpose. A capability modification alters the F3I of an asset in a manner that requires a change to the existing system, performance, or technical specification of the asset. Such modifications are generally accomplished to add a new capability or function to a system or component, or to enhance the existing technical performance or operational effectiveness of the asset. A sustainment modification alters the F3I of an asset in a manner that *does not* change the existing system, performance, or technical specification of the asset. Such modifications are generally accomplished to correct product quality deficiencies, or to bring the asset in compliance with, or to maintain the established technical or performance specification(s) associated with the asset. Sustainment modifications may also include efforts that are accomplished for the primary purpose of improving the reliability, availability, maintainability, or supportability of an asset, or to reduce its ownership costs.

Non-Developmental Item (NDI)—Any previously developed item of supply used exclusively for governmental purposes by a Federal agency.

Operational Assessment (OA)— An analysis of progress toward operational capabilities made by an operational test organization, 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 necessary to support full production decisions.

Operational Capability Requirements (OCR)—A system capability or characteristic to accomplish approved capability needs. Operational (including supportability) requirements are typically performance parameters, but they may also be derived from cost and schedule. For each parameter, an objective and threshold value must also be established.

Operational Effectiveness (OE)—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.

Operational Safety—The condition of having acceptable risk to life, health, property, and environment caused by a system or end-item when employing that system or end-item in an operational environment. This requires the identification of hazards, assessment of risk, implementation of mitigating measures, and acceptance of residual risk in accordance with the process in MIL-STD-882D.

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, natural environmental effects and impacts, documentation, and training requirements.

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. 2) Testing and evaluation conducted in as realistic an operational environment as possible to estimate the prospective system's operational effectiveness, suitability, and operational capabilities. 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.

Organic—Logistics support provided by Government-owned material/ equipment/ facilities and Government personnel.

Performance Based Contracting—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 by broad and imprecise statements of work.

Performance Based Agreement (PBA)—An agreement between organic entities to delineate measurable performance outcomes that correspond to support requirements and the resources to achieve both. Weapon system PBAs between the PM and the lead/using MAJCOMs should be consistent with the applicable system PMA/EMAs. PBAs are to support established performance baselines and define required metrics necessary to achieve the performance requirements. They may be used as a basis for support arrangements or contracts and as a tool to

ensure accountability in meeting requirements by defining the expectations, range of support requirements, and roles and responsibilities.

Performance Based Logistics (PBL)—Product support strategy where PM develops and implements performance based logistics strategies that optimize total system availability while minimizing cost and logistics footprints. 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.

Personnel Survivability—The area of survivability which consists of those system design features that reduce the risk of fratricide, detection, and the probability of being attacked; and that enable the crew to withstand man-made hostile environments without aborting the mission or suffering acute chronic illness, disability, or death.

Pre-Operational Support (POS)—Support for test and evaluation efforts, system risk reduction and demonstration, production readiness or other temporary periods during the acquisition or modification of a system, equipment or end item.

Product Group Manager (PGM)—Designated individual for overall management of a specified product group; includes responsibility for cost, schedule and performance aspects along with the sustainment elements of the group's products. PGMs shall support overall system objectives as required by the SPM/PM. The PGM is not a DODD 5000.01 Program Manager (PM) of an acquisition program unless assigned separately and in accordance with guidance on assigning PMs.

Product Support Strategy—The planning and directing for effective integrated logistics support throughout the life cycle of a weapon system that will maximize system capabilities, reduce the logistics footprint, minimize total system sustainment cost, and satisfy the requirements of the warfighter.

Program—Systems, subsystems, end items, services, or activities on the Air Force Acquisition Program Master List (APML), Sustainment Program Master List (SPML), weapon systems designated in AFPD 10-9 (*Lead Command Designation and Responsibilities for Weapon Systems)*, or identified as Services Category activities.

Program Executive Officer (PEO)—The individual dedicated to executive management and supervision of a portfolio of mission-related ACAT and selected programs. The PEO shall be chartered by and is accountable to the SAE.

Program Management Agreement (PMA)/Expectation Management Agreement (EMA)—The PMA/EMA is an achievable and measurable annual plan that is jointly developed by the PM and the lead command and signed by the PM, the MDA, and the lead command. The PMA/EMA should be fully resourced and is consistent with the approved acquisition baseline.

Program Management Directive (PMD)—The official Headquarters Air Force document used to direct acquisition or modification responsibilities to appropriate Air Force Major Commands (MAJCOMs), Field Operating Agencies (FOA), and Direct Reporting Units (DRU) for the development, acquisition, modification, or sustainment of a specific weapon system, subsystem, or piece of equipment. It is used throughout the acquisition cycle to initiate, direct, or terminate

research for development, production, or modifications for which sufficient resources have been identified. It states program-unique top-level goals, objectives, roles and responsibilities.

Program Manager (PM)—The DODD 5000.01 designated individual with responsibility for and authority to accomplish program objectives for development, production, and sustainment to meet the user's operational needs. PM for sub-systems shall support overall system objectives as required by the SPM. The PM for acquisition programs shall be accountable for credible cost, schedule, performance, and materiel readiness to the MDA. ACAT I, ACAT IA, and ACAT II PM shall be chartered by the SAE and the PEO. Delegated ACAT II and III PM shall be chartered by the PEO or DAO. The PM for sustainment programs shall be accountable for credible cost, schedule, performance, and materiel readiness to the AFMC/CC or designee.

Program Protection Plan (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. PPP for technology is developed by research organizations that identify Science and Technology (S&T) programs requiring increased protection. The PPP for technology identifies AFRL directorate-level Designated Science and Technology Information (DS&TI) and provides a management plan, outlining the measures necessary to protect the effectiveness of that technology while within the technology director's (TD) control.

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 National Environmental Protection Act (NEPA) (42 USC §4321), Environmental Impact Assessment Program (EIAP) (32 CFR 989), and Executive Order 12114 (*Environmental Effects Abroad of Major Federal Actions)*. The PESHE is developed for MS B, and updated for MS C, for the Full-Rate Production Decision Review/Full Deployment Decision Review, and as required throughout the life of the program.

Project Manager—A designated individual with responsibility for and authority to accomplish project objectives for development, production, and/or sustainment of a subsystem to meet the user's operation needs in support of Program Manager(s) (PM).

Prototype—A model suitable for evaluation of design, performance, and production potential. *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.

Public-Private Partnership (PPP)—A logistics sustainment philosophy involving a cooperative agreement between DOD and private sector entities. A PPP for depot maintenance is an agreement between the buying authority (e.g. PM or PGM), one or more organic depot maintenance activities (includes geographically separated organizations/units of a depot/center) and one or more private industry entities to perform work or utilize facilities and equipment.

Relative Environment—The specific subset of the operational environment that is required to demonstrate critical "at risk" aspects of the final product performance in an operational

environment. It is an environment that focuses specifically on stressing the technology in question. Not all systems, sub-systems, and/or components need to be operated in the operational environment in order to satisfactorily address performance margin requirements. Note: A relevant environment is required for Technology Readiness Levels 5 and 6.

Reliability—The ability of a system and its parts to perform its mission without failure, degradation, or demand on the support system.

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. 1) *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 Integrated Test Team (ITT) that is qualified to conduct and responsible for overseeing Developmental Test and Evaluation (DT&E).

Safety—Freedom from conditions that can cause death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

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 users 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.

Senior Procurement Executive (SPE)—The SPE is the individual responsible for management and direction of the procurement system including implementation of the unique procurement policies, regulations, and standards of the Air Force. The SPE under 41 USC §414 is the Assistant Secretary of the Air Force (Acquisition) (SAF/AQ) as delegated. Delegation is contained in the HAF Mission Directive 1-10, Assistant Secretary of the Air Force (Acquisition), 08 Apr 2009 and SECAF memo 21 Aug 06, Air Force Acquisition Authorities and Responsibilities.

Service Acquisition Executive (SAE)—The SAE is the individual responsible for the development of programs to meet defined needs, and as such develops, coordinates, and integrates plans, policy, and programs for systems and the acquisition of Air Force programs. The SAE for Air Force programs is either the Assistant Secretary of the Air Force (Acquisition) (SAF/AQ) for non-space programs or the Under Secretary of the Air Force (SAF/US) for space programs as delegated by the Secretary of the Air Force (SECAF); authority remains with the SECAF if not delegated. Delegation is contained in the HAF Mission Directive 1-10, Assistant Secretary of the Air Force (Acquisition), 08 Apr 2009 and HAF Mission Directive 1-2, Undersecretary of the Air Force, 08 Sep 2008.

Software Maintenance—Those activities necessary to correct errors in the software; add incremental capability improvements (or delete unneeded features) through software changes;

and adapt software to retain compatibility with hardware or with other systems with which the software interfaces. Software maintenance comprises software maintenance performed on military materiel (e.g. weapon systems and their components, space control systems and their components, automated test equipment and test package sets, and systems integration laboratories).

Source of Repair (SOR)—An industrial complex (organic, commercial contract, or inter-service facility) with required technical capabilities to accomplish repair, overhaul modification, or restoration of specific types of military hardware or software.

Source of Repair Assignment Process (SORAP)—A part of the total Depot Source of Repair (DSOR). It is the primary process by which the Air Force postures its depot level workloads for both hardware and software. It applies to both new acquisition and fielded programs.

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.

Stakeholders—Individual or organizational entities (users, developers, acquirers, technologists, testers, budgeters, sustainers, and industry) that are, or will be, associated with implementing and supporting the associated system, subsystem, or end-item capability requirements.

Strategic Source of Repair (SSOR)—When a Depot Source of Repair (DSOR) determination cannot be accomplished for program initiation approval (MS B B) an SSOR determination will be accomplished to allow an earlier assessment of the sustainment concept. The SSOR determination, defined as a determination of the anticipated source of repair (organic or commercial and probable organic depot(s) considering all Services), is based on the best available information during the Technology Development Phase (non-space programs) or Concept Development Phase (space programs), or during the first applicable acquisition phase.

Supply Chain Management—Strategy for integrated life cycle management (ILCM) enterprise sustainment that integrates acquisition of assets, supply, maintenance, and distribution functions with the physical, financial, information, and communications networks in a results-oriented approach to satisfy materiel requirements.

Support Equipment/Automatic Test Systems (SE/ATS)—That equipment required to make a system, end item or facility operational in its intended environment. It includes: aeronautical/ground equipment e.g., maintenance stands, electrical generators, servicing carts, etc; test measurement diagnostic equipment (TMDE) e.g., automatic test equipment (ATE), oscilloscopes, multimeters, etc.; tools e.g., torque wrenches, manufactured jigs, borescopes, etc.; and automatic test systems (ATS) e.g., ATE, test program sets (TPSs), and interface test adapters (ITAs).

Support Equipment Family—Support equipment that is interoperable and has the capability to support a variety of weapon system requirements through flexible hardware or software architectures that permit addition or expansion of capability with minimal impact to the support equipment logistics support profile.

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.

Survivability—The ability of a system, subsystem, component, or equipment to withstand the effects of adverse environmental conditions such as battle damage, Chemical, Biological, Radiological, and Nuclear warfare, weather, or Acts of God that could otherwise render the ship, aircraft, or weapon system unusable or unable to carry out its designed function. Survivability also enables rapid restoration of the system, subsystem, component, or equipment to increase the sustainability of the war-fighting operations. A survivability analysis, accomplished early in the acquisition phase, influences the design and identifies additional support resources required to maintain system readiness.

Sustainment—Continuing materiel support which consists of the planning, programming, and execution of a logistics support strategy for a system, subsystem, or major end item to maintain operational capabilities from system fielding through disposal.

System—Any organized assembly of resources and procedures united and regulated by interaction or interdependence to perform a set of specific functions.

System of Systems (SoS)—A set or arrangement of interdependent systems that are related or connected to provide a given capability. The loss of any part of the system could significantly degrade the performance or capabilities of the whole. The development of an SoS solution will involve trade space between the systems as well as within an individual system performance

System Program Manager (SPM)—In accordance with DODD 5000.01, the SPM is the Air Force designated individual with responsibility for and authority to accomplish *system* objectives for development, production, and sustainment to meet the user's operational needs. SPM assignments are based upon the APML, SPML, and AFPD 10-9 (*Lead Command Designation and Responsibilities for Weapon Systems)* designated weapon systems. For systems in acquisition, the SPM is accountable for credible cost, schedule, performance, and materiel readiness to the MDA. ACAT I, ACAT IA, and ACAT II SPMs will be chartered by the SAE and the PEO. Delegated ACAT II and III SPM shall be chartered by the PEO or DAO. For systems in sustainment, the SPM is accountable for credible cost, schedule, performance, and materiel readiness to the AFMC/CC, AFSPC/CC, or designee.

System Sustainment Manager (SSM)—The individual with functional responsibility for the sustainment portion of a system's life cycle in support of a PM.

System Training Plan (STP)—An iterative planning document that defines the justification, design, development, funding, resources, support, modification, operation, and management of a Training System. The STP is designed to provide for planning and implementation of training and to make sure all resources and supporting actions required for establishment and support are considered. The STP may be a stand-alone document or part of a Life Cycle Management Plan (LCMP). All references to the STP in this document incorporate the possibility that the intended documentation may be part of a LCMP.

Systems Engineering (SE)—An interdisciplinary approach encompassing the entire set of scientific, technical, and management efforts needed to conceive, evolve, verify, deploy, and support an integrated and life cycle balanced set of system solutions that satisfy customer needs.

Systems engineering, through technical and management processes, addresses architectures; requirements development; design; technical management; test and evaluation; verification and validation; operational safety, suitability, and effectiveness (OSS&E); environment, safety, and occupational health (system safety); and human systems integration. These fundamental elements must be accomplished on all development, acquisition, and sustainment activities to develop a relevant technical knowledge base that is matured, maintained, and transferred in a disciplined manner.

Tailoring—The manner in which certain core issues (program definition, program structure, program design, program assessments, and periodic reporting) are addressed in a particular program. The Milestone Decision Authority (MDA) seeks to minimize the time it takes to satisfy an identified need consistent with common sense, sound business management practice, applicable laws and regulations, and the time sensitive nature of the requirement itself. Tailoring may be applied to various aspects of the acquisition process, including program documentation, acquisition phases, the time and scope of decision reviews, Supportability Analysis, and decisions levels consistent with all applicable statutory requirements.

Technical Data—Information, regardless of the form or method of the recording, of a scientific or technical nature, including computer software documentation. It includes information required for the design, development, production, manufacture, assembly, operation, training, testing, repair, maintenance, or modification of defense articles. Relative to software it includes information on system functional design, logic flow, algorithms, application programs, operating systems, and support software for design, implementation, test operation, diagnosis, and repair. It does not include computer software or data incidental to contract administration or general scientific, mathematical, or engineering principles commonly taught in schools, or information in the public domain.

Technical order (TO)—Air Force procedures developed or acquired for performance of organic operation, maintenance, inspection, modification, or management (exclusive of administrative procedures) of centrally-acquired and managed Air Force systems or commodities. TOs include paper and digital media developed to Technical Manual Specifications and Standards (TMSS), non-embedded personal computer software which automates the function directed by a TO without duplicating functionality of other Air Force Systems, contractor-developed manuals adopted for Air Force use, and approved commercial-off-the-shelf (COTS) manuals. The term "Technical Order (TO)" is equivalent to the DOD term "Technical Manual (TM).

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 Readiness Assessment (TRA)—A systematic, metrics-based process and accompanying report that assesses the maturity of Critical Technology Elements (CTE) used in systems. The resulting TRA report details how the CTEs are identified, why they are important to the program, and a program-independent assessment of their maturity. The TRA also provides supporting information for the Title 10 (§2366b) Milestone Decision Authority certification that the technology in the program has been demonstrated in a relevant environment for major defense acquisition programs (MDAP) prior to Milestone B approval.

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)—A document detailing 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 critical operational issues (COIs); critical technical parameters; objectives and thresholds documented in the requirements document; and Milestone decision points. ***NOTE*:** Where the word TEMP appears in this AFI, the LCMP T&E annex is also implied. The TEMP may be included in a LCMP as a T&E annex.

Test and Evaluation Strategy—The overarching integrated T&E outline 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.

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.

Total Contract Training (TCT)—A contractor support (CS) method to provide a contractor-operated performance-based training system.

Total Ownership Cost (TOC)—Total ownership cost encompasses all cost associated with development, production, operations, support, and disposal of a weapon system.

Training Devices—Aircrew training systems, maintenance training systems, ground based training systems, training devices for mission command and control, training equipment, range/scoring systems, maintenance trainers, physiological/aeromedical and treatment devices, space and missile training devices/systems, etc., which provide individual training for personnel assigned as pilots, navigators, radar operators, flight engineers, maintenance personnel, boom operators, load masters, gunners, and/or crew training in aspects of the operational mission. The term “training devices” does not include trainer aircraft.

Training Planning Team (TPT)—Responsible accomplishing the Training System Requirements Analysis (TSRA) and then documenting training requirements for inclusion in the Life Cycle Management Plan (LCMP) or the System Training Plan (STP). It is recommended that TPT meetings will be held annually. This meeting will maintain and document training system quality and concurrency with the operational system. The TPT shall be established and

operational before the system acquisition strategy is developed, as early as Milestone A (Defense Acquisition Board); the acquisition strategy will be coordinated by the TPT Chair.

Training System Requirements Analysis (TSRA)—The TSRA is a formal and systematic front-end analysis of the weapon system to determine training system requirements and provides alternative solutions for a training system acquisition or modification. The TSRA uses the Instructional System Development (ISD) process and supportability analyses to address total training requirements (training hardware, software, facilities, instructional media, etc.) throughout the life cycle of the weapon system being defined.

Validated Needs—Capability objectives identified and approved by the capability based planning (CBP) process, or requirements development within the CBP process.

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

Verification— Process of determining that modeling and simulation (M&S) accurately represent the developer's conceptual description and specifications.

*****— ***Validation****:* Rigorous and structured process of determining the extent to which modeling and simulation (M&S) accurately represent the intended real world phenomena from the perspective of the intended M&S user.

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

Vulnerability—The characteristics 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. Vulnerability in an information system is a weakness in system security procedures, internal controls, or implementation that could be exploited.

Warfighter—An individual or organization who executes military force or is responsible for making operational decisions that result in the use of military force. The term includes field level personnel assigned to an Air and Space Expeditionary Force (AEF) whose duties support USAF core competencies and distinctive capabilities.

Weapon System—A combination of elements that function together to produce the capabilities required for fulfilling a mission need, including hardware, equipment, software, and all performance based logistics (PBL) sustainment elements, but excluding construction or other improvements to real property.

Work-Share Agreement (WSA)—When the AF program office receives funding from the customer and passes it directly to the depot performing the workload.

Workload Shift—The change of an officially designated postured workload from organic repair to contract repairs or vice versa. It also includes the change of a previously postured workload from one organic source to another. Not included are changes in previously postured contract workloads from one contract source to another, combining several permanently postured contract workloads into fewer contracts, or current contract workloads that are broken out to several contract sources.

Attachment 2

TITLE 10, UNITED STATES CODE, ARMED FORCES

Subtitle A, General Military Law

Title 10 Sections Pertinent to This Publication Include:

(NOTE: Below is not all inclusive. It identifies selected applicable areas being addressed. It is NOT an authoritative summary, interpretation or explanation of the Title 10 text. Any needed explanation of Title 10 Sections may be requested from the functional legal office.)

1) **Section 2208(j), *Working Capital Funds:*** Under specified conditions, permits depots financed through Working Capital Funds to sell articles or services outside the DOD if the purchaser is fulfilling a DOD contract and the contract is awarded pursuant to a public-private competition.

2) **Section 2223, *Information Technology: Additional responsibilities of Chief Information Officers:*** In addition to responsibilities provided in Title 44, Chapter 35; specifies additional responsibilities to the Chief Information Officer (CIO) of the Department of defense.

3) **Section 2228, Military Equipment and Infrastructure: Prevention and Mitigation of Corrosion:** Requires a Department of Defense senior official or organization to oversee and coordinate efforts throughout the Department to prevent and mitigate corrosion of military equipment and infrastructure.

4) **Section 2304, *Contracts: Competition Requirements:*** Obliges, except as otherwise authorized by statute, the head of an agency requirement to conduct full and open competition in conducting procurement for property or services.

5) **Section 2306c, *Multiyear Contracts: Acquisition of Services:*** Delineates authority for the head of an agency to enter into contracts for periods of not more than five years for services.

6) **Section 2320, *Rights in Technical Data*:** Obliges the prescribing of direction to define the legitimate interest of the United States and of a contractor or subcontractor in technical data pertaining to an item or process.

7) **Section 2321, *Validation of Proprietary Data Restrictions:*** Obliges establishment of a requirement for a contractor at any tier provide a written justification for any use or release restriction.

8) **Section 2330, *Procurement of Services: Management Structure:*** Requires the Secretary of Defense to establish and implement a management structure for the procurement of Services for DOD.

9) **Section 2350a (g),** ***Cooperative Research and Development Agreements: NATO organizations; Allied and Friendly Foreign Countries; Side-by-Side Testing:*** "Sense of the Congress" relative to testing of conventional defense equipment, munitions, and technologies manufactured and developed by foreign countries.

10) Section 2366b, ***Major Defense Acquisition Programs: Certification Required Before Milestone B or Key Decision Point B Approval*****:** Obliges the Milestone Decision Authority (MDA) for a Major Defense Acquisition Program (MDAP) to make certain certifications prior to Milestone B approval.

11) Section 2366a, ***Major Defense Acquisition Programs: Certification Required Before Milestone A or Key Decision Point A Approval*****:** Obliges the Milestone Decision Authority (MDA) for a Major Defense Acquisition Program (MDAP) to make certain certifications related to program requirements, military needs, and resources prior to Milestone A approval.

12) **Section 2399,** ***Operational Test and Evaluation of Defense Acquisition Programs:*** Obliges major defense acquisition programs not to proceed beyond low-rate initial production until initial operational test and evaluation of the program is completed.

13) **Section 2400,** ***Low-Rate Initial Production of New Systems:*** Provides that in the course of development of a major system, the determination of what quantity should be procured for low-rate initial production (including the quantity to be procured for pre-production verification articles) shall be made when the Milestone B decision is made. In this context the term "Milestone B decision" means the decision to approve the system development and demonstration of a major system.

14) **Section 2435,** ***Baseline Description:*** Requires the military department to establish a baseline description for each major defense acquisition program under its jurisdiction. The baseline shall include sufficient parameters to describe the cost estimate (referred to as the "Baseline Estimate"), schedule, performance, supportability and any other factor of such MDAP.

15) **Section 2451,** ***Defense Supply Management:*** Requires development of a single catalog system and related program of standardizing supplies for the Department of Defense.

16) **Section 2460,** ***Definition of Depot-Level Maintenance and Repair:*** In this context the term "depot-level maintenance and repair" means materiel maintenance or repair requiring the overhaul, upgrading, or rebuilding, or rebuilding of parts, assemblies or subassemblies and the testing and reclamation of equipment as necessary. It includes all aspects of software maintenance classified by DOD as of 1 July 1995 as depot-level maintenance and repair, and interim contractor support (ICS) or contractor logistics support (CLS) to the extent that such support is for the performance of services described in the preceding sentence.

17) **Section 2463,** ***Collection and Retention of Cost Information Data on Converted Services and Functions:*** With respect to converting performance of a service or function of the DOD to contractor performance and extension of such contract, requires during the term of the

contract, cost information data regarding performance or the service or function by contractor employees, not to exceed five years.

- **Section 2464*, Core Logistics Capabilities*:** Obliges DOD to maintain a Core logistics capability that is Government-owned and Government-operated; including Government personnel and Government-owned and operated equipment and facilities. Requires Services to establish and maintain organic capabilities to provide a ready and controlled source of technical competence and resources necessary to ensure effective and timely response to mobilization, national defense contingencies or emergencies.
- **Section 2466*, Limitations on the Performance of Depot-Level Maintenance of Materiel*:** Allows no more than 50 percent of the funds made available in a given Fiscal Year (FY) to a military department or defense agency for depot-level maintenance and repair workload to be used to contract for the performance by non-Federal Government personnel.
- **Section 2469*, Contracts to Perform Workloads Previously Performed by Depot-level Activities of the Department of Defense: Requirement of Competition*:** Requires public-private competitions for existing depot workloads, valued at more than $3 million, for work that is proposed to move to other depots or to the private sector.

1) **Section 2474*, Centers of Industrial and Technical Excellence: Designation; Public-Private Partnerships*:** Requires Military Departments to designate depot maintenance activities as Centers of Industrial and Technical Excellence, authorizes and encourages public-private partnerships, permits performance of work related to core competencies, permits under specified conditions the use of DOD facilities and equipment by entities outside of DOD, and permits sale proceeds from public-private partnerships to be credited to depot accounts.

2) **Section 2533a*, Requirement to Buy Certain Articles From American Sources; Exceptions*:** (Commonly referred to as "Berry Amendment") Delineates requirements of certain supplies purchased by DOD to be sourced domestically.

3) **Section 2539b*, Availability of Samples, Drawings, Information, Equipment, Materials, and Certain Services:*** Authorizes the sale of services for testing of materials, equipment, models, computer software, and other items.

4) **Section 2563*, Articles and Services of Industrial Facilities: Sale to Persons Outside the Department of Defense*:** Under specified conditions, permits the sale of articles manufactured and services performed by a working capital funded industrial facility that are not available from any United States (US) commercial source to an entity outside DOD.

Section 2667*, Leases: Non-Excess Property of Military Departments*: Allows leasing of non-excess equipment and facilities**.**

Attachment 3

FORMAT FOR NEW START VALIDATION

In accordance with AFI 63-101, I have reviewed AFI 65-601 and 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 3, Par 3.20 of this AFI in order to being/coordinate New Start Notification package

Program is budgeted and appropriated. 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. *(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).*	**YES**	**NO**
Program is a Congressional Add. 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. (*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).*	**YES**	**NO**
Program is an out-of-cycle New Start. 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. *(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).*	**YES**	**NO**
SAF/HAF has advised this Program Office that a new start notification is not required *(Mark Yes in the column to the right and attach supporting documentation from SAF/AQX or AF/FMB).*	**YES**	**NO**

_____ _____

Program Manager (Name/Grade) Signature and 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.

Attachment 4

DESCRIPTIONS OF ENGINEERING DATA SERVICE CENTER (EDSC) CATEGORIES

Category I Engineering Data Service Center (EDSC)—This EDSC is established to support a base or installation whose mission requires minimal engineering data. These EDSCs do not maintain data files nor are they authorized to have any equipment for viewing and reproduction. A DOD Index of Specifications and Standards (DODISS) documents library is permitted.

Category II EDSC—This EDSC is established to support a base or installation whose mission requires small amounts of engineering data. These EDSCs do not maintain data files but may have equipment for viewing and printing copies of engineering data. These EDSCs may requisition engineering data on a one-time basis. A DODISS documents library is permitted.

Category III EDSC—This EDSC is established to support a base or installation whose mission requires individual items of data, some partial or complete sets of data, and the maintenance of data files. These EDSCs requisition data on a one-time basis. They are authorized to have equipment for viewing and printing copies of engineering data. A DODISS documents library is required.

Category IV EDSC—This EDSC is established to support a base or installation whose mission requires complete sets of data. These EDSCs must maintain data files. They are authorized to have equipment for viewing and printing copies of engineering data. A DODISS documents library is required.

Category V EDSC—This EDSC is established to receive new data from contractors, subcontractors, vendors, and government design activities; process requests for copies of individual items and sets of data from government and non-government activities and provide automatic updates to Category III and Category IV EDSCs to other individuals or activities as necessary. These EDSCs, located at the Air Logistics Centers (ALCs), are primary DOD repositories maintaining the official Air Force record copies of data, sets of data (reserve files), and they have complete reproduction capabilities for that data. These EDSCs also perform the local base-level EDSC operations for their respective bases. A DODISS documents library is required.

Attachment 5

INDEX

Table A5.1. INDEX.

Subject	Page	Section
A		
Abbreviations and Acronyms	196	Attch 1
Acquisition and Sustainment Life Cycle Management	12	Chapter 1
Acquisition and Sustainment Life Cycle Readiness	55	Chapter 3
Acquisition and Sustainment Organizations	21	1.6
Acquisition and Sustainment Processes	54	Section 3A
Acquisition Centers of Excellence (ACE), Roles and Responsibilities	54	2.30
Acquisition Decision Memorandum (ADM)	93	3.40
Acquisition of Services	165	Chapter 4
Acquisition of Services Applicability	165	4.3
Acquisition of Services Definitions	172	4.11
Acquisition of Services Objectives	165	4.2
Acquisition of Services Responsibilities	166	4.4
Acquisition Program Baseline (APB)	94	3.41
Acquisition Programmatic Requirements	82	Section 3B
Acquisition Programmatic Requirements Overview	82	3.33
Acquisition Strategy Panels (ASP)	62	3.7
Acquisition Workforce	175	5.2
Acquisition Workforce Management and Professional Development	175	Chapter 5
Acquisition Workforce Management	176	5.4
AF Acquisition Professional Development Program (APDP)	177	5.5
AF Automated Computer Program Identification Number System	163	3.121
AF Human Systems Integration Office (AFSIO), Roles and Responsibilities	47	2.25
AF IT Standards Waiver Process	163	3.120
AF Non-Space Acquisition Program Master List (APML)	63	3.10
AF SE Management Responsibilities	120	3.75
Air Force Global Logistics Support Center (GLSC) (RESERVED)	145	3.98
Air Force Integrated Life Cycle Management Organizational Structures	22	Figure 1.4
Air Force Review Boards (AFRB)	62	3.7
Aircraft Information Program	122	3.83
Annual Execution Reviews (Services)	171	4.10
Applicability	12	1.2
Arms Control Compliance	115	3.70

Assistant Secretary of the AF for Installations, Environment and Logistics (SAF/IE), Roles and Responsibilities	35	2.10
Assistant Secretary of the AF, Financial Management (SAF/FM), Roles and Responsibilities	34	2.8
Assistant Secretary of the Air Force for Acquisition (SAF/AQ), Roles and Responsibilities	27	2.2
B		
Berry Amendment Compliance	103	3.56
Budget Stability	108	3.62
Buy American Act (BAA)	103	3.55
C		
Capability Based Requirements Development	59	3.3
Centralized Asset Management (CAM)	148	3.101
Certification and Accreditation	161	3.117
Changes	182	6.3
Chief of Warfighting Integration and Chief Information Officer (CIO) (SAF/XC and AF/A6), Roles and Responsibilities	38	2.18
Clinger-Cohen Act	155	3.106
Commander, AF Materiel Command (AFMC/CC), Roles and Responsibilities	39	2.19
Commander, AF Operational Test and Evaluation Center (AFOTEC/CC), Roles and Responsibilities	46	2.24
Commander, AF Research Laboratory (AFRL/CC), Roles and Responsibilities	42	2.20
Commander, AF Space Command (AFSPC/CC), Roles and Responsibilities	43	2.21
Commander, Air Education and Training Command (AETC/CC), Roles and Responsibilities	46	2.23
Commercial Item Purchase	103	3.54
Configuration Management (CM)	121	3.81
Configuration Steering Board (RESERVED)	63	3.8
Contractor Incentives	103	3.51
Contractor Logistics Support	139	3.94
Corrosion Prevention and Control Planning	113	3.68
Cost Realism	108	3.61
Courses of Action	82	3.36
Cyberspace Infrastructure Planning System (CIPS)	163	3.123
D		
Data Collection	170	4.7
Data Rights	131	3.90
DCS, Intelligence (HQ AF/A2), Roles and Responsibilities	36	2.14

DCS, Logistics, Installations & Mission Support (HQ AF/A4/7), Roles and Responsibilities	37	2.16
DCS, Manpower and Personnel (AF/A1), Roles and Responsibilities	36	2.13
DCS, Operations, Plans and Requirements (HQ AF /A3/5), Roles and Responsibilities	37	2.15
Delegations for Programs within AFPEO/CM Decision Authority	171	4.8
Demilitarization, Disposal, Reclamation, and Migration	154	3.104
Depot Maintenance / Sustainment Cost Reporting (50/50)	145	3.99
Depot Maintenance Partnership Authorities	147	Table 3.2
Depot Source of Repair (DSOR)	126	3.89
Deputy Assistant Secretary for Acquisition Integration (SAF/AQX), Roles and Responsibilities	32	2.6
Deputy Assistant Secretary, Contracting (SAF/AQC), Roles and Responsibilities	31	2.4
Deputy Assistant Secretary, Science, Technology and Engineering (SAF/AQR), Roles and Responsibilities	32	2.5
Deputy Under Secretary of the AF for International Affairs (SAF/IA), Roles and Responsibilities	34	2.9
Description of Engineering Data Service Center (EDSC) Categories	234	Attch 4
Design Reviews (Preliminary Design Review (PDR)/Critical Design Review (CDR)) Reports and Assessments) (RESERVED)	63	3.9
Designated Acquisition Officials (DAO), Roles and Responsibilities	49	2.28
Diminishing Manufacturing Sources/Material Shortages (DMSMS) (Renamed Industrial Base Constraints)	143	3.95
Directed Use of Joint Integrated Architectures	157	3.109
Director, Space Acquisition (SAF/USA), Roles and Responsibilities	35	2.11
Documentation	82	3.34
E		
Earned Value Management (EVM)	70	3.17
Embedded Links	193	Attch 1
End Use Certificates	117	3.73
Engineering and Manufacturing Development Phase	14	1.5
Engineering Data	132	3.91
Entry into the Acquisition System	14	1.5
Environment, Safety, and Occupational Health (ESOH)	121	3.77
Evolutionary Acquisition (EA)	60	3.5
Evolutionary Acquisition Approach	61	Figure 3.1
Expectations Management Agreement (EMA)	94	3.42

F

Foreign Military Sales (FMS) and Security Assistance (SA)	115	3.71
Format for New Start Validation	233	Attch 3

G

Global Information Grid (GIG) Integrated Architecture	157	3.110
Glossary of References and Supporting Information	184	Attch 1
Government Cost Estimates	107	3.60

H

HQ AF, Chief of Safety (AF/SE), Roles and Responsibilities	53	2.31
HQ AF, Director of Test and Evaluation (AF /TE), Roles and Responsibilities	36	2.12
HQ AF, Strategic Plans and Programs (HQ AF/A8), Roles and Responsibilities	38	2.17
Human Systems Integration (HSI)	121	3.79

I

ILCM Acquisition and Sustainment Life Cycle Organizations	21	Figure 1.3
ILCM Tenets	13	1.4
Independent Assessments	80	3.31
Information Assurance (IA)	159	3.115
Information Collection, Records, and Forms	182	6.4
Information Support Plans (ISP)	112	3.67
Information Technology Lean (and SISSU) Process	160	3.116
Information Technology Systems Registration and Support of AF IT Portfolio Management Process	155	3.107
Inherently Governmental Functions Determinations	103	3.53
Initial Contract Performance Review (Services)	171	4.9
Integrated Architecture (Data) Contract Issues	159	3.114
Integrated Life Cycle Execution Framework	16	Figure 1.2
Integrated Life Cycle Management (ILCM) Framework	12	1.3
Integrated Life Cycle Management and Milestone Requirements	14	1.5
Integrated Life Cycle Management Chain of Authority	21	1.7
Integrated Life Cycle Management Framework	13	Figure 1.1
Integrated Life Cycle Management Publication Coordination	182	6.1
Integrated Master Plans (IMP) and Integrated Master Schedules (IMS)	97	3.46
Intelligence Support(ability) Requirements	79	3.30
Internet Protocol Version 6 (IPv6)	158	3.111

Interoperability of IT and NSS	158	3.112
J		
Joint Capability Technology Demonstration	78	3.29
Joint Tactical Radio System (JTRS) Waivers/Notifications	163	3.119
K		
L		
Lead Systems Integrator (LSI) Limitations	103	3.52
Leasing	104	3.57
Life Cycle Acquisition and Sustainment Reporting	64	3.13
Life Cycle Expectation Management	65	3.14
Life Cycle Management Plan (LCMP)	89	3.39
Life Cycle Systems Engineering (SE)	120	3.74
Life Cycle Systems Engineering Requirements	120	Section 3C
M		
Maintenance Engineering/Sustaining Engineering (ME/SE)	121	3.80
Management Information Systems and Program Control Metrics	109	3.63
Management of AF Training Systems	116	3.72
Management of Defense Business Systems	156	3.108
Management of System of Systems	62	3.6
Materiel Development Decision	82	3.35
Materiel Fielding	74	3.23
Migration Plan	14/154	1.5 / 3.104
Milestone Decision Authority (MDA) Decisions and Reviews	55	3.2
Military Equipment Valuation (MEV)	106	3.59
Mission Assignment	60	3.4
Modeling and Simulation (M&S)	102	3.50
Modification Management	73	3.21
N		
Net-Ready Key Performance Parameter (NR-KPP)	158	3.113
Networks and Information Integration Requirements	155	Section 3 E
New Start Notification	72	3.20
Nuclear Weapon Related Acquisition	80	3.32
O		
Operational Commands and Field Operating Agencies (FOA)	45	2.22
Operational Safety, Suitability, and Effectiveness /Mission Assurance	121	3.78

P

Packaging, Handling, Storage and Transportation (PHS&T)	139	3.93
Performance Based Contracting	72	3.18
Performance Based Logistics (PBL)	149	3.103
Performance Based Logistics (PBL) Levels	150	Figure 3.3
Performance Based Logistics Relationships	150	Figure 3.2
Pertinent Sections of Title 10, United States Code, Armed Forces	230	Attch 2
Points of Contact for Acquisition of Services	173	4.12
Portfolio Transfer	77	3.26
Post Implementation Review (PIR)	75	3.24
Privacy	163	3.122
Product and System Integrity	122	3.82
Product Support Integrator (PSI)	125	3.88.4
Product Support Sourcing Determination	88	3.38
Product Support/Sustainment Planning Overview	125	3.88
Program Executive Officer, Combat and Mission Support (AFPEO/CM), Roles and Responsibilities	49	2.27
Program Executive Officers (PEOs), Roles and Responsibilities	47	2.26
Program Management Directive (PMD)	88	3.37
Program Managers (PMs), including SPMs, Roles and Responsibilities	50	2.29
Program Protection Planning	109	3.66
Program Terminations	74	3.22
Program Transfer	76	3.25
Programmatic Environment, Safety, and Occupational Health Evaluation (PESHE)	101	3.49
Provisioning	149	3.102
Public-Private Partnerships	146	3.100
Purpose of AFI 63-101, Acquisition and Sustainment Life Cycle Management	12	1.1

Q

R

References	184	Attch 1
Reliability, Availability, Maintainability, and Supportability (RAMS) Analysis and Documentation	98	3.47
Request for Reclassification of Acquisition Programs Categorization	64	3.12
Requirements of Services Acquisitions within the US Air Force	169	Table 4-2
Review and Approval of Services Acquisitions within the US Air Force	167	Table 4-1
Risk Management Plans	100	3.48

Risk-Based Program Management and Decision Making	66	3.16
S		
SAF/AQ Capability Directors (CDs), Roles and Responsibilities	33	2.7
Section 508	164	3.124
Selection of Contractors for Subsystems and Components	72	3.19
Serialized Item Management (SIM)	104	3.58
Services Acquisition Review and Approval	169	4.6
Services Requirements Determination and Approval	168	4.5
Software Engineering	123	3.84
Spectrum Management	161	3.118
Support Equipment/Automated Test Systems (SE/ATS)	143	3.96
Sustainment Planning Requirements	125	Section 3D
Sustainment Program Master List (SPML)	64	3.11
System Compatibility and Interoperability	123	3.87
System Survivability	113	3.69
System/Program Transfer	76	3.25
Systems Engineering in Integrated Master Plan (IMP) and Integrated Master Schedule (IMS)	123	3.86
Systems Engineering Plan (SEP)	120	3.76
T		
Technical Orders (TO)	134	3.92
Technology Development Strategy (TDS)	95	3.43
Terms	215	Attch 1
Test and Evaluation Master Plan	97	3.45
Test and Evaluation Strategy	97	3.44
Total Ownership Costs (TOC)	65	3.15
Translation of MIL-STD-882D Risk Matrix to the OSD Risk Management Guide Matrix	101	Table 3.1
U		
Under Secretary of the AF (SAF/US), Roles and Responsibilities	30	2.3
Unliquidated Obligations (ULO)	108	3.64
Urgent Operational Needs	78	3.27
Use of Specifications and Standards	109	3.65
V		
Value Engineering (VE)	123	3.85
W, X, Y, & Z		
Waivers	182	6.2
Warfighter Rapid Acquisition Process	78	3.28
Weapon System Support Program (WSSP)	145	3.97

Workforce Management, Responsibilities and Authorities 175 5.3