

22 MAY 1995



Operations

**MODERNIZATION PLANNING
DOCUMENTATION**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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OPR: HQ USAF/XOFP
(Lt Col Daniel A. Ruehl)

Certified by: HQ USAF/XOF
(Maj Gen John B. Sams, Jr)

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This instruction implements AAFP 10-14, *Modernization Planning*. The PD establishes responsibilities for, gives an overview of, and defines the major processes involved in modernization planning. Several of those steps involve extensive analysis of plans and requirements to develop a deficiency list and the most cost effective method to overcome this list. A Mission Area Plan (MAP) or Functional Area Plan (FAP) is a codification of the process into an easily read common format. This document describes the format and contents of the MAP/FAP and briefly touches on the analytical process for definition only. You should review the policy directive for a description of the entire Modernization Planning process before using this instruction to construct a Mission Area Plan. Forward proposed revisions to the Mission Area Plans Office of Primary Responsibility (OPR) for your command, who will in turn consolidate and forward them to HQ USAF/XOME, Evaluation Support Division, 624 9th St NW, Suite 300, Washington D.C. 20001-5303. Major Command (MAJCOM) OPRs must send their consolidations to HQ USAF/XOME by 1 September. A conference of MAJCOM OPRs will coordinate changes that require major alterations to the Modernization Planning process. See **Attachment 1** for Glossary of References, Abbreviations, Acronyms, and Terms.

Section A—Goal

1. The Goal of the Process. Modernization Planning produces documents (Mission Area Plans (MAP) and Functional Area Plans (FAP)) evaluating Air Force mission areas and functions, pinpoints deficiencies, and shows how the Air Force plans to affordably overcome those deficiencies to achieve the combat capability it needs in the future.

Section B—Responsibilities for Modernization Planning Documentation

2. Responsibilities of MAJCOMS. MAJCOMs review their tasking under Defense, Joint and Air Force directives and assigned missions under concepts of operations (CONOPS) for the various regional plans. These regional plans assign specific operational military objectives for their forces provided by the Air

Force. MAJCOMs continually evaluate plans and Joint Staff guidance for changes in assigned missions and objectives that may change the tasks required for that mission.

2.1. Mission Area Teams. MAJCOMs will establish a Mission Area Team (MAT) for each mission area that includes the required disciplines to develop a MAP. Two notional teams are in **Attachment 2**. MAJCOMs must train team members to ensure the process and requirements to produce a Mission Area Assessment (MAA), Mission Needs Analysis (MNA), or MAP are understood. The mission area teams receive support from weapons system/capability teams, functional teams and Air Force Materiel Command (AFMC) Technical Planning Integrated Product Teams (TPIPT). AFMC provides a TPIPT chief to assist the mission area team leader. TPIPT participation in the Modernization Planning process is essential in the development of deficiency corrective actions, formulation of the Weapons System/Capability Roadmaps, construction of the mission area critical enabling technology needs, and pricing from commencement through the capability phase of the process.

3. Responsibilities of Functionals. The functional office may develop a FAP when a particular functional area, such as Command, Control, Communications, and Computers (C⁴), security police, intelligence, civil engineering, etc., requires investments in systems or leveraging technologies that must be standardized or interoperable on a cross-MAJCOM or joint basis. An example would be an intelligence gathering system that could be used by all MAJCOMs but would not be specifically needed in a MAJCOM MAP. Air Staff proponents for FAPs must maintain open communications with MAJCOM functional counterparts to avoid duplication of and insure cross-referencing between MAPs and FAPs.

Section C—Products

4. How the Air Force Reports the Results of the Process. MAPs and FAPs consist of two formats: a document and a briefing. Both formats described below will reflect the Strategies-to-Tasks (STT) analysis of the Mission Area. They will show the identification of needs and the deficiency corrections recommended.

4.1. Document. A combination of descriptive paragraphs and diagrams will summarize the Mission Area, the implementation CONOPs, the deficiencies identified and prioritized corrections. The document is a summary of the entire Mission Area Planning process for the Mission Teams. Standardized MAJCOM presentations will enhance understanding and ease of assimilation.

4.2. Briefing. MAP briefings are a concise summary of the MAP.

Section D—MAP Contents and How to Format Them

5. Title Page and Classification. **Attachment 3** is the format for the title page. Mark MAPS (including individual page and paragraphs) according to standard classification marking guidelines.

6. Mission Area Plan Overview. In the overview, write a descriptive summary of MAP and the results of any studies and analyses. This is a top-level view, so do not include detail here.

7. Introduction (MAP paragraph 1). This section is the lead-in to the MAP. Outline the general national and military strategy the mission area supports. If another MAP covers weapons systems normally associated with this mission area, provide a cross reference to the other MAP in the introduction.

The MAP OPR will document an annual review in the introduction to ensure the effective integration of the latest aerospace and weapons technologies into the force structure and changing fiscal and environmental constraints.

8. Mission Area Assessment (MAA) (MAP paragraph 2). This section describes the results of the formal MAA. This process summarizes required tasks by identifying military objectives in the Defense Planning Guidance (DPG), the Joint Strategic Capabilities Plan (JSCP), Air Force guidance, theater commander input and regional Operations Orders and Operations Plans. MAA uses a "strategies-to-tasks" methodology to identify the operational and support tasks needed to achieve military objectives (AFI 10-601, *Mission Needs and Operational Requirements Guidance and Procedures*). Starting with the National Security Strategy, the MAA proceeds through National Military Objectives, Theater/Regional Objectives, Operational Objectives, and Operational Tasks, to the Operational Systems (as defined by their features and characteristics) allocated to the Mission Area. Systems include aircraft, space systems, training systems, weapons, and required support assets (cross referenced to other applicable MAPs if not covered here). This paragraph begins with a general breakout of the Strategies-to-Tasks Analysis (MAP paragraph 2.1). Include a discussion of the modeling, simulation, and analysis required to assess the Threat (MAP paragraph 2.2), the Concept of Operations (MAP paragraph 2.3), the Operational Concepts (MAP paragraph 2.4), and the Operational/Functional Tasks (MAP paragraph 2.5).

8.1. Strategies-to-Tasks (STT) Analysis (MAP paragraph 2.1). This section contains a detailed discussion of the STT that supports mission area planning. The STT is the baseline and logic source for the MAP products. MAJCOM functional areas will use the STT baseline provided by HQ USAF/XOX as the starting point for their analysis, making modifications as needed to take into account unique command needs.

8.2. Threat (MAP paragraph 2.2). Cover Global and regional threats with emphasis on those threats creating deficiencies and thereby driving modernization actions. Use validated threat assessments, developed under the DIA DoD Intelligence Futures Program. Provide specific references to the source and date of the threat analysis used (including assessments developed outside the DoD Intelligence Futures Program) to cross-reference anticipated threat and subsequent deficiencies. A figure accompanies this subparagraph summarizing the regional threats. Discuss other threat-related issues like arms limitation treaties, technology transfer, and emerging threats.

8.3. Concept of Operations (MAP paragraph 2.3). This paragraph is a brief recap of the basic employment concept and the interrelationship of force elements. CONOPS must reflect not only how we currently intend to employ forces provided by the Air Force, but also how we project to use these forces in the future. Develop current and evolutionary CONOPS based on current and evolutionary Joint Doctrine to defeat the threat summarized in each MAP. Again, use both current and projected intelligence summaries to allow realistic CONOPS development and ensure deficiency corrective actions remain aligned with the world situation.

8.4. Operational Concepts (MAP paragraph 2.4). This paragraph expands the basic operational concept in terms of the following phases. Subparagraphs discuss each phase from readiness to final reconstitution.

8.4.1. Readiness. Highlight key training and exercise initiatives (including the contribution of trainers--cross referenced to other MAPs if appropriate).

8.4.2. Deployment. Briefly discuss basic requirements like airlift support, refueling support, enroute command and control, and other deployment "tail" support requirements.

8.4.3. Employment. Include command relationships, tasking authority, change of operational control, interoperability requirements, and C⁴I links--as well as expected mission tasking and required availability rates.

8.4.4. Sustainment. Briefly describe logistics support maintenance support and combat support requirements and critical supply items to support the mission area.

8.4.5. Reconstitution. Summarize redeployment and replenishment concepts.

8.5. Operational Tasks (MAP paragraph 2.5). Describe mission tasks and provide an overview of the mission area force structure for aircraft, weapons, and support systems (as required) see **Attachment 4** for a sample graphic.

9. Mission Need Analysis (MAP paragraph 3). This assesses the Air Force's ability to accomplish the tasks identified during MAA. MNA uses a task-to-need methodology to identify mission needs. MNA can also highlight technological opportunities and identify reliability and maintainability improvements that can also enhance warfighting capabilities (AFI 10-601). Derive deficiencies from an iterative process incorporating decision-making methods to include supporting modeling, simulation, or other analytical tools as appropriate. Some criteria to consider are future operational concepts and developing threat technologies. Needs identified must include mission support and functional areas such as logistics, deployability, reliability and maintainability, C4I, human systems requirements (i.e., training, manpower, safety, etc.), as well as weapons and weapon systems. This paragraph and supporting subparagraphs documents the deficiencies identified by the MNA process. These identified deficiencies extend to the "features and characteristics level" that support the mission area force elements. Capture the results of the MNA in the "Mission Area Current Assessment" (**Attachment 5**). Subparagraphs provide the detailed explanation of deficiencies to include specific system and/or capability limitations. This assesses the impact of various force elements and combinations of force elements variously applied at the CONOPS and operational concept levels to arrive at preferred concepts. It relies heavily on Modeling and Simulation (M&S) to support the process to evaluate the ability to perform operational and support tasks (including features and characteristics) that support a military strategy/objective. Revisit the models and simulations throughout the process, to update them, and test options for the correction of deficiencies and to develop investment strategies. Potential sources of M&S support are internal MAJCOM resources, AFMC and the Air Force Labs, USAF/XOM, 4525 CAS/JSO, ARPA, OSD/AS&T, the National Laboratories, and Air Force contractors. M&S requirements fall into three levels: Threat Analysis; Mission Analysis; and System Analysis.

9.1. Mission Area Current Assessment. The presentation of the results of the MNA is via a "Stop-light" Chart (**Attachment 5**). The chart shows the "Mission Area Tasks" from the MNA ("Task-to-Need") versus the weapons systems/capabilities and supporting weapons/munitions/capabilities, and our current ("on the ramp") and programmed (FYDP) capability to satisfy those mission tasks. The "Mission Area Current Assessment" is a macro-level chart used to "set the stage" for the subsequent MNA discussion and Weapons System Roadmaps.

9.1.1. Optional Means of Presentation. Use an overall summary chart for the mission area when several figures/charts capture the information in the "Mission Area Current Assessment." The summary may be supported by the individual weapons system/capability assessments. Pro-

vide sufficient detail to link the solutions selected in the MAP to specific deficiencies. Use supporting subparagraphs for every task/sub task rated other than "Green."

9.1.2. Initial Analysis. Part of the MNA is an ongoing affordability analysis at the Mission Area level to select options for deficiency correction. Capture the results of this analysis in the MAP to preserve the STT logic.

10. Mission Area Plan (MAP paragraph 4). This paragraph and supporting subparagraphs will outline the measures to correct the MNA identified deficiencies. Corrections may be nonmateriel and may be reflected in changes to operational manuals and guidance. TPIPTs provide the primary support to develop the solutions described in the roadmaps by applying a "Need to Concept" and "Concept to Technology" methodology. TPIPTs, starting with deficiencies identified in the MNA, develop a range of near-term, mid-term, and far-term solutions to provide MAJCOMs with planning alternatives for evaluation in selecting preferred solutions. TPIPTs then break the concepts down further to define critical and enabling technologies necessary to implement the systems. Materiel solutions/technology development efforts are described in a modernization roadmap that outlines the mission area in terms of all the assigned force elements over the next 25 years, including new acquisitions. Individual weapon system road maps provide increased levels of detail depicting how technology transitions, modifications, and key software upgrades become incorporated in the weapon system over time. For technologies not yet ready for transition to a specific weapon system, but providing leverage for the entire mission area, mission area critical/enabling technologies diagrams and descriptions depict development timelines, forecast availability rates, and provide current funding status.

10.1. Summary of Task Deficiency and Solution. The supporting subparagraphs provide the required detail to demonstrate the flow of task identification, capability evaluation/deficiency identification, and solution selection rationale. Detailed information will include: Pros and cons of changing the strategy, tactics, techniques, training, or procedures to satisfy the need (non materiel solutions). Pros and cons of increasing quantities in terms of manpower, equipment, or other support. Pros and cons associated with modifying or modernizing existing equipment. Pros and cons associated with developing and acquiring a new capability. Finally, include selected solution(s) rationale.

10.2. Weapons System/Capability Modernization Roadmaps (MAP paragraph 4.1). This section outlines a detailed modernization plan for each weapons system/capability within the mission area. This shows the plan for improving the weapon system capability throughout the 25- year period. This is a look at a weapon system solution to this particular mission area deficiencies. You would discuss the improvements necessary to each of these depicted systems to overcome the deficiencies. This information would be depicted in a time phased chart as illustrated in **Attachment 6** to provide a snapshot view of the weapon system needs in this mission area. The following paragraphs provide more detail on the required "word picture."

10.2.1. Item Deficiency Supports Correction. The supporting paragraphs describe, in detail, how each "item" supports mission area deficiency correction through enhancement of weapons systems/capabilities (current or planned). They also detail how the items described affect the evolution of the weapons system/capability over the next 25 years. The programs described in the modernization figure and supporting paragraphs include: current force structure/acquisition (forecast for 25 years) and delivery plans; insertion of key technologies/sciences--technology transitions; hardware updates; major software updates (that change functionality); weapons/munitions/supporting capabilities updates that support the overall weapons system/capability (if not sepa-

rately covered); and tactics/procedural changes that correct mission area task deficiencies. For the weapons/munitions/supporting capabilities updates, include transition of key technologies, hardware updates, and major software updates (functionality changes).

10.2.2. Status. The supporting paragraphs should expand on the "Status" to include requirements documents, acquisition milestones, development/test progress, and/or factors impacting funding and the adequacy of funding as appropriate. The intent of this paragraph is to provide a complete status and discussion of each item while covering all relevant issues impacting this weapons system/capability's ability to contribute to specific mission area task deficiency corrective actions.

10.3. Mission Area Critical/Enabling Technologies (MAP Paragraph 4.2). These supporting paragraphs describe, in summary, the contributions specific Science and Technology (S&T) programs have in correcting identified task deficiencies. This discussion continues the identification of the deficiency-to-solution linkage to include the critical and enabling technology needs and related technology projects. The specific S&T projects discussed are those that have been identified through TPIPT/Lab activities in support of the MAP process. Provide the same level of detail here as provided in the individual weapons systems and capabilities descriptions (see paragraph **10.2.1.**). The technology programs to include in this paragraph are pervasive 6.3 *Advanced Technology Demonstrations (ATD)* with mission area-wide application--(6.3A programs transitioning to specific weapons systems should be included as part of the specific weapons system modernization discussion), 6.2 *Science and Technology Programs* (to include critical experiments), 6.1 Basic Research Programs (must be tied to a specific mission area deficiency), and Industrial Independent Research and Development (IR&D) Programs. Report the status for each program as described in paragraph **10.2.2.** See **Attachment 7** for a sample graphic display.

10.4. MAP Science and Technology Products (MAP paragraph 4.3). This paragraph is critical to showing the top level linkage between the technology requirements of projected future acquisition programs and the S&T investment recommendations contained in the S&T inputs to Air Force FYDP programming. This paragraph contains summaries, across the entire mission area, of key technologies identified in the MAP paragraph 4.2 descriptions. Descriptions contained in this paragraph, in addition to further details provided in MAP paragraph 4.2, will provide overall guidance to the Labs for technology area planning and to industry for independent research and development program planning.

11. Mission Area Post Investment Assessment (MAP paragraph 5). Like the Current Assessment in paragraph **9.1.**, the post investment assessment "sets the stage" for the MAP Summation. Using the same format as the "Current Assessment," the "Post Investment Assessment" shows the impact of the modernization/enhancement efforts described in the MAP. Again, it is a macro level chart that is easily and quickly understood. Supporting charts used to add details to the "Current Assessment" are not necessary to support the "Post Investment Assessment" since that detail is in the individual modernization roadmaps and Critical Enabling Technologies discussions. See **Attachment 8** for a graphic display.

12. Summation (MAP paragraph 6). The Summation captures the critical actions necessary to realize the deficiency corrections and enhanced combat capabilities for the particular mission area presented in the MAP. Highlight "Linchpin" actions like the availability and insertion of key technologies and hardware and major software updates. The combined effect desired from the MAP is an easily understood, logical, and therefore supportable plan for achieving required future combat capability.

13. Functional Area Plan. The FAP will follow the MAP format and methodology to the extent applicable. That is, FAPs will adapt all elements of the MAP document and briefing, omitting those that do not apply (such as simulation or modeling techniques peculiar to weapon systems). FAPs will expand on others as necessary (for example, statutory and regulatory requirements bearing on functional area tasks). The FAP should reference, but must not duplicate, functional requirements that are particular to a single MAJCOM or mission-area.

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DCS/Plans and Operations

Attachment 1

GLOSSARY OF REFERENCES, ABBREVIATIONS, ACRONYMS, AND TERMS

References

NOTE:

The user of this instruction is responsible for verifying the currency of the cited documents.

CJCS MOP 7, *Joint Strategic Planning System*, March 17, 1993

CJCS MOP 77, *Requirements Generation System Policies and Procedures*, September 17, 1992

Joint Pub 1-02, *Department of Defense Dictionary of Military and Associated Terms*, March 23, 1994

DoD Directive 5000.1, *Defense Acquisition*, February 23, 1991

DoD Instruction 5000.2, *Defense Acquisition Management Policies and Procedures*, February 23, 1991 (To include Air Force Supplement 1. See future Publishing Bulletin (PB) for availability of this publication.)

DoD 5000.2-M, *Defense Acquisition Management Documentation and Reports*, February 1991 (To include Air Force Supplement 1. See future PB for availability of this publication.)

DoD 5200.1-R/AFR 205-1, *Information Security Program Regulation*, April 28, 1987

DoD 7045.7-H, *FYDP Program Structure*, April 1992 (Book 2-Classified)

AFDD 2 DRAFT, *Theater Air Warfare*, December 1993

AFPD 10-6, *Mission Needs and Operational Requirements Use Agreements* (formerly AFR 57-1)

AFPD 10-14, *Modernization Planning*

AFI 10-601, *Mission Needs and Operational Requirements Guidance and, Procedures*(formerly AFR 57-2)

AFM 11-1, *Air Force Glossary of Standardized Terms* (to be incorporated into the AFDD series at a later date)

AFI 14-208, *Intelligence Support to the Air Force Acquisition Process*

AFI 32-70, *Environmental Quality*

AFI 33-102, *Command, Control, Communications, Computers, and Intelligence (C4I) Capabilities Planning* (formerly AFR 700-2)

AFPD 37-1, *Air Force Information Management* (formerly AFR 4-1)

AFI 37-123, *Management of Records* (formerly AFR 4-34)

AFI 37-124, *Management and Control of Information Reports Requirements* (formerly AFR 4-38)

AFI 37-132, *Air Force Privacy Act Program (PA)* (formerly AFR 12-35)

AFP 172-4, *The Air Force Budget Process* (to be incorporated into the 65 series at a later date)

Abbreviations and Acronyms

AFI—Air Force Instruction
AFPD —Air Force Policy Directive
AFR—Air Force Regulation
BPPBS—Biennial Planning, Programming, and Budgeting System
CONOPS—Concept of Operations
DoD—Department of Defense
DPG—Defense Planning Guidance
FAP—Functional Area Plan
FOA—Field Operating Agency
FY—Fiscal Year
FYDP—Future Years Defense Program
GR-GP—Global Reach-Global Power
HQ USAF—Headquarters, United States Air Force
IPL—Integrated Priority List
JCS—Joint Chiefs of Staff
MAA—Mission Area Assessment
MAJCOM—Major Command
MAP—Mission Area Plan
MNA—Mission Needs Analysis
MNS—Mission Need Statement
M & S—Modeling and Simulation
OCR—Office of Collateral Responsibility
OPR—Office of Primary Responsibility
ORD—Operational Requirements Document
OSD—Office of the Secretary of Defense
POM—Program Objective Memorandum
SAF—Secretary of the Air Force
SECDEF—Secretary of Defense
STT—Strategy-to-Task
TPIPT—Technical Planning Integrated Product Team

Terms

NOTE:

The purpose of this glossary is to help the reader understand the terms used in this publication. It is not intended to encompass all pertinent terms. Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 23 March 1994, and AFM-11-1, *Air Force Glossary of Standardized Terms*, contain standardized terms and definitions for Department of Defense and US Air Force use.

Aerospace Modeling and Simulation Hierarchy—The level or levels of resolution at which a model is operating. The four levels related to simulation of aerospace power are:

Campaign--Simulations that attempt to emulate all elements of aerospace power over the duration of a conflict and across the theater or theaters of operations. Time scale normally in days to weeks. Represents the strategic and operational levels of warfare.

Mission--Simulations of one or more interacting elements of aerospace power across all or part of the theater of operations. Time scale normally in hours. May represent the operational and tactical levels of warfare.

Engagement/Sub-mission--Simulations of weapon system and/or support system performance in a limited environment. Engagements ranging from one on one to many on many, or a portion of full system capability. Time scale normally in seconds to minutes. Represents the tactical level of warfare.

System/Subsystem/Component--Detailed engineering or scientific simulation of a single system, subsystems, and components across ranges of operations and environments. Time scales range from micro-seconds to minutes or more. May represent the tactical level of warfare.

Concept of Operations (CONOPS)—A verbal or graphic statement, in broad outline, of a commander's assumptions or intent in regard to an operation or series of operations. The concept of operations frequently is embodied in campaign plans and operation plans; in the latter case, particularly when the plans cover a series of connected operations to be carried out simultaneously or in succession. The concept is designed to give an overall picture of the operation. It is included primarily for additional clarity of purpose. Also called commander's concept. (Joint Publication 1-02)

Critical Enabling Technology Identification—For each preferred candidate system concept selected by the MAJCOM planners, the TPIPTs identify the critical technology needs that must be developed to allow the solution to be acquired. The Air Force TEO, working closely with the TPIPTs and MAJCOM planners through the AFMC Technology Master Process (TMP), identifies and selects the critical technologies that must be developed to satisfy these technology needs and, in turn, provide the desired new capability.

Future Years Defense Program (FYDP)—The official document, effective with the FY 92 Biennial Planning, Programming, and Budgeting System (BPPBS) cycle, that summarizes Secretary of Defense-approved programs for the Department of Defense (DoD). The FYDP projects detailed source requirements for 6 years and force structure for 9 years. During the BPPBS process, the FYDP is updated three times every year to reflect the Services' Program Objective Memorandum, Services' budget estimate submission, and the DoD portion of the President's budget. (AFI 10-601)

Information Security—The result of any system of policies and procedures for identifying, controlling, and protecting from unauthorized disclosure, information, whose protection is authorized by executive

order or statute. (DoD 5200.1-R/AFR 205-1)

Mission Area Assessment (MAA)—A process designed to enhance Air Force warfighting capabilities by identifying military objectives in the Defense Planning Guidance (DPG), the Joint Strategic Capabilities Plan (JSCP), Air Force guidance, and regional Operations Orders and Operations Plans. MAA uses a "strategy-to-task" methodology to identify the operational and support tasks needed to achieve military objectives. (AFI 10-601). This product uses simulation and analysis tools to assist in estimating the best use of current forces and capabilities and identifies areas if improved could yield greatest increase in capability. (DoDI 5000.2,Part 4, page 4-B-3) (HQ USAF/XOM)

Mission Deficiency—The inability to accomplish an operational or support task required for the achievement of a military objective. (AFI 10-601)

Mission Need Analysis (MNA)—A process designed to assess the Air Force's ability to accomplish the tasks identified during Mission Area Assessment (MAA). MNA uses a task-to-need methodology to identify mission needs. MNA can also highlight technological opportunities and identify reliability and maintainability improvements that can also enhance warfighting capabilities. (AFI 10-601) This product uses simulation and analysis tools to assist in identifying plausible operational concepts (alternatives) with potential to improve warfighting performance and roughly estimates amount of improvement in ability to achieve objectives associated with each candidate operational concept. (DoDI 5000.2,Part 4, page 4-E-3) (HQ USAF/XOM)

Mission Need Statement (MNS)—A document prepared to identify a requirement for a materiel solution to satisfy a mission deficiency. (AFI 10-601)

Modification—An alteration to a produced materiel item applicable to aircraft, missiles, support equipment, trainers, etc. The alteration changes, as a minimum, the fit or function of the item.

Need—The identification of a mission deficiency satisfied by a materiel or nonmateriel solution. If a materiel solution is envisioned, it is normally documented in a Mission Need Statement (MNS). (AFI 10-601)

Operational Concept—As an integral component of the acquisition process, an operational concept is the user's description of the deployment, employment, operation (to include maintenance and support), and redeployment of a modified, upgraded, or envisioned military system. An operational concept delineates a specific system's application across all mission areas and is written as a specific solution to a deficiency identified in an approved Mission Need Statement (MNS). This solution is then documented in an Operational Requirements Document (ORD). (AFM 11-1)

Operational Requirements Document (ORD)—A document prepared by the respective using command that describes pertinent quantitative and qualitative performance, operation, and support parameters, characteristics, and requirements for a specific candidate weapon system. It has a mandatory attachment called the requirements correlation matrix (RCM). (AFI 10-601)

Program Objective Memorandum (POM)—A biennial memorandum submitted to the Secretary of Defense (SECDEF) from each Military Department and Defense agency. It proposes total program requirements for the next 6 years. It includes rationale for planned changes from the approved Future Years Defense Program (FYDP) baseline within fiscal guidance issued by the SECDEF. (AFM 11-1)

Requirement—An established need that justifies the timely allocation of resources to achieve a capability to accomplish approved military objectives, missions, or tasks. (AFI 10-601)

Requirements Correlation Matrix (RCM)—A three-part matrix spreadsheet used to provide a system audit trail of the capabilities and characteristics identified in the Operational Requirements Document. It lists user-identified system capabilities and characteristics with accompanying thresholds and objectives; identifies user recommended key performance parameters; provides supporting rationale justifying each threshold; and rationale for changes in requirements as the system matures. (AFI 10-601, AFM 11-1)

Strategies-to-tasks—Strategies-to-tasks provides an audit trail from the broadest national objectives and strategies down to operational activities at the tactical engagement level. The framework explicitly disaggregates these activities into key functional elements encompassing the tactics, organizations, and systems that enable the successful execution of missions; it also gives high visibility to the interrelationships among these elements. (RAND Strategies to Tasks study)

Technical Planning Integrated Product Team (TPIPT)—TPIPTs are responsible for identifying and addressing customer technology needs with an optimized and integrated AFMC response. The TPIPT serves as the primary interface between the MAJCOM and AFMC to ensure that the MAP and the related TMP budgets and schedules are fully integrated and mutually supporting. The TPIPTs consist of a team of users, development planners, systems engineers, scientists, logisticians, and test engineers that tap all AFMC organizations and expertise to respond to customer needs. The TPIPT provides support to the Mission Area Planning process during all phases from MAA through development of the MAP.

Technology Master Process (TMP)—The Air Force Materiel Command's process for planning and executing a seamless AFMC technology strategy. As related to Mission Area Planning, the TMP involves: (1) the identification of customer deficiencies requiring technology solutions; (2) the development of candidate system solutions providing a range of technology solutions; (3) the generation of technology needs identifying specific levels of performance or capability required to enable the candidate solution; (4) the definition of S&T projects required to meet the critical enabling technology needs; and (5) the organization of S&T resources (Air Force Labs, National Labs, and industry and university R&D) into a balanced program response to all AFMC customers.

Weapon System—A combination of one or more weapons with all related equipment, materials, services, personnel, and means of delivery and deployment (if applicable) required for self-sufficiency. (Joint Publication 1-02)

Attachment 2

**NOTIONAL MISSION AREA IPT MEMBERSHIP AND WEAPON SYSTEM/CAPABILITY/
FUNCTIONAL IPT MEMBERSHIP**

Mission Area Team Membership (NOTIONAL)

Core Members	Advisors
Team Leader (Normally O-6)	SG
TPIPT Chief	Legal
Intel	Financial
Logistics	Contractors
Functional Team Leaders	Experts/Specialists
Executive Committee	

**Weapons System/ Capability/
Functional IPT Membership (NOTIONAL)**

Core Members	Advisors
Team Leader (O-4/O-5)	*C4
Program Management	*Training
Functional Experts	**Specialists
– Operations	*SG
– Logistics	*Intel
– Test & Evaluation	Analysts
Laboratory(s)	*CE
Tactics Development (For Weapons Systems)	PPBS/Financial
TPIPT Representative	*R&M
	Contractor(s)
	*SP
Executive Committee	Plans
	Legal
	*Weather
* Core when serving as functional experts	
** Same as above but represent disciplines like avionics software engineering, bioenvironmental, etc.	

Attachment 3

SAMPLE TITLE PAGE

(UNCLASSIFIED SAMPLE)

SECRET/NO FOREIGN DISSEMINATION/

**WARNING NOTICE: Intelligence Sources and/
or Methods Involved**

Air Force Modernization Planning



**Counter Air
Mission Area Plan**

OPR: ACC/DRA
28 Jun 93

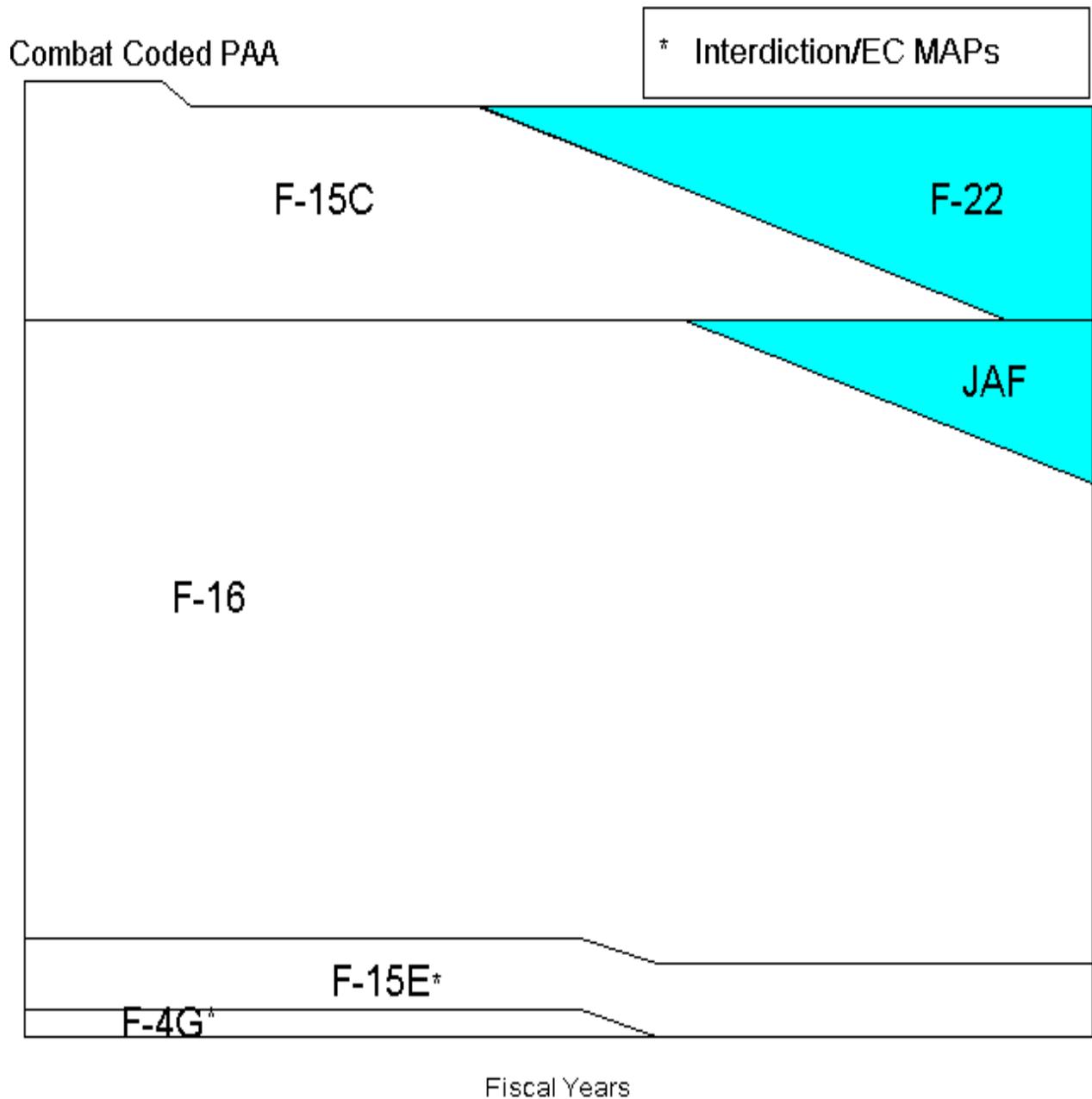
Classified By: Multiple Sources
Declassify On: OADR

SECRET/NOFORN/NOINTEL

Attachment 4

COUNTER AIR FORCE STRUCTURE

Counter Air Force Structure (Example)



Attachment 5

MISSION AREA CURRENT ASSESSMENT

Mission Area Current Assessment

(Example Format)

G = Green (Good Capability)
 Y = Yellow (Limited Capability)
 R = Red (No Capability)

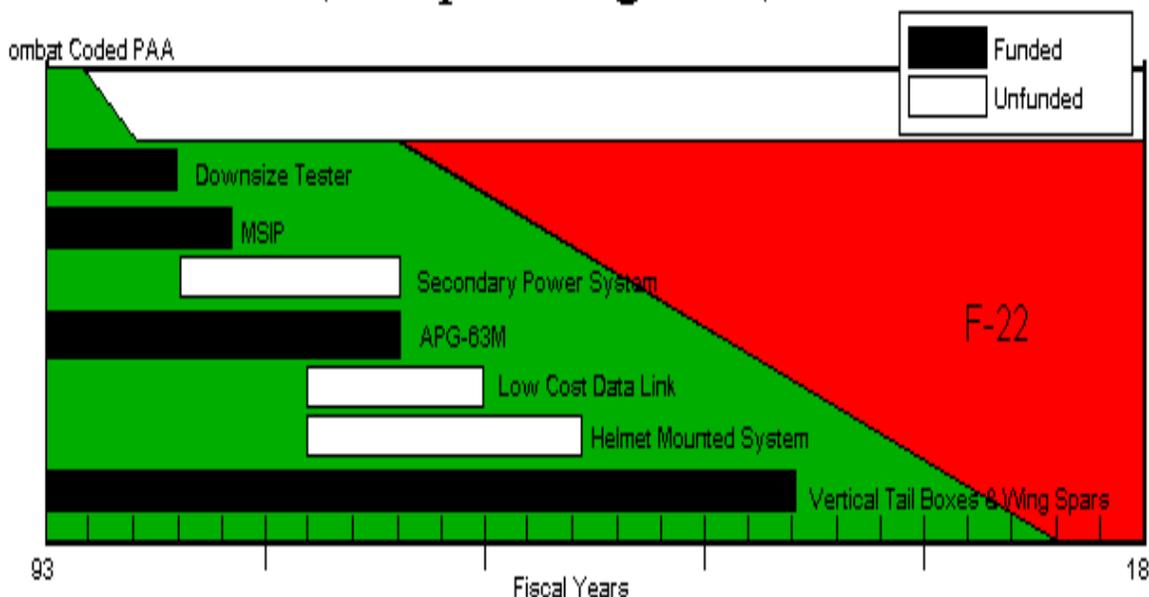
Tasks \ Capabilities	Maintain Readiness	Hold Assigned Targets At Risk	Deficient Features/ Characteristics
Penetrate Defenses	N/A	 	
Destroy/Damage Targets	N/A	 	
Subtask - Fixed Targets	N/A	 	
Subtask - Hardened Targets	N/A	 	
Subtask - Mobile Targets	N/A	 	
Subtask - Deep/Buried Tgts	N/A	 	
Generate Alert Forces	 	N/A	
Rapid/Flexible Response	 	N/A	
Conduct Realistic Trng/Exercise	 	N/A	
Provide C4I	N/A	 	
Provide Strat Recce	N/A	 	
Provide Tanker Support	N/A	 	

Attachment 6

F-15C MODERNIZATION ROADMAP

Status. On the figure a simple "Funded" (FYDP funded) or "Unfunded" is sufficient.

F-15C Modernization Roadmap (Sample Programs)



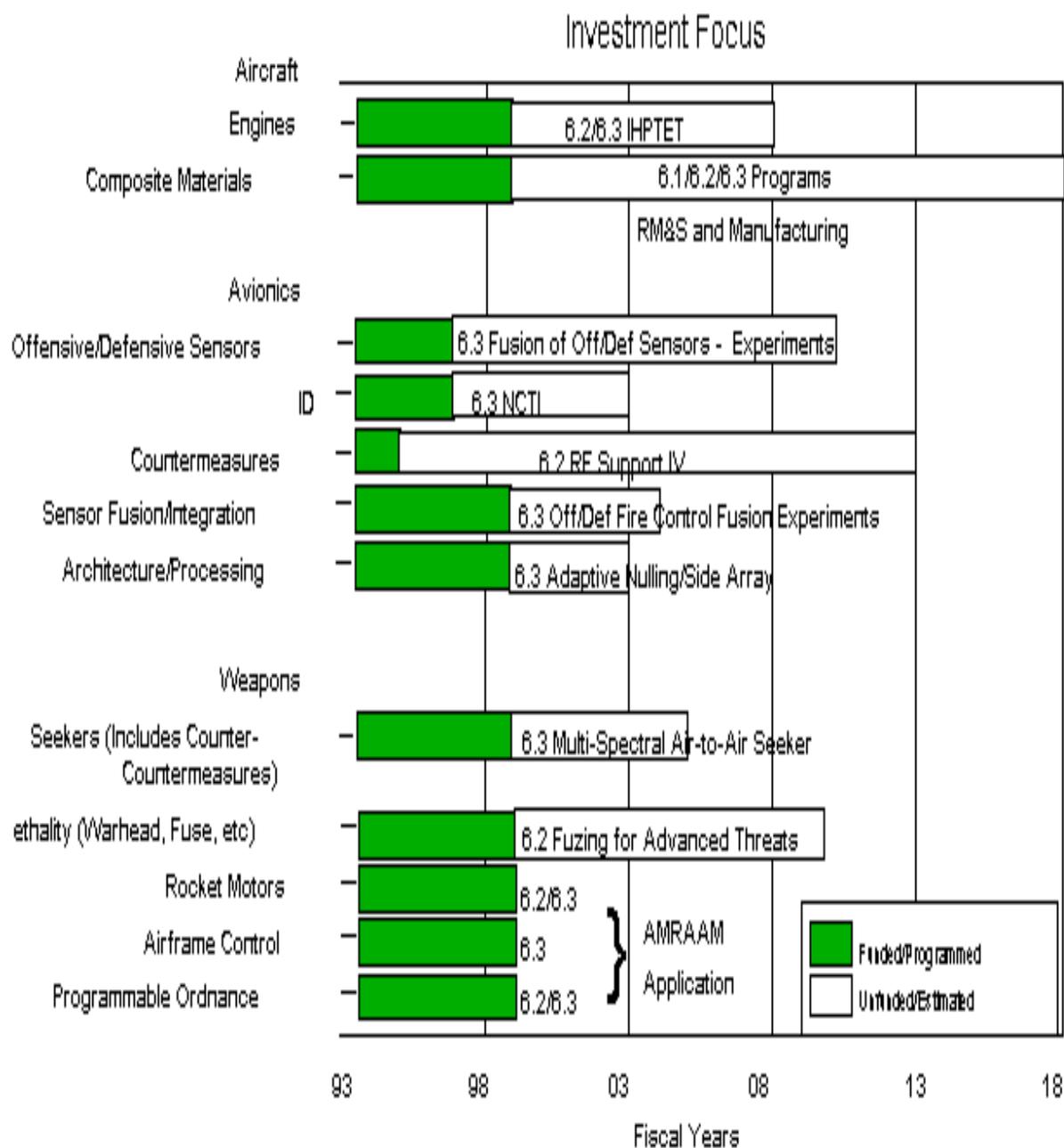
Planned/Potential Enhancements

Name	Description	Status
Downsized Tester	Fast, more reliable fault analysis	Funded
MSIP	Avionics Upgrade - required for AMRAAM	Funded
Sec Pwr	Replace CGB, AMAD, etc.	Unfunded
APG-63M	Incorporation of the APG-63M Radar	Funded
Data Link	Expanded Situational Awareness	Unfunded
HMS	Helmet Mounted Sight for cuing	Unfunded
Tails/Spars	New Design - Upgrade to 8,000 Flight Hours	Funded

Attachment 7

COUNTERAIR CRITICAL ENABLING TECHNOLOGIES

CounterAir Critical Enabling Technologies
(Example Technologies)



Attachment 8

MISSION AREA POST INVESTMENT ASSESSMENT

Mission Area Post Investment Assessment

(Example Format)

G = Green (Good Capability)
 Y = Yellow (Limited Capability)
 R = Red (No Capability)

Tasks \ Capabilities	Maintain Readiness	Hold Assigned Targets At Risk	Enhanced Features/ Characteristics
Penetrate Defenses	N/A		
Destroy/Damage Targets	N/A		
Subtask Fixed Targets	N/A		
Subtask Hardened Targets	N/A		
Subtask Mobile Targets	N/A		
Subtask Deep/Buried Tgts	N/A		
Generate Alert Forces		N/A	
Rapid/Flexible Response		N/A	
Conduct Realistic Trng/Ex		N/A	
Provide C4I	N/A		
Provide Strat Recce	N/A		
Provide Tanker Support	N/A		