

**BY ORDER OF THE
SECRETARY OF THE AIR FORCE**

AIR FORCE INSTRUCTION 11-412

10 DECEMBER 2009

Flying Operations

AIRCREW MANAGEMENT



COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available on the e-Publishing website at www.e-Publishing.af.mil for downloading or ordering.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: HQ USAF/A3O-AT
Supersedes: AFI11-412, 25 April 2005

Certified by: HQ USAF/A3O-A
(Mr. Gerald F. Pease, Jr., SES)

Pages: 78

This instruction implements AFPDs 10-2 *Readiness* and 11-4 *Aviation Service*. It provides guidance and procedures for the management of all aircrew members. It applies to all US Air Force aircrew managers, commanders of flying units and organizations with authorized/assigned aircrews, and aircrew personnel. This instruction applies to Air Force Reserve Command (AFRC) Units and the Air National Guard (ANG). It is exempt from Reports Control Symbol licensing procedures in accordance with AFI 37-124, *The Information Collections and Reports Management Program*. Ensure that all 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 Air Force Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims/>. Ensure all records collected as a result of compliance with this publication are correctly scheduled and that the information as stated in the RDS is current and valid to include form numbers, office symbols, retention periods, etc. If discrepancies exist in the RDS, follow instructions in AFI 33-364 and AFMAN 33-363 to update the schedule. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Form 847s from the field through the appropriate functional's chain of command. Send comments and suggested improvements to this instruction on AF Form 847, Recommendation for Change of Publication, through channels to HQ USAF/A3O-AT, 1480 Air Force Pentagon, Washington DC 20330-1480. A glossary of references and supporting information is at **Attachment 1**.

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. Major changes include: the expansion of existing chapters; updates and revision to Aircrew Management functions, processes, and oversight; a more detailed discussion of the Aircrew Management System; and, updated formulas.

Chapter 1—RESPONSIBILITIES	5
1.1. Purpose.	5
1.2. Aircrew Member.	5
1.3. Aircrew Management.	5
1.4. Who Must Comply.	5
1.5. Chief of Staff of the Air Force (CSAF).	5
1.6. Deputy Chief of Staff for Operations, Plans & Requirements (HQ USAF A3/5).	5
1.7. Deputy Chief of Staff for Manpower, Personnel, and Services (HQ USAF/A1). .	8
1.8. Deputy Chief of Staff, Plans and Programs (HQ USAF/A8).	11
1.9. MAJCOM Responsibilities.	11
1.10. Air Force Reserve Command	14
1.11. National Guard Bureau Air Operations Directorate (NGB/A2/A3).	15
1.12. Deputy Under Secretary of the Air Force, International Affairs (SAF/IA).	15
1.13. Operational Flying Wing Guidelines.	15
1.14. Field Operating Agencies (FOAs), Direct Reporting Units (DRUs), and Other Non-MAJCOM Organizations.	16
1.15. Waiver Authority.	16
Chapter 2—AIRCREW MANAGEMENT APPROACH	17
2.1. Objective.	17
2.2. Readiness-Sustainment Balance.	17
Figure 2.1. Aircrew Management Tenets.	17
2.3. Aircrew Management Policy.	18
Figure 2.2. Aircrew Management System.	18
Chapter 3—ABSORPTION	19
3.1. Definition.	19
3.2. Absorption (Goal/Capacity).	19
Figure 3.1. Elements of the Aircrew Management System.	20
3.3. Key Absorption Points:	20

3.4.	Absorption Dynamics/Calculations.	21
3.5.	Absorption Guidance.	26
Chapter 4—RECRUITING/ACCESSIONS AND TRAINING/PRODUCTION		28
4.1.	Overview.	28
Figure 4.1.	Absorption - Recruiting/Accessions - Training/Production Dynamics.	29
4.2.	Recruiting/Accessions.	29
4.3.	Training/Production.	30
4.4.	CEA and Other Non-Career Production/Training.	37
Table 4.1.	ATDR Cycle Event Sequence and Timeline and ATDR/PPBS Linkage.	37
Chapter 5—AIRCREW MANPOWER REQUIREMENTS		39
5.1.	General.	39
5.2.	Responsibilities.	39
5.3.	Key Points.	40
5.4.	Details.	41
Table 5.1.	Rated Categories (* indicates absorbable aircraft).	42
5.5.	CEAs and Non-rated Aircrew Member Authorizations.	45
Chapter 6—RETENTION, INVENTORY, AND DEVELOPMENT		47
6.1.	Retention.	47
6.2.	Aircrew Inventory.	48
6.3.	Development.	50
Table 6.1.	Special Duty Identifiers (SDI) and Reporting Identifiers (RI).	52
Table 6.2.	Rated Distribution and Training Management (RDTM) Codes.	53
Chapter 7—AIRCREW REQUIREMENTS-INVENTORY DELTA MANAGEMENT		57
7.1.	Overview.	57
7.2.	Redline/Blueline (RL/BL) Charts:	57
7.3.	Reduce/Eliminate Aircrew Shortfalls.	57
7.4.	Common Missteps.	58
7.5.	Rated Allocation Plans.	58
7.6.	CEA Priorities.	59
7.7.	Forms Adopted.	59
7.8.	Forms Prescribed.	59
Attachment 1—GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION		60

Attachment 2—FORMULAS, MODELS, SYSTEMS, AND TOOLS	71
Attachment 3—MEMBERSHIP	77

Chapter 1

RESPONSIBILITIES

1.1. Purpose. This instruction provides Air Force policy and guidance for managing the Lt Col-and-below aircrew force (pilots, navigators, combat systems officers [CSOs], weapon systems officers [WSOs], electronic warfare officers [EWOs], air battle managers [ABMs], career enlisted aviators [CEAs], flight surgeons, and X-prefixed personnel). It lays out the Air Force's approach to Aircrew Management, assigns responsibilities, and details processes and methodologies. (NOTE: Unless otherwise stated in this AFI, 'Combat Systems Operator' or 'CSO' include navigator, CSO, WSO, and EWO.)

1.2. Aircrew Member. AFD 11-4 Aviation Service (paragraph 3.1), is the source document for defining "aircrew". Pilots, CSOs, ABMs, and Flight Surgeons are rated officer aircrew members. Enlisted members holding AFSC 1AXXX are considered Career Enlisted Aviators. Some officer and enlisted aircrew members (e.g., 46F Flight Nurse, 4N0X1 Aerospace Medical Services Specialist, and 1N5X1 Airborne Intel Technician) are non-career aviators, and are referred to as non-rated aviators in this AFI.

1.3. Aircrew Management. The objective of Aircrew Management is to meet near-term, operational requirements while building leaders for tomorrow thereby ensuring a healthy aircrew force (i.e., combat ready and sustainable) to effectively support current and future Air Force missions. To ensure this strategic objective, Aircrew Managers have oversight responsibilities for Lt Col-and-below aircrew requirements and shaping inventories to match these requirements. Though there are myriad tactical responsibilities that contribute to effective Aircrew Management (e.g., Current Ops scheduling; ARMS inputs), the strategic Aircrew Managers are responsible for developing coherent and workable policies and executing sound practices at the command level to provide for the overall health of the aircrew force today and in the future. Strategic Aircrew Managers are Air Staff and MAJCOM level, to include NGB and AFPC. If an issue or initiative deals with numbers/types of aircrews or aircraft, it has Aircrew Management implications that require coordination with the Aircrew Management offices as described in this instruction.

1.4. Who Must Comply. The policies and requirements of this instruction apply to all Air Force organizations and personnel involved in managing the aircrew force. Unless otherwise stated in this AFI, 'Air Force' includes Active Duty, Guard, and Reserve. In addition to those outlined in this chapter, other responsibilities are established throughout this AFI, not only for the offices and organizations outlined below, but also for other SAF and HQ USAF offices as well. Also, this AFI outlines AF Aircrew Management responsibilities as they relate to non-AF organizations (e.g., Joint Staff and OSD) that have requirements for AF aircrew members.

1.5. Chief of Staff of the Air Force (CSAF). CSAF oversees Aircrew Management, and periodically convenes four-star-level aircrew summits to address aircrew issues.

1.6. Deputy Chief of Staff for Operations, Plans & Requirements (HQ USAF A3/5). HQ USAF A3/5 is the office of primary responsibility (OPR) for Aircrew Management. HQ USAF A3/5 develops strategy, policy, guidance, plans and processes/methodologies for functionally managing the aircrew force. For aircrew requirements/manning purposes, this office is specifically responsible for the AF Flight Standards Agency, AF National Security Emergency

Preparedness Agency, Nuclear Weapons & Counterproliferation Agency, AF Operations Group, and any other FOAs/DRUs/organizations aligned under HQ USAF A3/5.

1.6.1. Directorate of Operations (HQ USAF/A3O). HQ USAF/A3O develops and oversees implementation of CSAF and HQ USAF A3/5 policy/guidance governing aircrew training, readiness, and aircrew requirements/manning via the Aircrew Management Approach and processes/procedures outlined in this AFI. Unless otherwise directed by CSAF or HQ USAF A3/5, HQ USAF/A3O is approval authority for aircrew absorption/production levels and distribution plans; rated allocation methodology and oversight; and any other areas that have significant Aircrew Management implications.

1.6.1.1. Director of Air Operations (HQ USAF/A3O-A). HQ USAF/A3O-A is responsible for policy/oversight of air operations to include operational readiness, command & control, aircrew management, flying training, civil aviation, special ops & personnel recovery, classified programs, homeland defense, flight standards, airspace, ranges & airfield ops. CSAF-designated lead for tracking combat/contingency operations and exercises. Develops/assesses airpower employment and concepts.

1.6.1.1.1. Operational Training Division (HQ USAF/A3O-AT). HQ USAF/A3O-AT is responsible for the day-to-day conduct of Air Force Aircrew Management matters as directed in this instruction, to include formulating policy/guidance and processes/methodologies for the following: operational flying unit readiness parameters (experience mix, average time on station, and manning levels); aircrew manpower requirements; undergraduate flying training (UFT) production guidance; absorption calculations; distribution plans; and graduate level flying training requirements. AF/A3O-AT, in coordination with AF/A1PP, develops and publishes rated allocation plans (including HAF, Joint Staff, and OSD) approved by CSAF and designed to meet near-term operational as well as long-term leader requirements. The division provides Air Force Career Field Managers (AFCFMs) for all Pilots, Navigators/WSOs/EWOs/CSOs, ABMs, and CEAs (11XX, 12XX, 13BX, and 1AXXX AFSCs, respectively) to perform the above functions, as well as the AFCFM duties outlined in AFIs 36-2201 Volumes 1 and 5. Additionally, the division has CFM responsibilities for the 1C0X2 Aviation Resource Management AFSC. The AFCFMs are responsible for documenting, tracking, analyzing, coordinating and recommending improvements. The division also houses Program Element Monitors (PEMs), who are the MAJCOMs' advocates for formal flying training requirements resources/funding and conduit into the AF corporate process. HQ USAF/A3O-AT oversees aircrew requirements as directed in this AFI (Chapter 6) and in AFI 38-201, to include producing official Air Force aircrew manpower requirements projections (redlines) and approving/maintaining AF Forms 480 (Aircrew AFSC/Active Flying Justification) for SAF, OSD, JCS, and any other positions that do not fall under MAJCOM purview, as well as for all P/N-prefix billets (ref AFMAN 36-2105). The division also evaluates new X-prefix, non-rated aircrew position requirements to validate "full-time" in-flight duties specific to aircraft's primary mission in compliance with AFIs 11-401 and 11-402 and ensures aircrew qualification programs are in compliance with AFIs 11-202, Volumes 1 and 2 for all rated, CEA, and non-rated aircrew members.

1.6.1.1.1.1. Aircrew Management Executive Council (AMEC). At least

annually, HQ USAF/A3O-AT organizes and chairs a colonel/CEM-level AMEC conference whose attendees are Aircrew Managers from the operations and personnel communities across the Air Force. AMEC is a decision forum that assesses the health of the aircrew force by reviewing key aircrew force decisions/guidance and trends/issues/concerns, discussing improvement options, and developing proposals/taskers for further coordination/approval in the formal AF staffing process. The AMEC also provides a forum for ensuring Aircrew Managers have a sufficient and consistent understanding of Aircrew Management. Aircrew issues normally discussed include: readiness parameters (experience mix, average time on station, and manning levels); manpower requirements; absorption; training/production; distribution; retention; rated allocation; requirements-inventory delta management; and any other issues or developments that may affect the aircrew force. A list of AMEC members is at Attachment 4.

1.6.1.1.1.2. AMEC Subgroups. AMEC Subgroups are established to collect information, work issues, and develop proposed positions for presentation to AMEC. The AMEC Subgroups and their Chairs are: Training Management – AETC/A3R; CAF – ACC/A3T; MAF – AMC/A3T; SOF – AFSOC/A3T; CEA – AF/A3O-AT; Ad Hoc – As designated by AMEC. Each AMEC, Subgroup Chairs will report on: State of Force; Subgroup Work done since last AMEC; Outstanding Taskers with Recommendations; Issues affecting force. Preparations for AMECs are the purview of the Subgroup Chairs, who have complete responsibility and autonomy over their respective Subgroups (e.g., meeting venue and attendees).

1.6.1.1.1.2.1. AMEC Training Management Subgroup (ATMS). The Training Management Subgroup is a crosscutting Subgroup, that addresses training requirements and management issues that affect each of the other Subgroups. Training is the primary facilitator for making the aircrew management “system” work. The focus of this subgroup is on training related issues that impact aircrew management. The subgroup is chaired by HQ AETC/A3R. The Core membership of the ATMS are those organizations that have training management responsibilities (HQ USAF/A3O-AT and A1PP; HQ AETC/A3R and A3F; HQ AFPC/DPA; lead MAJCOM/A3; AFSOC/A3; ANG/A3; and AFRC/A3 representatives). SAF/IAPX will participate as desired/required to represent international training issues. The ATMS does the following: facilitates the Aircrew Training and Distribution Requirements (ATDR) process (including the identification, validation, consolidation, programming and resourcing of requirements); reviews Distribution Plans, Undergraduate/Graduate Program Requirements Documents (UPRDs/GPRDs), Planning Program Guidance Letter(s) (PPGL) and Programmed Flying Training (PFT) documents for consistency; identifies any projected over-/under-production, breaks in training, and other deviations that could adversely affect the Training and Force categories; provides visibility into the pipeline training flow and management with an eye toward improving effectiveness/efficiency. The ATMS, normally an ‘AO-level’ group, is responsible for keeping the AMEC apprised of its activities and progress.

1.6.1.1.1.2.2. **Aircrew Management Document (AMD).** Includes any materials AF/A3O-AT deems appropriate to archive and might include: historical account of aircrew management significant decisions/initiatives since the last AMD was published; AMEC briefings and background papers; operational unit experience, average time on station (TOS), and actual manning level data for the end of the fiscal year; requirements and inventory actual data for the end of the fiscal year; Total and Major Weapon System (MWS) requirements vs. inventory projections (Redline/Blueline charts); retention statistics; UFT planned and actual data; distribution planned and actual data; forecast allocation and actual data; and experience definitions, criteria, and mix. The AMD will document the deliberations/decisions of AMEC and any other forum germane to Aircrew Management (e.g., AF Ops Conference; Realistic Training Review Board).

1.6.2. **Directorate of Operational Capability Requirements (HQ USAF/A5R).** Establishes Air Force policy and is the Air Force lead for the Joint Capabilities Integration Development System (JCIDS). The warfighter representative and lead for Air Force-wide Capabilities Development Process, effects-based capabilities functional solution, analysis, development and evaluation for combat forces, mobility, SOF, CSAR, C2ISR and electronic warfare. The directorate is the focal point for review and approval of validated MAJCOM needs and requirements statements. Two particular areas of HQ USAF/A5R work that have Aircrew Management implications are Capability Development Documents (CDDs) and Capability Production Documents (CPDs), which contain aircraft crew composition/ratio requirements and have impacts on a number of areas (e.g., formal training resources/funding/requirements, operational unit readiness/training/manning/funding), and aircraft modifications and associated schedules, which affect flying hour program execution, aircrew experiencing rates, and unit readiness/capability. Accordingly, these two areas require HQ USAF/A3O coordination. (A5R Divisions: A5RC – Combat Forces; A5RE – EW & Cyberwarfare; A5RM – Global Mobility, Special Operations & Combat Search and Rescue)

1.7. Deputy Chief of Staff for Manpower, Personnel, and Services (HQ USAF/A1). Assists the Secretary of the Air Force and the Chief of Staff of the Air Force in carrying out the manpower and personnel programs of the Department of the Air Force. Within manpower and personnel programs, the HQ USAF/A1 is responsible for preparing policies and issuing official guidance/procedures for implementing these policies. Among the duties described by HAF Mission Directive 1-32, the HQ USAF/A1 is responsible for developing and administering policies for identification and adjustment of Air Force manpower and personnel requirements. Additionally, the HQ USAF/A1 is responsible for overseeing all aspects of Total Force sustainment to include, family matters, equal opportunity, quality of life initiatives, military dress and appearance, commanders' programs, civilian regionalization, labor relations, and rated force management. Three FOAs report to the AF/A1: the AF Personnel Center, the AF Manpower Agency, and the AF Services Agency.

1.7.1. **Directorate of Force Development (HQ USAF/A1D).** AF/A1D is responsible for developing "Airmen," both in terms of what Airmen deliver to commanders, and the programs that help commanders meet their Airmen's needs. Defines competencies and leadership attributes that Airmen must possess in order to become effective members of the

Air Force's Total Force. Develops education, training, and assignment guidelines with objective, measurable outcomes, which are used to shape the knowledge, skills, and expectations of Airmen through a continuum of experiences that will prepare them to execute and manage complex missions/programs, and lead people. Defines the Culture of Airmen—core standards, values, and expectations that all Airmen hold in common; and develops guidance to operationalize and sustain the culture. A1D is also the focal point for institutional competency development; that is the development of leaders within the Air Force.

1.7.1.1. Force Management and Development Council (FMDC). Corporate body that provides an institutional perspective on USAF-wide force management and development issues and makes strategic level recommendations to the SecAF and CSAF. The VCSAF chairs the FMDC. The AF/A1, Fas, MAJCOM/CVs, CMSAF, AFRC/CV, NGB/CF, and SAF/MR are members of the FMDC. The AU/CC and USAFA/CC will be advisors to the FMDC. The FMDC meets three times a year and is administratively supported by the Directorate of Force Development, AF/A1D.

1.7.2. Directorate of Manpower, Organization and Resources (HQ USAF/A1M). AF/A1M is responsible for defining AF manpower requirements and managing corporate AF Manpower and Personnel programming and resource distribution for the Total Force. AF/A1M also ensures corporate AF manpower requirements link mission capabilities to programmed resources. In doing so, AF/A1M provides AF/ A1 with the ability to prioritize programs and manage the Personnel portfolio within the Headquarters Air Force Resource Management Process (HAFRMP) and gives AF/A1 visibility on all Personnel assets, which is needed to effectively and efficiently manage enterprise operations and fund associated programs. From an aircrew perspective, AF/A1M ensures all aircrew manpower authorization changes and organizational adjustments that involve aircrews are coordinated/approved by HQ USAF/A3O-AT IAW this instruction and AFI 38-201. (A1MT – Personnel and Training Panel; responsible for personnel and training resource allocation issues, to include funding for Undergraduate Flying Training).

1.7.3. Directorate of Force Management Policy (HQ USAF/A1P). AF/A1P is responsible for developing objectives, performing analysis, and developing force management policies to effectively shape and balance the AF's Total Force workforce (Active, Guard, Reserve, and Civilians).

1.7.3.1. Military Force Policy Division (HQ USAF/A1PP). Serves as the A1 focal point for aircrew management personnel issues including, accession planning (based on the AF rated distribution plans published by HQ USAF/A3O-AT) and implementation guidance (Trained Personnel Requirement – TPR), inventory projections, and retention analysis, programs, and policy. Manages alternate aircrew manning efforts (e.g., civilian temporary over-hire, retired recall, and limited period recall initiatives) and works with AFPC/DPS to provide updates to USAF/A1P and A3O on the level of participation by each MAJCOM/FOA/DRU/organization. The Rated Force Policy Branch, HQ USAF/A1PPR, is the single-point rated POC within HQ USAF/A1. AF/A1PP, in coordination with AF/A3O-AT, develops and publishes rated allocation plans (including HAF, Joint Staff, and OSD) approved by CSAF and designed to meet near-term operational as well as long-term leader requirements.

1.7.3.2. Force Management Division (HQ USAF/A1PF). The Force Management Division (A1PF) is a strategically-oriented team that uses a wide-range of tools and talents to manage the force. A1PF functions include: analyzing officer, enlisted, and civilian personnel issues; evaluating the cost, effectiveness, and morale implications of major personnel issues; and developing, maintaining, and operating a variety of computer models (including the Air Force Rated Aircrew Management System [AFRAMS] and Enlisted Force Management System) and databases to analyze Air Force wide promotion, retention, accession, compensation, and separation policy alternatives. In 2001, AFRAMS replaced the Rated Management Decision Support System [RMDSS] as the official Air Force rated inventory model. A1PF uses AFRAMS to provide official aircrew inventory projections for use in requirements-inventory (Redline/Blueline) and rated allocation plan preparations, as well as, other rated management analysis needs (e.g., rated production, bonus take rates, ACIP projections, etc.).

1.7.4. Air Force Personnel Center (HQ AFPC). One of the three FOAs reporting to the HQ USAF/A1. Integrates and executes personnel operations to develop Air Force people and meet field commanders' requirements. Directs the overall management and distribution of military officers, lieutenant colonel and below; enlisted, senior master sergeant and below; and civilian personnel at grades GS-15 (or equivalent) and below. Conducts military and civilian personnel operations to include overseeing performance evaluations, promotions, retirements, separations, awards, decorations, uniforms, education, personnel procurement, disability processing and the Air Force's voting program. Develops contingency plans, maintains active-duty personnel records and provides transition assistance and support to Air Force retirees. Serves as the single manager for the military and civilian personnel data systems covering active-duty, Reserve, Guard and civilian personnel under the Total Force Management Concept.

1.7.4.1. Directorate of Assignments (HQ AFPC/DPA). Executes personnel policies/procedures set forth by AF/A1 to implement senior Air Force leadership guidance/instructions/priorities regarding active duty officer and enlisted assignments and force development. Utilizes AF distribution and rated allocation plans provided by HQ USAF/A3O-AT in determining how to fill aircrew requirements.

1.7.4.1.1. Operations Assignment Division (HQ AFPC/DPAO). Responsible for Air Force Lieutenant Colonel-and-below officer and Senior Master Sergeant-and-below CEA assignments to include filling aircrew school/flying training quotas with qualified officer/enlisted personnel. HQ AFPC/DPAO ensures aircrew assignments are made in accordance with Air Force guidance/instructions, priorities (i.e., AF aircrew rated allocation plans), established readiness objectives (unit manning, experience mix, and average time on station), and programmed flying training guidance as laid out in the AF Aircrew Distribution Plan, UPRD/GPRD, and Programmed Flying Training [PFT] documents provided by HQ USAF/A3O-AT and MAJCOMs. HQ AFPC/DPAO is a key participant in annual consolidated PFT conferences. HQ AFPC/DPAO tracks and provides current/projected data on unit/base manning and experience levels to HQ USAF/A1PP and HQ USAF/A3O-AT every 4 months after completion of a PCS assignment cycle match. The Enlisted Aircrew Assignments Team (DPAOM4) is responsible for AF-wide assignments for CEA in grade of SMSgt and below. Additionally, the Enlisted Aircrew Assignments

Team provides functional recommendations to HQ USAF/DPE (Chief's Group) on CMSgt assignments.

1.7.4.1.1.1. Pipeline and Trainer Assignments Branch (HQ AFPC/DPAOT). The AF OPR for assigning all Air Force Active Duty aircrew candidates and aircrews to formal survival and flying training schools/courses in accordance with AF Distribution Plans, Undergraduate/Graduate Program Requirements Documents (U/GPRDs), and Programmed Flying Training (PFT) documents. Consolidating training assignments under a single office facilitates implementation by efficiently and effectively aligning aircrews against planned numbers and types of survival/flying training quotas in compliance with the U/GPRD and PFT documents. PFT documents identify training requirements for a three-year period (execution year and two planning years) to help align training and budgeting processes, and to facilitate assignment-quota management. NOTE: For CEA's, HQ AETC/A3RF is responsible for ensuring completion of all prerequisite training (e.g., technical, survival). Once prerequisite training is completed, HQ AFPC/DPAOM4 provides assignment instructions and schedules follow-on weapons system training.

1.7.4.1.1.2. Force Development and Developmental Education Branch (AFPC/DPAPF). Using policies and guidance from AF/A1, AF/A1DL and AFPC/DPA, AFPC/DPAPF executes the Air Force developmental education selection process, including overseeing officer nominations, designations and placements in Intermediate and Senior Developmental Education (IDE/SDE), and providing functional and operational expertise to facilitate Development Team (DT) actions culminating in an annual Developmental Education Designation Board (DEDB) chaired by AF/A1. Additionally, AFPC/DPAF incorporates policies and guidance from AF/A1, AF/A1DI and AFPC/DPA on the development and execution of SECAF/CSAF Force Development objectives to meet current and future Air Force mission needs.

1.8. Deputy Chief of Staff, Plans and Programs (HQ USAF/A8). HQ USAF/A8 provides long-term planning and programming for the Air Force. Develops, integrates and analyzes the Air Force Future Years Defense Program (FYDP) and Long Range Plan to support the national military strategy. Formulates and evaluates options relating to readiness, sustainability, force structure and modernization for SECAF/CSAF. It is also responsible for all Program Change Requests (PCR), IAW AFI 16-501, *Control and Documentation of Air Force Programs*. Additionally, AF/A8 facilitates the Air Force Corporate Structure (Integrated Product Teams, Mission and Mission Support Panels, Air Force Group, Air Force Board, and Air Force Council), and provides the chairs of the Air Force Group and the Air Force Board.

1.8.1. Directorate of Programs (HQ USAF/A8P). Manages the Air Force Corporate Process and is responsible for developing, integrating, analyzing, and defending options relating to force structure, readiness, sustainability, and modernization. Force Programmers provide HQ USAF/A3O-AT official force structure data, and advise A3O-AT of any anticipated changes that have not yet been programmed.

1.9. MAJCOM Responsibilities. MAJCOMs have key aircrew management responsibilities, which are highlighted in this paragraph and elaborated upon in subsequent chapters and

referenced AFIs, to facilitate maintaining an aircrew force whose size and readiness enable it to accomplish the Air Force mission. For purposes of this AFI, MAJCOM/DO also refers to A3s and Xos. Also, for this AFI, ANG is considered a MAJCOM. MAJCOM responsibilities include:

1.9.1. **Readiness.** MAJCOMs with operational units (i.e., ACC, AMC, ANG, AFRC, AFSOC, AFSPC, PACAF, and USAFE) will:

1.9.1.1. Establish operational experience criteria/mix and average time on station (TOS) objectives by API (i.e., 1/2/9/A). Submit them, as well as any requests for changes once established, to HQ USAF/A3O for approval.

1.9.1.2. Work closely with their respective personnel centers to maintain the unit manning objective of 100% to the maximum extent possible for operational units. When operational unit manning exceeds 100%, readiness is negatively impacted. However, the reality of an environment of production-based FTU goals (versus absorption-based), coupled with an ever dwindling aircraft force structure may result in overmanning of flying units. The challenge to aircrew managers, AFPC in particular, is to monitor and manage unit manning overages as effectively and efficiently as possible. Overmanning, when required, is only authorized for line billets (i.e., API's 1, 2, 9, and A). AFPC will publish periodic reports to ensure MAJCOMs and Air Staff are kept apprised of current and forecast manning.

1.9.1.2.1. AFI 11-401 limits staff and flight surgeon flying positions. If approved for over manning of staff or flight surgeon API billets and there is an increase in a flying unit's mission requiring additional staff or flight surgeon operational flying support over current manning authorizations, process a double billeting aeronautical order "flying" waiver request IAW AFI 11-401.

1.9.1.3. Establish hours per aircrew member per month (HCM) objectives for inexperienced API-1/2/9/A aircrew members, and submit them (as well as any requests for changes once established) to HQ USAF/A3O for approval.

1.9.1.4. Provide Mission Design Series (MDS) and Major Weapon System (MWS) actual experience mix, average TOS, manning, and HCM data to lead commands for quarterly submission to HQ USAF/A1PP and HQ USAF/A3O-AT.

1.9.2. **Absorption.**

1.9.2.1. Lead MAJCOMs with operational units provide AF Distribution Plan inputs based on the absorption guidance in Chapter 3 (Absorption) and the procedures outlined in Chapter 4 (Recruiting/Accessions and Training/Production).

1.9.2.2. Manage the Total Force Absorption Program (TFAP) and Fighter Associate Program (FAP) as directed in the TFAP CONOPS and FAP MOA, respectively.

1.9.3. **Training.** Training serves two principal purposes for the Air Force. First and foremost it is the facilitator and supplier of qualified aircrew to feed and sustain the aircrew management system and aircrew force. Second, training is provided to Sister Services, international partner nations and other agencies in support of national and DoD policy. While there are several MAJCOMs that conduct formal training, AETC is the designated lead agency for training and provides leadership through AETC/A3R who chairs the ATMS

and assists in framing the Aircrew Training and Distribution Requirements process outlined in Chapter 4 of this instruction. Nonetheless, MAJCOMs have training responsibilities:

1.9.3.1. MAJCOMs and other components/agencies that require formal aircrew training will submit their requirements IAW Aircrew Training and Distribution Requirements (ATDR) process for inclusion in AF Distribution Plans, Undergraduate Programmed Requirements Document (UPRD), and Graduate Programmed Requirements Document (GPRD), as applicable. See Chapter 4 (Recruiting/Accessions and Training/Production).

1.9.3.2. MAJCOMs that conduct formal aircrew training will coordinate with the Air Staff (AF/A3O-AT/A8PC/A1MR/A1PP) any changes to formal training syllabi that may affect student production levels/flow (e.g., changing the B course length because the increase changes a members' status from TDY to PCS), training resources/personnel (e.g., aircraft, simulators, instructors), etc.

1.9.4. **Manpower Requirements.** All MAJCOMs are responsible for limiting or strictly controlling aircrew requirements growth for organizations/functions within their purview, and for providing HQ USAF/A3O-AT the results of their annual aircrew requirements review (ref AFI 38-201, Ch 11). In addition, MAJCOMs with Air Component roles are charged with limiting/controlling AF aircrew requirements, including both PCS personnel exchange program (PEP) / extended training service support (ETSS) billets and continuously manned TDY slots within the area of responsibility, in Unified Commands. Other MAJCOMs have oversight responsibility due to functional relationships or proximity. See Chapter 5 for additional details. MAJCOM/Manpower Offices must validate requested changes to manpower positions and ensure AF/A3O-AT concurs with changes prior to updating unit manpower documents.

1.9.4.1. **Aircrew Ratio (ACR) and Aircrew Composition.** MAJCOMs with operational flying units and the ANG are required to submit aircrew ratio/composition change requests with justification to lead MAJCOMs (if applicable). Requests should be forwarded IAW AFI 38-201, Chapter 11, for approval. Lead MAJCOMs, in close coordination with other affected MAJCOMs/ANG and AF/A5R, also submit proposed aircrew ratios/composition and associated justification as part of the initial capabilities document (ICD) for aircraft scheduled to enter the AF's operational inventory (these ICDs require AF/A3O coordination). MAJCOMs/ANG requests must include a detailed aircrew ratio/composition analysis/justification that addresses both mission tasking levels and aircrew readiness (i.e., shows that sorties/crewmember/month available will meet/exceed SCM required to maintain mission ready status). If approved, MAJCOMs/ANG will need to include the new crew ratio in its budget computations to compete for funding. Once funded, AF/A3O-AT will ensure appropriate changes are made to AFI 65-503, *U.S. Air Force Cost and Planning Factors*. Submit changes to AFI 65-503, Tables A36-1/A37-1/A38-1 to AF/A8PM. Additionally, ANG and AFRC are required to submit to AF/A3O/A1M for approval/coordination the breakout between Active, Technician, and Traditional Guard/Reserve authorizations and provide by-squadron total line aircrew authorization data to AF/A3O/A1M for approval/coordination.

1.9.4.2. **Programmed Flying Training (PFT) Instructor Aircrew Authorizations.** As the PFT student load changes, instructor authorizations will likely change. MAJCOMs

that conduct formal aircrew training will submit instructor aircrew authorization manning and any change requests to AF/A1M for coordination and to AF/A3O for approval (see Chapter 5, Aircrew Manpower Requirements). In addition to complying with the above coordination/approval guidance, AFRC and ANG are required to submit to AF/A3O/A1M for approval/coordination the breakout between Active, Technician, and Traditional Guard/Reserve authorizations and provide by-squadron total line aircrew authorization data to AF/A3O/A1M for approval/coordination.

1.9.5. Inventory Management.

1.9.5.1. **Rated Staff Allocation Plans** (see chapter 7). Ensure the effective use of rated resources by allocating entitlements in these plans to appropriately address current and future requirements (e.g., development and leadership).

1.9.5.2. **Alternate Manning** (see chapter 7). Submit alternate manning requests to HQ USAF/A1P for coordination and to HQ USAF/A3O for approval. If a request involves changes to aircrew manpower authorizations, it will also require AF/A1M coordination.

1.9.6. **Lead Command.** AFPD 10-9, *Lead Operating Command Weapon Systems Management*, designates lead commands. For aircrew management purposes, lead MAJCOMs are responsible for consolidating aircrew/aircraft inputs, reporting data, and making policy recommendations to the Air Staff in coordination with and on behalf of other MAJCOMs/agencies with the same type of weapon system. "Lead command" does not imply authority over other commands; it is a way to effectively and efficiently manage multi-command MDSs and MWSs. Exception: flying training and survival production requirements will be worked IAW the direction outlined in Chapter 4 of this instruction.

1.9.7. **MAJCOM Functional Manager (MFM).** Primary focal point and liaison between the MAJCOM and HQ USAF on all matters relating to the aircrew career fields and aviation resource management within the command. This includes, but is not limited to, responsibility for the aircrew training programs, coordination on aircrew resource allocations, and within the aviation resource management functional community, aviation and parachutist database management.

1.9.7.1. The CEA MAJCOM functional managers should be Chief Enlisted Managers (CEM) or civilian equivalents and generally will reside within the MAJCOM/DO/A3 community.

1.9.7.2. The Aviation Resource Management MAJCOM functional manager responsible for Aviation Resource Management System (ARMS) database management should be a Chief Enlisted Manager (CEM) or civilian equivalents with SEI 066 qualification IAW AFI 11-421, *Aviation Resource Management* and generally will reside within the MAJCOM/DO community.

1.9.7.3. MAJCOMs will provide HQ USAF/A1PP and HQ USAF/A3O-AT a current list of functional managers (AFSCs 11XX, 12XX, 13BX, 1AXXX, and 1C0X2) by 30 September each year.

1.10. Air Force Reserve Command Intelligence, Air, Space and Information Operations Directorate (HQ AFRC/A2A3). AFRC/A2A3 has oversight responsibility for the Air Force Reserve Command aircrew management function, to include ensuring AFRC data comparable to

that required of the Active Component is provided to HQ USAF/A3O-AT and HQ USAF/A1PP to facilitate Total Force aircrew management. AFRC will submit any formal flying and aircrew survival school training requirement inputs to AF/A3O-AT in accordance with the process outlined in Chapter 4 of this instruction.

1.10.1. Operations and Training Division (AFRC/A3T). AFRC/A3T is the OPR within the Air Force Reserve Command for aircrew management. AFRC/A3T works closely with AF/A3O-AT and AFRC/A1 to ensure AFRC aircrew management is integrated into AF/A3O-AT's Total Force management efforts and to ensure any changes are coordinated with / approved by AF/A3O.

1.11. National Guard Bureau Air Operations Directorate (NGB/A2/A3). NGB/A3, working in concert with NGB/A1FF, has oversight responsibility for the Air National Guard aircrew management function, to include ensuring ANG data comparable to that required of the Active Component is provided to HQ USAF/A3O-AT and HQ USAF/A1PP to facilitate Total Force Aircrew Management. The ANG will submit any formal flying and survival school training requirement inputs to AF/A3O-AT in accordance with the process outlined in Chapter 4 of this instruction.

1.11.1. Operations and Training Division (NGB/A3T). NGB/A3T is the OPR within the Air National Guard for aircrew management. NGB/A3T works closely with AF/A3O-AT and NGB/A1FF to ensure ANG aircrew management is integrated into AF/A3O-AT's Total Force management efforts and to ensure any changes are coordinated with / approved by AF/A3O.

1.12. Deputy Under Secretary of the Air Force, International Affairs (SAF/IA). SAF/IA provides long-term planning for international training and provides advocacy for international training requirements via the Air Force Corporate Structure (AFCS). SAF/IA is responsible for collecting, documenting, and submitting international flying training requirements in accordance with the Aircrew Training and Distribution Requirements (ATDR) process outlined in Chapter 4 of this instruction. It is their responsibility to advocate, prioritize, and educate the requirements process community of the importance and reimbursable nature of international training.

1.13. Operational Flying Wing Guidelines. This AFI does not mandate aircrew management responsibilities for Wing and Operations Group Commanders; however, some of the points outlined below are AF guidance for aircrew managers. The following paragraphs are offered as information to assist wing leadership in effectively managing its aircrews.

1.13.1. Authorized squadron/wing manning level, by crew position, is 100%. Overmanning may be necessary in order to maintain squadron experience mix or when overproduction and/or a decrease in force structure occurs.

1.13.2. If additional manning is needed due to a permanent increase in mission taskings, consider submitting a request for a crew ratio increase through channels to the MAJCOM/DO/A3, who will in turn coordinate with the MDS lead MAJCOM and forward the request IAW AFI 38-201 *Determining Manpower Requirements*.

1.13.3. Equitably balance assigned and attached experienced aircrews among squadrons. This does not necessarily mean that each unit should receive a proportional share of inexperienced inbound personnel. For example, if a fighter wing has two squadrons (one 18 PMAI and one 24 PMAI), and an overmanning [of inexperienced aircrews] situation exists, a

higher percentage of inexperienced aircrews should be assigned to the 24 PMAI squadron – beyond the proportional percentage – as the larger squadron will typically have a better ability to absorb inexperienced members (more aircraft, instructors, etc.).

1.13.4. Generally, experienced aircrews should fly in flight lead / instructor / aircraft commander positions. They should only fill inexperienced crew positions when dictated by the mission, when necessary to instruct/evaluate, or when unit experience mix is such that experienced aircrews can fly in inexperienced crew positions without reducing the Hours per Crewmember per Month (HCM)/Sorties per Crewmember per Month (SCM) rates of inexperienced aircrews. To the maximum extent possible/practical, limit attached flyers (especially API-8s and Ds) to the minimum number needed to accomplish the mission.

1.13.5. Line (API-1/2/9/A) aircrews have priority for flying over staff (APIs-6/8 and B/D), and API-6/8 Flight Leads / Acs / Instructors have priority over API-6/8 CPs / non-FLs / non-Instructors. Flight surgeons have last priority among aircrew members. Pilot-physicians have priority for flying commensurate with their qualifications and experience as determined by the flying organization commander (see AFI 11-405, *The Pilot-Physician Program*, for detailed guidance on Pilot-Physicians).

1.13.6. Encourage development of institutional competencies in assigned personnel (i.e., leadership, management, and cross-cutting warfighter competencies).

1.14. Field Operating Agencies (FOAs), Direct Reporting Units (DRUs), and Other Non-MAJCOM Organizations. FOAs, DRUs, and other non-MAJCOM organizations are required to submit any formal flying and aircrew survival school training requirement inputs to HQ USAF/A3O-AT for inclusion in AF Distribution Plans, UPRDs, and GPRDs. See Chapter 4 (Recruiting/Accessions and Training/Production).

1.15. Waiver Authority. Waiver authority for this AFI is AF/A3O-A.

Chapter 2

AIRCREW MANAGEMENT APPROACH

2.1. Objective. The overall aircrew management objective is to maintain an aircrew force whose readiness and size enable it to effectively accomplish the Air Force's current and forecast mission.

2.2. Readiness-Sustainment Balance. One of the major challenges in Aircrew Management is determining and achieving the appropriate balance between readiness and sustainment. To achieve the "readiness" part of the objective, units must have enough experienced aircrews (especially including unit supervision/leadership) and sorties/hours per crewmember per month (S/HCM) to effectively prepare for and conduct operational missions/taskings. Achieving the "sustainment" aspect of the objective necessitates that sufficient numbers of aircrews are accessed, produced, absorbed/experienced, and retained, **and** that a healthy Line (i.e., Ops units) to Staff (e.g., HHQ; Test; Joint) manpower requirements ratio is maintained. Effective aircrew management requires constant attention, MDS/MWS-specific incremental adjustments within a logical range/band, and fully coordinated actions that make sense for both the short and long term. The many facets and factors of aircrew management are inextricably linked; changing one factor typically affects/changes several others. The main tenets of aircrew management are outlined in Figure 2.1, and discussed further in subsequent chapters. Figure 2.2 is a simple depiction of the Aircrew Management System from accessions through training, into operational units, then on to "experienced requirements".

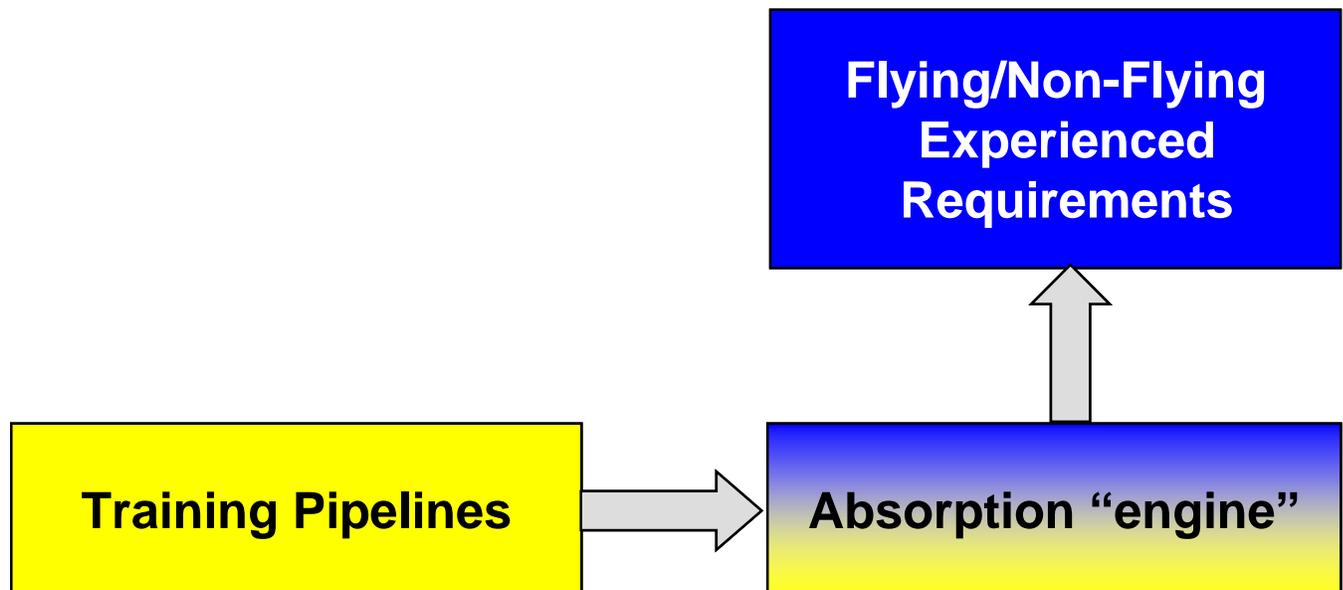
Figure 2.1. Aircrew Management Tenets.

AIRCREW MANAGEMENT TENETS

1. Optimize Absorption to sustain requirements within readiness parameters (Manning Level, Experience Mix, Average Time on Station)
2. Size Accessions/Training (Production) based on operational needs (i.e., flying and non-flying aircrew requirements). NOTE: This assumes a balanced system where production levels to sustain the aircrew force are not constrained by the absorption capacity of the operational units.
3. Right-size Retention to meet force sustainability needs using credible, congruent, long-term-focused policies and actions
4. Set Manpower Requirements to provide sufficient line force positions to meet operational taskings and efficiently support (Training/Staff/Test/Other) operations
5. Produce Leaders prepared for positions within aircrew functional communities, the Air Force, the Department of Defense and the US Government.
 - a. Actions that reflect AF priorities to include preservation of institutional culture
6. Manage the Aerospace Force (Aircrews and Aircraft)
 - a. Smooth, incremental adjustments to get/keep the system in balance – operate within reasonable bands
 - b. Fully coordinated actions that make sense for the short and long term
 - c. Effective use of all available aircrew expertise/assets as required

2.3. Aircrew Management Policy. HQ USAF/A3O-AT formulates Air Force aircrew management policy and guidance for CSAF, HQ USAF/A3/5 or HQ/A3O approval. HQ USAF/A1PP is the OPR for related aircrew personnel policy development that works in conjunction with A3O-AT's aircrew management policies. As practical, policies should be consistent with the Force Development construct outlined in AFPD 36-26 (Total Force Development) and its subordinate documents.

Figure 2.2. Aircrew Management System.



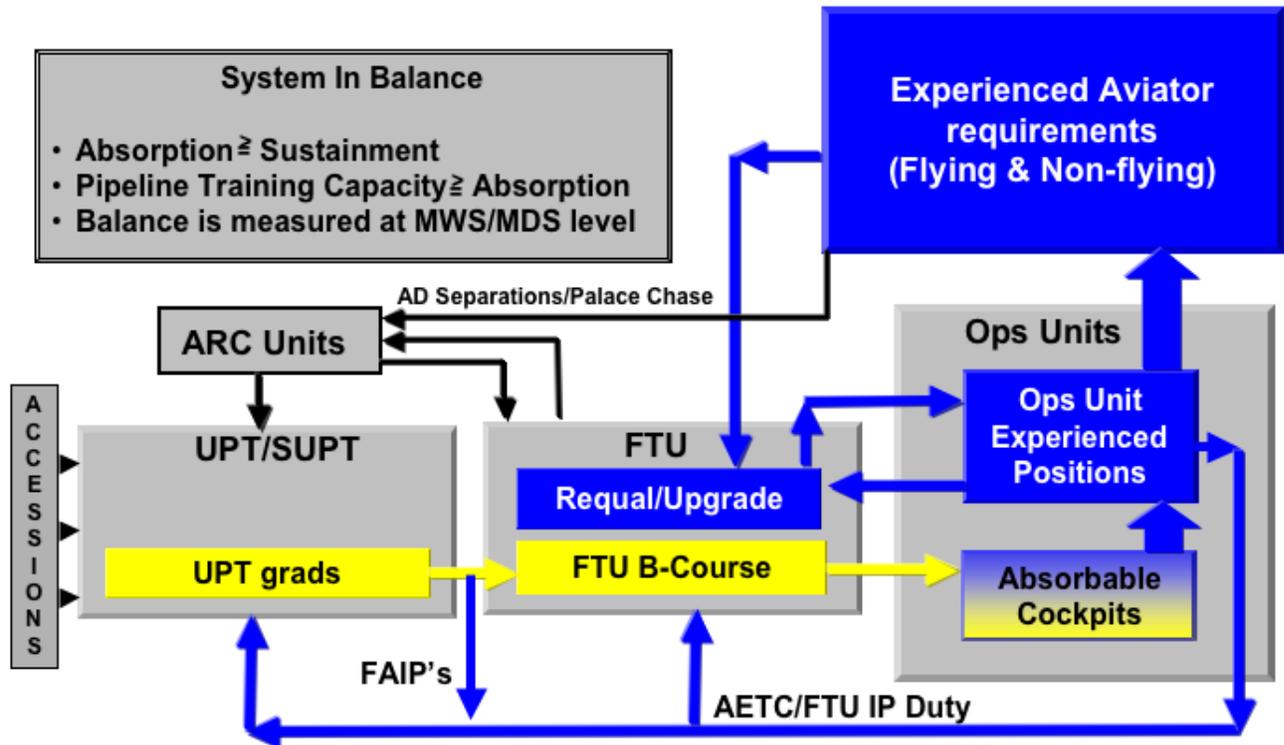
Chapter 3

ABSORPTION

3.1. Definition. Absorption is the process of accessing new undergraduate flying training (UFT) graduates and/or prior qualified (e.g., FAIP, OSA) aircrews, by career field (i.e., Pilot; CSO/Nav/EWO/WSO; ABM; CEA) into operational unit line flying positions (i.e., API-1/2/9/A) for their first operational assignment.

3.2. Absorption (Goal/Capacity). The AF's goal is to balance the long-term need to sustain an inventory that meets requirements with the near-term goal of maintaining unit readiness parameters. Stated another way, the goal is to absorb the required number of new aircrews while maintaining at least the minimum unit readiness posture of experience mix, average time on station, and manning levels required to meet operational taskings/commitments. Programmed absorption capacity is the maximum number of new aircrews that can be hired per year within programmed resources (i.e., force structure, initial training quotas and flying hours) necessary to maintain at least the minimum unit readiness posture. MAJCOMs should make every effort to program sufficient resources to ensure absorption capacity is in balance with both long-term requirements and near-term readiness parameters. Using pilots as an example, Figure 3.1 shows the relationship of the basic elements of aircrew management (e.g., accessions; training; absorption in the ops units; experienced requirements, requal/upgrade training). Included in the figure is the "normal" flow of ARC pilots. ARC pilots are of 3 varieties: 1) Home grown (i.e., commissioned from within), 2) Access experienced pilots from the Active Duty, and 3) Members gained from sister command/services. Recruiting and retention are of greatest concern in sustaining and nurturing experienced pilot in the ARC.

Figure 3.1. Elements of the Aircrew Management System.



3.3. Key Absorption Points:

3.3.1. The primary absorption factors are:

- 3.3.1.1. Total active duty requirements (i.e., force, training, staff, students, AFIT/PME and Transient)
- 3.3.1.2. Active operational force structure (i.e., absorbable cockpits, based upon PMAI and CR, in a unit)
- 3.3.1.3. Programmed training (initial and continuation)
- 3.3.1.4. Programmed flying hours per crewmember per month (HCM)
- 3.3.1.5. Readiness parameters (experience mix, average time on station, and manning level).

3.3.2. The only place new aircrews can be assigned to become experienced aviators is to API-1/2/9/A positions in operational units (although not all line positions are “absorbable billets”). Additionally, the objective for Active Duty aircrews is to “experience” individuals during their first operational tour (exception – Active Duty short tours such as Korea), or as specified in Total Force Initiative guidance.

3.3.3. Attempting to set absorption levels based on inventory overages or shortfalls is problematic and results in insufficient numbers of aircrews and/or reduced unit readiness. Regardless of retention/inventory levels, operational squadrons can only effectively absorb a set number of new aircrews.

3.3.4. Although there are different metrics to assess readiness (e.g., RAP completion; Experience Mix; SORTS), effective assessment(s) are a derivative of absorption as the principal determinant of unit readiness (specifically in terms of experience mix and HCM/SCM).

3.3.5. Absorption calculations not only determine the number of inexperienced aircrews to be assigned to operational units, they also provide the number of experienced and limited experience (LIMEX) aircrews required.

3.3.6. **Over-absorption** decreases readiness. MAJCOMs should program and fund sufficient resources to ensure over-absorption does not occur. When resources are insufficient, absorption should be reduced to ensure minimum readiness levels are maintained.

3.3.7. **Under-absorption** can lead to growing inventory shortfalls, inability to man critical training cockpits, limitations on developmental career opportunities, and severely undermanned staffs.

3.3.8. The programmed number of aircrew members to be absorbed is the basis for the UFT and IFF/FTU formal flying training capacity required, which in turn drives the number of new accessions (recruits and cross-trainees) needed each year.

3.4. Absorption Dynamics/Calculations. Determining absorption levels is a critical core aircrew management task. Numerous factors affect absorption, and changing one variable may necessitate changing another to obtain an accurate calculation of absorption capacity. Subparagraphs 3.4.3 through 3.4.7 address the variables that affect absorption.

3.4.1. **Absorption Sustainment Calculations.** The first step in determining absorption is to calculate the yearly absorption needed to sustain your total requirements. This is done by dividing your end-FYDP or out-year programmed total requirement, by your best estimate of turn-over rate (for most career fields) or Total Active Rated Service (TARS) for rated forces. If at all possible, MAJCOMs should attempt to program sufficient resources (training and flying hours) to be able to absorb to this sustainment absorption number. However, this number may exceed the maximum absorption constrained by available resources and readiness constraints. In that case, absorption to readiness calculations becomes necessary.

3.4.2. **Absorption Readiness Calculations.** Properly sizing absorption to readiness is basically deriving the mathematical solution to a series of equations. The solution set is a function of force variables such as “cockpit” authorizations, experience parameters, programmed aging rates, and assignment stability (time-on-station) criteria, and other MAJCOM parameters.

3.4.3. **Operational Line (API-1/-2/-9/-A) Positions.** Operational line positions are those in the operational flying squadrons, excluding the squadron commander and operations officer (API-6s); they are the core of the AF’s combat/operational capability. In general, the greater the number of Active Component (AC) line positions, the greater the combat/absorption/sustainability capabilities and the lower the required aging rate necessary to sustain a fixed overhead requirement. **The number of line operational positions, principally determined by force structure and aircrew ratio/composition, is the single-most important determinant of absorption capacity.**

3.4.3.1. The number of operational line positions is calculated by multiplying the number of Primary Mission Aircraft Inventory (PMAI) assigned to each squadron times crew composition times aircrew ratio, then adding all the squadron API-1s/-2s/-9s/-As to get an aggregate number. NOTE: In a few instances, Primary Other Aircraft Inventory (POAI) is used instead of PMAI.

3.4.3.1.1. Force structure is the sum of the number of PMAI (or POAI) in all the operational units. For a variety of reasons, Active Component (AC) aircraft provide the lion's share of the AF's absorption capability. Whether an operational unit can accept inexperienced/new aircrews depends on mission/aircraft requirements.

3.4.3.1.2. Aircrew Composition and Aircrew Ratio. Aircrew composition/ratio is determined by mission requirements and tasking levels, and by aircraft and aircrew capabilities/requirements. If an aircraft has a high, sustained sortie generation capability, a higher aircrew ratio will be needed to ensure sufficient aircrews are on hand. Aircrew ratios are set at a level that enables the line force to operate independently (i.e., without augmentation from the wing staff since the staff has mission planning and other taskings). If aircrew ratios are set too low, combat capability is diminished, OPS/PERSTEMPO is too high, Quality of Life (QOL), and retention and flight safety suffer.

3.4.3.2. Options for increasing absorption via an increase in Active Component operational line positions: Acquire more aircraft – sourcing options include: to regenerate from Aerospace Maintenance And Regeneration Center (AMARC); transfer from the Reserve Component; purchase/lease.

3.4.3.2.1. Increase aircrew composition or aircrew ratios. Aircrew composition/ratio changes are driven by mission and/or tasking level changes. If an aircrew ratio is increased, a commensurate flying hour program (FHP) increase would be required to enable all line aircrews to maintain the same level of flying currency/proficiency as before the increase.

3.4.3.2.2. Make non-absorbable aircraft absorbable. While mission and aircraft requirements determine the unit's experienced aircrew requirements, mission changes and aircraft/system improvements can result in an initially non-absorbable aircraft becoming absorbable. That change is affected by the MAJCOM submitting a request to HQ USAF/A3O for approval to reduce the experience mix from the non-absorbable 100% number to a lower percentage, such as 75% or 50%, so that inexperienced aircrews can be assigned to the unit.

3.4.3.2.3. Assign Active Component (AC) inexperienced aircrews to the Reserve Component (RC – Reserves and Guard). This option increases absorption capacity.

3.4.4. **Hours per Crewmember per Month (HCM).** HCM and/or sorties per crewmember per month (SCM) are critical variables for determining readiness. For inexperienced pilots, HCM (also referred to as the aging rate) is key to calculating experience constrained absorption capacity. If insufficient HCM/SCM is programmed, funded, or executed, this could contribute to units falling below minimum readiness requirements at required absorption levels.

3.4.4.1. Ways to increase absorption via an increase in inexperienced aircrew HCM include: increasing the FHP, setting limits on the number of attached API-6/-8 flyers to only those who can fly as lead or in command, and reducing the frequency and/or number of experienced aircrews flying in inexperienced aircrew positions [e.g., NAF API-8 flying as a wingman or copilots].

3.4.4.2. Two factors can reduce HCM below needed levels.

3.4.4.2.1. Great effort must be made to limit **unit overmanning** to only the level supported by funded flying hours...especially inexperienced overmanning. Actual overmanning, which is typically the main HCM detractor, is caused by over-absorption of inexperienced aircrews. Over-absorption has an adverse synergistic effect on HCM in that not only are more inexperienced aircrews competing for limited flying hours, but also fewer are able to upgrade to AC/FL status which would have enabled them to fly more.

3.4.4.2.2. **If a unit is unable to fully execute its Flying Hour Program (FHP)** (due to logistics/maintenance factors [undermanned in experienced maintainers, insufficient O&M funds, lack of spare parts, lack of available aircraft due to modifications or insufficient Backup Aircraft Inventory (BAI)/Attrition Reserve (AR), etc.], funding, and so on), HCM will decline.

3.4.4.3. Primarily regarding fighter aircraft, wing/squadron size and composition can impact HCM in a number of ways. Air Force policy is to robust / level squadrons and wings where able, and to make wings as homogeneous (same MDS aircraft throughout) as practical. Regarding size, if a fighter wing has three 24 PMAI aircraft-equipped squadrons, it will normally be able to generate more sorties/hours (i.e., fly at a higher aircraft utilization rate) than a wing equipped with two 18 PMAI squadrons. From both maintenance/logistics and operations perspectives, larger wings/squadrons have improved scheduling flexibility for generating sorties; also, they are able to share/pool manpower and resources easier. Similarly, the more homogeneous the wing, the greater its sortie/hour generation capability. Composite wings that have three squadrons, each comprised of a different type aircraft, essentially operate as three stand-alone squadrons and do not have the benefits of wings with like aircraft. Small wings often have lower HCM/SCM than large wings; since wing staffs are fairly standard in size, small wings have fewer aircraft/sorties/hours to support a larger percentage of attached flyers than the larger wings. Where practical, 24UE squadrons will be the goal. Due to force posture, political, fiscal, and other factors, in the near term, leveling units within existing wings (e.g., converting 18 and 24 PMAI squadrons in a wing to 21 PMAI) may be a practical expedient.

3.4.5. **Manning.** Operational squadrons/wings manned at 100% are optimum level for absorption, readiness, and sustainability/retention. If overmanning occurs and experience mix is not an issue, then the wing/group staff (including OSS) should bear the burden of any aircrew overage; however, overmanning is most often caused by a unit having too many inexperienced aircrew members who need to remain assigned to the squadron to maximize flying opportunities. If a wing under-manning situation should occur, the wing/group staff (including OSS) should bear the burden of any aircrew shortfall such that the squadrons continue to be manned at 100% to maintain full combat capability. While undermanning

does tend to increase HCM/SCM, those advantages are outweighed by significant disadvantages, including reduced combat capability, reduced absorption capability, and higher PERSTEMPO (and resulting adverse retention effects). The formulas for calculating squadron manning are at Attachment 3. As a general rule, AFPC mans to the wing. The wings, in turn, ensure that manning is appropriately distributed to squadron, group, and wing positions. AFPC periodically reports wing-level manning data. Another general rule is that an aircrew member is considered 'assigned' when they appear on the UMD. NOTE: HQ AFPC/DPA is approval authority for overmanning actions and exceptions to the 'assigned' rule.

3.4.5.1. Line API-1s/-2s/-9s/-As. Except for the operations officer and squadron commander, who are coded as API-6s, operational squadrons are manned by line aircrews. They are the UTC-tasked personnel who maintain CMR status, and must continually be ready to meet operational taskings.

3.4.5.2. Staff API-6/B/8/D. Except for the squadron operations officer and squadron commander, who are assigned to the squadron, API-6s/Bs (wing level and below staff) and API-8s/Ds (above-wing-level staff) are attached to squadrons for flying purposes. Some staff API-6s/Bs, such as standardization/evaluation aircrew members and weapons/tactics officers, have duties that require them to maintain CMR status; however, the majority of API-6s/Bs and all API-8s/Ds are required to maintain basic mission capability (BMC) / instrument qualification status. Since all API-6s/Bs/8s/Ds should be experienced aircrew members, they have fewer sortie requirements than inexperienced line aircrew members. Also, in general, API-6s/Bs/8s/Ds best contribute to the squadrons when the CMR aircrews are instructors / flight examiners and the BMC aircrews are aircraft commanders (Acs) / flight leads (FLs). If not AC/FL or instructor qualified, these experienced aircrew members occupy inexperienced aircrew positions to get their flying time, thus adversely affecting individual/unit combat capability/readiness and absorption capability.

3.4.5.2.1. AFI 11-401 limits staff and flight surgeon flying positions. If approved for over manning of staff or flight surgeon API billets and there is an increase in a flying unit's mission requiring additional staff or flight surgeon operational flying support over current manning authorizations, process a double billeting aeronautical order "flying" waiver request IAW AFI 11-401.

3.4.5.3. Flight Surgeons, Pilot-Physicians, and Exchange Officers. API-5s (flight surgeons and pilot-physicians) may be assigned or attached to squadrons. Exchange officers should occupy experienced aircrew positions in the wing/squadron. However, since many exchange officers (whether from other countries or other Services) have become experienced in a different aircraft (e.g., USN F/A-18 pilot assigned to a USAF F-16 unit) with different missions and different procedures, they understandably may not be able to serve as a FL/IP/SEFE as soon or as effectively as their USAF counterpart on exchange to their country/Service and can have adverse effects on a unit.

3.4.5.3.1. Approved overmanning authorized by this AFI applies to manning only, not flying. AFI 11-401 limits staff and flight surgeon flying positions. AFI 11-401 authorizes inactive and double billeted flight surgeons to fly on a non-interference basis. If approved for over manning of an API 5 billet and there is an increase in a

flying unit's mission requiring additional flight surgeons "operational" flying support over current manning authorizations, process a double billeting aeronautical order "flying" waiver request IAW AFI 11-401.

3.4.6. Experience. When referring to Experience, it is essential to differentiate between experience levels for personnel and operational purposes. For personnel purposes, AFPC uses hours as a metric to determine when an aircrew member becomes experienced. AFPC forecasts wing manning and experience levels using this metric. Based on this forecast, AFPC programs appropriate assignment actions to maintain adequate Experience levels in Ops units. For operational purposes, MAJCOMs use the term experienced to specify when an aircrew member has upgraded or is ready to upgrade to a flight leadership position (e.g., aircraft commander, flight lead, instructor). There are three elements of Experience: **Criteria** – based on hours flown, previous flight experience (i.e., FAIP, previously experienced), or squadron leadership recommendation. Experience criteria should not be a substitute for training currency or mission ready qualification metrics. **Objective** – minimum number of crew ratio-earned unit authorizations which must be occupied by Experienced aircrew members; expressed as a percentage; assumes 100% unit manning; determined by MAJCOM and approved by AF/A3O. **Mix** – actual percentage of Experienced and Inexperienced aircrews. There are several variable and constant factors that affect Experiencing. The variables are Ops unit manning, hours/sorties per crew per month (H/SCM), Time on Station (objective and actual) and relative unit manning mix (i.e., Experienced; Previously Qualified Pilot; Limited Experienced; Inexperienced). Adjustments are made primarily through the assignment process. The constants are mandated metrics (e.g., 55% experience objective for operational fighter units) and production goals (e.g., 1100 pilots per year). Generally, as experience mix increases, combat capability increases. Of course, closely tied to the (unit's) experience mix are HCM/SCM and the Ready Aircrew Program (RAP). Mission/aircraft requirements principally dictate a unit's minimum required experience mix. Included in the mission experience requirement is the unit's leadership/supervision (API-6 squadron commander, operations officer, and wing staff API-6 positions/manning are excluded from squadron experience mix calculations), which is integral to the unit's success. Along with the other absorption factors (e.g., number of operational API-1 positions, HCM, manning levels, average TOS), experience mix is a key variable in determining the optimum absorption level. An MDS's objective experience mix is the greater of the mission/aircraft-driven minimum experience mix and the optimum experience mix for absorption. For example, as of FY2000 the F-117's mission/aircraft requirements called for 100% experience mix, while the optimum experience mix for absorption was 55%; therefore, the F-117 objective experience mix was 100%. For the F-16 MDS, the experience mix for mission/aircraft requirements and absorption coincided at 55%. Maintaining the squadron objective experience mix (see Atch 5) or higher is essential for optimizing unit combat capability/readiness and sustainability (absorption/retention/Quality of Life), as well as for ensuring key supervisory/leadership positions are properly manned. Over-absorption compromises both combat readiness/capability and sustainability.

3.4.6.1. Maintaining the objective experience mix ensures sufficient numbers of experienced aircrews (e.g., Flight Leads; Aircraft Commanders) are available to meet sortie tasking levels (combat capability). From an absorption perspective, it sets the experienced-inexperienced aircrew mix such that a maximum number of inexperienced

aircrews can be brought into a unit while flying at an HCM/SCM rate that enables them to meet at least minimum RAP/readiness requirements.

3.4.6.2. Experience Criteria. Experience criteria are a combination of the number and type hours (i.e., total and/or mission aircraft) an aircrew member must fly to be designated "experienced." As detailed in MDS-specific instructions, CEA and other non-rated aircrew experience are determined by an individual's time holding a specific AFSC and performing duties in a weapon system. Experience criteria are recommended by MAJCOMs and approved by AF/A3O. The formula for calculating squadron experience mix is at Attachment 3. NOTE: MAJCOM Experience Criteria is annotated in the respective MDS Vol 1's; additional criteria are available at the 'Aircrew Requirements' Community of Practice maintained by AF/A3O-AT (<https://wwwd.my.af.mil/afknprod/ASPs/CoP/OpenCoP.asp?Filter=OO-OP-AF-87>).

3.4.6.3. For pilot aircrew managers, another way to affect experience mix is to vary the mix between SUPT graduates ("SUPTs") and prior-qualified pilots (PQPs -- pilots, such as FAIPs and OSA pilots, whose first flying tour is not in a MWS aircraft). Because PQPs enter operational units with more total time than SUPTs, PQPs experience sooner (assumes at least 1000 hours flight time upon arrival at the new operational squadron).

3.4.7. **Average Time on Station (TOS).** Average TOS is the average tour length (e.g., 3.0 years) for operational line aircrews. It directly influences unit readiness, QOL, and retention. In general order of priority, important considerations for determining an objective average TOS include: operational cycles (e.g., 20-month AEF rotations); time to complete checkouts in the required mission skills; absorption (especially time to experience a new aircrew member, experience mix, and manning level); stability (QOL); formal training and associated instructor requirement impacts; and, PCS costs. (NOTE: TOS guidelines may not affect ARC units, where an individual may spend his/her entire career in the same unit.)

3.4.7.1. Average TOS varies by MDS, but is generally optimized between 2.8 and 4.0 years with the fighters on the low end and other aircraft on the high end of the spectrum.

3.4.7.1.1. Below 2.8 years, aircrews may not be able to complete needed mission checkouts and upgrades (e.g., low altitude airdrops; flight lead), and have less assignment stability (shorter tour length); either unit readiness declines, or the experienced aircrew input increases above normal levels; and the AF may not be able to absorb sufficient numbers of new aircrews (adverse inventory/sustainability effects), and will likely incur increased training (including increased instructor requirements) and PCS costs.

3.4.7.1.2. Above 4.0 years, either insufficient positions are filled by unit leaders/supervisors and absorption is too low, or units are over-manned; readiness declines; career progression and Force Development may suffer; training and PCS costs are lower; and, stability is improved.

3.4.7.2. Operational remote tours are not included in average TOS calculations, but are factored into absorption calculations.

3.5. Absorption Guidance. Once absorption levels have been determined by MAJCOMs, they are approved by AF/A3O in AF distribution plans. Air Force-wide absorption of new aircrews is

reflected in the Undergraduate Program Requirements Document (UPRD), which factors in attrition and aligns aircrew candidates with specific courses/tracks such that MWS goals can be met. Similarly, the Graduate Program Requirements Document (GPRD) reflects MAJCOM absorption calculations for both MDS-specific basic/initial and transition/re-qualification training requirements.

Chapter 4

RECRUITING/ACCESSIONS AND TRAINING/PRODUCTION

4.1. Overview. This chapter will deal with Training/Production both as a key element in the USAF Total Force (Active Duty, AFRC, and ANG) aircrew management system covered by this instruction and as a mechanism for supporting the training requirements of other customers of Air Force flying training programs (such as international training and training provided for other services/agencies). As an element of aircrew management, training (and the associated throughput requirements) provides graduates with the required skills and in sufficient quantity to sustain the aircrew force. Training/production and recruiting/accessions are tied to the absorption capability of the operational units and to the numbers required to sustain the overall aircrew force while meeting CSAF goals. While training has both a throughput (production quantity) and content aspect, this chapter will focus on the process by which the production requirements are established, collected, validated, approved and documented.

4.1.1. Production requirements sources. For convenience we can categorize the flying training production requirements by five broad “source categories”. These are:

4.1.1.1. Active duty. Lead commands (ACC, AMC, AFSOC, and AFSPC) are responsible for collecting, validating, and submitting active duty production requirements.

4.1.1.2. Air Force Reserve Command (AFRC). AFRC/A3T is responsible for collecting and forwarding validated AFRC production requirements to AF/A3O-AT.

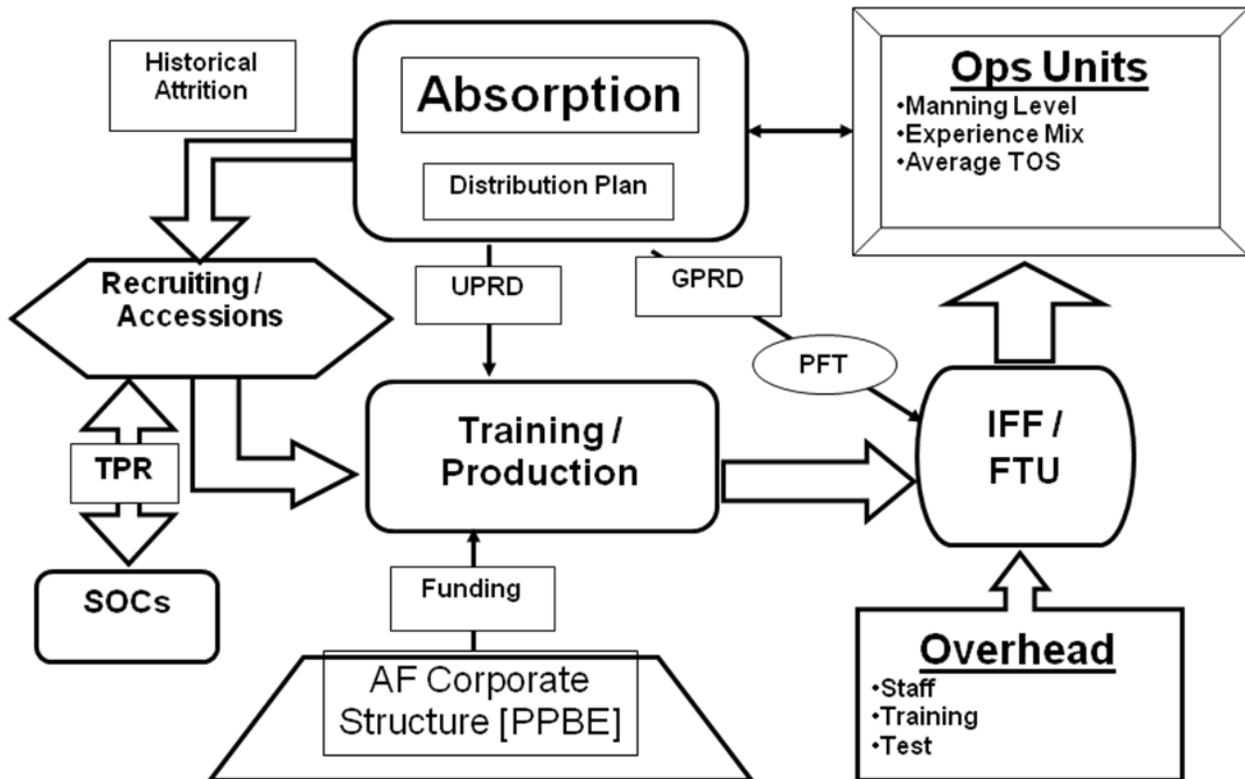
4.1.1.3. Air National Guard (ANG). NGB/A3T is responsible for collecting and forwarding validated Guard production requirements to AF/A3O-AT.

4.1.1.4. International training requirements. SAF/IA is responsible for collecting, validating, and submitting international flying training requirements in accordance with the procedures outlined in this chapter of the instruction.

4.1.1.5. Other flying training requirements. This category encompasses sister service and other US agencies that require formal training conducted by USAF formal training schoolhouses. AF/A3O-AT will collect these requirements for inclusion in the appropriate Programmed Requirements Document (PRD).

4.1.2. Recruiting/Accessions and Training/Production relationships. The central objective of the processes outlined in this chapter is to identify and codify the key relationships among the elements that result in a predictable and efficient flow of qualified graduate aviators to the operational units to sustain combat capability and sustain the overall aircrew force. Understanding the linkage between force structure, absorption capability, recruiting/accessions requirements, and training/production requirements is critical to maintaining a healthy aircrew force and meeting the mission requirements for which this aircrew force is generated. Figure 4.1 below displays a simplified diagram of these key relationships and becomes the foundation for the guidance provided in subsequent sections of this chapter.

Figure 4.1. Absorption - Recruiting/Accessions - Training/Production Dynamics.



4.2. Recruiting/Accessions. Overarching recruiting/accession guidance is laid out in AFPDs 36-20 *Accession of Air Force Military Personnel* and 36-26 *Total Force Development*. AFI 36-2616 *Trained Personnel Requirements* specifies that HQ USAF/A3O-AT sets UFT production rates based on MAJCOM absorption capability; therefore, recruiting/accession levels for aircrew candidates and aircrew training/production requirements are based on the absorption level requested by operational MAJCOMs (and ANG) and approved by AF/A3O. AF/A1P applies historical attrition factors [AF/A3O approved numbers provided by AETC/A3R] to the absorption level to determine how many new aircrews need to be recruited/accessed. AF/A1P coordinates to adjust the recruiting/accession goals for, intra-, inter-Service transfers, then allocates the remaining quotas to the sources of commissioning (SOCs). For instance, if the aggregate attrition rate for pilot training is 10% and required absorption is 1000, then the AF would access $1000 \div .90 = 1111$ pilots. In turn, HQ USAF/A1PPR develops for HQ USAF/A1 approval, the rated Trained Personnel Requirement (TPR), which is published by 1 December each year. HQ USAF/A1PP ensures the approved rated TPR is incorporated into the overall Officer TPR.

4.2.1. CEA Accession Plan. CEA accession plan is developed as part of the TPR process. Based on AF/A3O-AT and other functional inputs, AF/A1PT develops for HQ USAF/A1 approval, the TPR. It is published during the first two months of the first and third fiscal quarters. The TPR document is a statement of the gains to each AFSC, Special Duty Identifier (SDI), and Reporting Identifier (RI), by fiscal year, needed to maintain the active officer and enlisted airman force at programmed manning levels. It is used at the Training Flow Management Conference and the Training Planning Meeting to develop the enlisted training program. Authorizations used to determine requirements are based on programs

reflected in the current budget cycle, as they are included in the Central Manpower Data Bank and adjusted in the Skills Programming Model. The adjustments are based on Program Element Code changes that either have not been allocated as changes or extended on the manpower files. Amendments to the TPR will be issued when changing authorizations, accessions, losses, or production adversely impact programmed manning levels.

4.2.2. Intra-Service and Inter-Service Transfers (ISTs). Most aircrew candidates enter the Air Force as new recruits/accessions; exceptions include limited intra- and inter-Service transfers (ISTs) and voluntary extended Active Duty for Air Reserve Component commissioned officers. In cases where the accessions were already rated (e.g., U.S. Army helicopter pilot ISTs), their AF aeronautical ratings and training needs are determined IAW AFI 11-402 (*Aviation and Parachutist Service, Aeronautical Ratings and Badges*). ISTs are included in the total accession numbers; e.g., if the AF needs to access 1100 pilots and has 50 ISTs, it would need 1050 new recruits. Not factoring in ISTs would overload training and cause over-absorption in the operational units.

4.2.3. Awaiting PCS Training (APT) Pool. The APT pool is the group of UFT selectees who are waiting for a slot/quota to begin undergraduate flying training. Having a small APT pool affords training quota managers the flexibility to fill all quotas by minimizing/eliminating training vacancies that would otherwise occur due to last-minute dropouts/no-shows. Periodically reviewing/updating attrition factors to keep them accurate and smoothing the summer spike, to the maximum extent practical, will help prevent the APT pool from growing too large. Should the APT pool become excessive, AETC and AF/A1P/A3O will take steps to adjust future accessions to enable the pool to be reduced in a timely manner. Drawbacks of an excessive APT pool include extensive pre-UFT delays that result in these personnel counting against end strengths yet being of very limited utility, adverse effects on accessions into other AFSCs if caused by over-accessing into aircrew career fields, Force Development repercussions, and a poor initial impression of the USAF. Also, aircrew managers should be reluctant to support the establishment of programs that seek to use APT pool manpower overseas and/or for periods exceeding three months. Such programs can have the unintended detrimental consequence of unfilled UFT quotas. Conversely, too small of an APT pool will result in training vacancies for last-minute dropouts/no-shows going unfilled. Members assigned to the APT Pool should be focused on developing operational and/or institutional competencies while awaiting training.

4.3. Training/Production. As with accessions, the absorption level is the basis for required student production (i.e., number of graduates) from both formal undergraduate and graduate flying training courses. See Chapter 3 for a discussion of determining absorption levels. Absorption calculations are used to determine not only the amount of IFF/FTU initial qualification training required for new aircrews, but also the number of FTU re-qualification/transition training quotas needed for experienced aircrews returning to operational duty. In turn, required student production levels (i.e., required training capacity) drive training resources/personnel (e.g., aircraft, FHP, and training instructor requirements). Training/production is most effective and efficient when training is smooth-flowed throughout the year and when non-flying activities (e.g., ASBC, Flight Screening) are accomplished first, followed by flying training with good continuity (i.e., minimal breaks in training) from UFT through mission ready status at operational units. However, the “summer spikes” of AF-bound high school and college graduates who must enter Active Duty (commissioned officers within

180 days of commissioning) and AF aircrews graduating from PME and returning to flying, combined with breaks in training (BITs) and varying FTU course start dates, often present significant training pipeline management challenges. The following subparagraphs cover the AF's processes and timelines for managing and funding aircrew training/production. AF/A3O-AT has management responsibility for aircrew training/production. Forecasting training/production requirements is critical, and the planning process must begin at least 18 months prior to the execution year to ensure inputs are incorporated into AF programming/budgeting schedules. Ideally, instructor and other resources needed to provide the training are identified a year earlier than that, so that they will be ready and in-place when the training actually begins.

4.3.1. Aircrew Training and Distribution Requirements (ATDR) process. The ATDR process provides a disciplined, time/sequence based set of procedures for establishing, collecting, validating and documenting flying training production requirements for all formal training conducted by or for the Air Force. In broad terms the process starts with a formal data call to the key "customer" agencies requesting unconstrained but realistic training requirements and leads, through a series of steps and accompanying documents, to a constrained program guidance letter upon which the formal programming and funding activities can be based that will result in a funded executable training program for the Air Force. The following outlines these specific steps and documents sequentially through a complete ATDR cycle. This cycle parallels and syncs with the PPBS cycle. The objective of this disciplined process and the document set outlined below is to provide both an orderly progression from the initial, unconstrained but realistic requirements inputs from the "customers" and to provide a complete and accurate audit trail for all the steps in this process for a given PPBS cycle from initial data call through to the PFT document which provides the plan/schedule for executing the training requirements.

4.3.1.1. Requirements Data Call.

4.3.1.1.1. Description. The Data Call starts the annual ATDR cycle. It is a solicitation of valid, unconstrained, realistic, requirements from the five customer "sources" identified in 4.1.1 above. The data call is initiated by AF/A3O-AT and is sent to the lead MAJCOMs (for active duty requirements), AFRC, ANG, SAF/IA (for international requirements) and to sister service and other agencies (for "Other" flying training production requirements). The data call document provides dedicated tabs for each of these five sources to facilitate the collection and validation of these several requirements inputs.

4.3.1.1.2. Key data call documents and procedural guidance.

4.3.1.1.2.1. Data Call Documents. There are three key documents to the Data Call Process; 1) undergraduate requirements, 2) rated distribution and 3) graduate requirements. All three components are in the form of spreadsheets in which direct entries are made by the appropriate advocates. All data call documents are designed to capture requirements for the next POM cycle and the budget year that precedes it (e.g. FY10 POM data call covers the FY09 budget year and FY10-15 POM years).

4.3.1.1.2.1.1. Undergraduate Program Requirements Document (UPRD) Data Call. The UPRD Data Call (includes selective graduate training that

requires SJUPT/ENJJPT/JSUNT/ABM assets) applies to RegAF, ARC, SAF/IA (for international requirements) and other (USN, USMC, USCG, etc.). Advocates will collect, validate and submit their unconstrained but realistic requirements by updating the data call “spreadsheet” and returning it to AF/A3O-AT for consolidation and publication as the Undergraduate Program Requirements Document (UPRD).

4.3.1.1.2.1.2. **Rated Distribution Plan (RDP) Data Call.** The RDP Data Call applies to RegAF only. Lead MAJCOMs are responsible for obtaining (from all RegAF users), validating and submitting future requirements for all initial Pilot’s, CSO’s and ABM’s. This data call also gathers FAIP/OSA requirements and priorities for placement of IFF wash-outs.

4.3.1.1.2.1.3. **Graduate Program Requirements Document (GPRD) Data Call.** The GPRD Data Call applies to all user MAJCOMs, ARC, SAF/IA IA (for international requirements) and other (USN, USMC, USCG etc.). Each MAJCOM/agency that owns and controls quotas for flying training is responsible for submitting their validated, unconstrained but realistic requirements. Additionally, Lead MAJCOMs are responsible for 1) coordinating with AFPC/DPAO to collect/submit AFPC’s requirements and 2) ensuring flying training is requested (to include pre-requisite training) for all rated personnel requested in the RDP Data Call (or the RDP if it has already been published when the GPRD Data Call is initiated).

4.3.1.2. **Rated Distribution Plan (RDP).**

4.3.1.2.1. **Description:** The RDP documents validated requirements for the distribution of all new rated personnel for all MWS’s. The RDP provides formal guidance to AFPC/DPAO for the flow of new rated personnel into FTUs (MWS/MDS) over the FYDP. For pilots it includes the distribution of FAIPs, Operational Support Aircraft (OSA) and other MWS pilots. However, it DOES NOT represent the number of UFT graduates that will be produced in the corresponding UPRD and RDP year. The varying lengths of the UFT pipelines means that each RDP year is fed by portions of two “feeder year” UFT production year groups. (e.g., FY10 distribution will be fed by UFT graduates from FY09 and FY10 production). To assist MAJCOMs and A3O-AT in developing accurate distribution plans and linking distribution to undergraduate production guidance, the distribution plan has added programmed UFT “available graduates” numbers from each of the “feeder years” to (1) identify disconnects between desired distribution and available graduates and (2) allow adjustments to distribution and/or programmed UFT production to align distribution and production.

4.3.1.3. **Program Requirements Documents (PRD).**

4.3.1.3.1. **Description:** The unconstrained requirements from above mentioned data calls are compiled and validated for compliance with Air Force Policy/CSAF guidance and collated into the UPRD and GPRD. The UPRD contains the aggregate requested training for all undergraduate flying training courses, as well as selected graduate level training associated with the undergraduate assets. The GPRD contains the aggregate requested training for all graduate flying training (except as noted in the

UPRD). The PRD's represent formal documentation of the unconstrained requirements and realistic for all flying training courses for which the Air Force has programming responsibility. Additionally, the budget year information provides updated requirements for the PFT Conference and identifies potential opportunities to modify near-term UFT production. Combined, these documents form the baseline from which the remaining ATDR activities are predicated.

4.3.1.4. **Capacity Analysis and Shortfall Report.**

4.3.1.4.1. **Description.** Once the data call inputs have been compiled into the UPRD/GPRD, AF/A3O-AT will forward these unconstrained requirements to the training commands (MAJCOMs charged with the conduct of formal training) to identify constraints (if any) that would preclude meeting the requirements documented in the PRDs. Training MAJCOMs use the PRD's as input to conduct a capacity and resource analysis. These constraints may take the form of physical capacity limitations and/or resource constraints that limit the production capability by program, weapon system or course. This analysis also identifies what would be required to overcome these limitations (where possible). The results of this analysis will be documented in a Shortfall Report provided to AF/A3O-AT by each training command. This information will be briefed to the AF Corporate Structure by way of the P&T Panel to determine whether the shortfalls can/should be fixed or accepted. When a shortfall exists, the requesting agency (lead MAJCOM for active duty, SAF/IA for international requirements, AFRC and ANG, and AF/A3O-AT for "other") will be given the opportunity to address the limiting factors or implement a training prioritization plan.

4.3.1.4.2. **Key documents and procedures.** Two key documents are due from each Training MAJCOM, a Capacity Analysis and a Shortfall Report. The Capacity Analysis is simply an expansion of the PRD's to document actual capacities (for each entry) within the current funded resources. The Shortfall Report is a narrative description of the shortfalls along with a description of the limiting factors that preclude meeting the full requirement and what would be required to overcome this shortfall, along with a quantification of the net shortfall for each applicable course where the shortfall exists. The training command may also submit a "Constrained PRD" (the original UPRD/GPRD with a recommended reduction in requirements which matches capacity) to assist AF/A3O-AT in addressing the shortfalls and prioritization of training within capacity limits. The training commands will provide the shortfall report for all flying training under their purview. AF/A3O-AT will compile the training commands shortfall reports into a consolidated shortfall document and present that information, along with recommendations for overcoming these shortfalls and priorities for available training where the shortfalls cannot (or are not recommended to be) fixed to the AFCS for decision.

4.3.1.5. **Planning Program Guidance Letter (PPGL).**

4.3.1.5.1. After the AF corporate review and decision on priorities (where shortfalls are not/cannot be fixed), AF/A3O-AT will produce a prioritized constrained requirements document upon which the training commands and customers will base their production planning and POM submission. This document will be called the

Planning Program Guidance Letter (PPGL) and represents the formal production tasking for the FYDP covered by the ATDR and PPBS cycle being worked. In form this document is identical to the PRD except that the requirements are adjusted and prioritized to reflect the constraints identified during the capacity analysis and corporate review. This document is the result of the deliberation process that either prioritizes training to existing capacity or acknowledges and supports the added resources required to meet the agreed upon production tasking (in other words what the AFCS is willing to fund and/or the lead commands are willing to support)

4.3.1.6. Approved Program Guidance Letter (PGL).

4.3.1.6.1. Undergraduate Program Guidance Letter (UPGL). The purpose of the UPGL is to close the cycle for that FYDP by dropping the “P” (planning) designation to signal that it has passed through the AFCS and PPBS vetting process. The UPPGL will be reviewed again following the POM deliberations and amended as required to reflect any changes to production and/or priorities that come from the POM as it works through the AF corporate process. This approved and funded requirements document will be published as UPGL, the final undergraduate step in the ATDR cycle for that PPBS sequence. The UPGL is the tasking of record for that cycle (the document may be identical to the UPPGL if the POM deliberations do not change the requirements published in the UPPGL).

4.3.1.6.2. **Graduate Program Guidance Letter (GPGL).** The Graduate PPGL is considered final upon publication. However, a GPGL will still be generated to document formal tasking for the budget year graduate training requirements. While the UPGL will be named for the POM cycle it is matched against, the GPGL will be named for the single (execution) year it provides guidance for. The budget year information contained in the GPRD (that is not carried forward into the GPPGL) will be utilized as a starting point for the annual PFT Conference (see para. 4.3.1.6.2.1.). After the PFT Conference is concluded and all required post-conference taskers are cleared, the resultant, prioritized plan for the utilization and distribution of the available training will be published as the GPGL. The GPGL only covers the budget year, is signed by the AF/A3O and is a binding contract between all parties. Training commands will ensure initial FTU production and distribution of the resultant course quotas are built IAW the GPGL. Subsequent minor changes (except Internationals gaining quotas) that are agreed upon by all affected users can be negotiated at MAJCOM Action Officer (AO) level. All major changes (significant changes in FTU capacity etc.) or potential transfer of USAF quota to international customers must be coordinated with AF/A3O-AT and approved by

4.3.1.6.2.1. **Program Flying Training (PFT) Conference.** Annually, a training command (normally AETC) hosts the AF/A3O PFT Conference which is chaired by AF/A3O-AT. The purpose of the PFT conference is to put the final refinement on the budget year ATDR cycle (e.g., the Dec 08 PFT Conference would utilize budget year date from the FY11 APOM GPRD to finalize PFT allocations for FY10 training). The conference is an AO level event tasked with adjudicating the unconstrained requirements (GPRD) with available training (actual FTU capacity IAW the Capacity Analysis). During the two week conference, an hour or two is dedicated to each MWS to achieve this objective. During MWS breakouts each

course is evaluated and where capacity doesn't meet GPRD requirements, a prioritized distribution is established. A3O-AT makes final distribution decisions. Any user who does not receive a minimally acceptable level of training should clearly make that known during the MWS breakout. A3O-AT will either, 1) "open a tasker" to continue efforts to increase their allocations after the conference (all such taskers will be closed with the user prior to final publication of GPGL), or 2) direct the user to raise shortage through appropriate military channels. Each MWS breakout should be attended by:

4.3.1.6.2.1.1. **Lead MAJCOMs.** Lead MAJCOM representation is mandatory. Lead MAJCOMs will validate/clarify user statements and when applicable provide their perspective of prioritizations.

4.3.1.6.2.1.2. **FTUs.** FTU representation is mandatory if capacity does not meet requirements. FTU representatives are tasked with ensuring that the training allocated at their MWS break-out is executable within their funded and available assets. Additionally, FTU representatives should be prepared to work changes in priorities (e.g. if capacity does not cover demand for a course and priorities are set appropriately, FTU rep should be capable of assessing impacts of reducing other courses to provide the assets required to increase the critical course capacity).

4.3.1.6.2.1.3. **Users.** All user units are welcome to send representation to advocate their requirements. Unit commanders should weigh this invite against the likelihood they will either require advocacy, or provide added value to the conference. If attendance exceeds facility capacity, a prioritization of attendance will be set by the lead MAJCOM and AF/A3O-AT.

4.3.1.7. **Over/Under Production Plan.** HQ USAF/A3O-AT will establish a contingency plan in the event UFT production exceeds or falls short of programmed production. This contingency plan for over- and under-production is a formal document in the ATDR process and will normally be published in September of each year to provide contingency and priority guidance for AFPC and AETC/A3R for pipeline and quota management activities. The plan will also be briefed during the AMEC and/or ATMS meetings.

4.3.2. **Training Capacity.** MAJCOMs (and the ARC) that provide aircrew formal flying training are responsible for having sufficient capacity to meet the training requirements specified in the PFTs, whose quotas are principally based on operational needs. If training capacity is insufficient, MAJCOMs that provide training will coordinate with HQ USAF/A3O-AT concerning resolution, and the MAJCOMs may need to take programmatic steps to source additional training aircraft, FHP funding, and instructors to increase training capacity. The command receiving the trained aircrews has a vested interest in supporting the training command's aircraft/personnel sourcing efforts. Changes in instructor requirements may affect manning in other areas, and therefore must be coordinated with AF/A3O-AT and approved by AF/A3O. (NOTE: AF/A3O-AT coordinates, in turn, with customers and training commands as required.) During its annual session, the AMEC Training

Management Subgroup (ATMS) addresses any training capacity shortfalls, along with potential impacts and shortfall mitigation options.

4.3.2.1. To determine the training resources needed, training commands translate Air Force formal flying training taskings (as documented in Program Requirements Document and approved syllabi) into the resources needed to provide the required training capacity.

4.3.2.2. The command that provides formal training is obligated to objectively, efficiently, and effectively execute the PPGL. If this command has insufficient resources/personnel to fully execute the UPRD/GPRD, and has exhausted all options within its command to meet the AF's training needs, then it has two main responsibilities:

4.3.2.2.1. Advise AF/A3O-AT, who in turn will work with the commands scheduled to receive the newly-trained aircrews to develop an objective under-execution plan. That plan will seek to direct the trained aircrews to the commands / MDSs that have the greatest aircrew shortages. Those commands / MDSs with healthier manning will typically bear the under-execution burden. However, other factors may bear on the situation, such as the level at which various units are being operationally tasked. All other factors being equal, if one command provided at least its fair share of support to the training command, then AF/A3O-AT would have a logical point for ensuring that command receives most, if not all, of its planned portion of the GPRD quotas.

4.3.2.2.2. Take steps to increase training capacity to preclude future under-execution problems. The PRD provides multi-year training requirements to give the training command the opportunity to obtain the resources/personnel it will need to accomplish the PRD requirements. With few exceptions (such as an unforeseen extended strike), it should know well in advance if meeting the required UPRD/GPRD training will be a problem. If the training command is unable to source/fund the increased training capacity needed, and the lead and other commands are unable to help, then the training command's budget submission (in or out of cycle, as appropriate) should reflect the unfunded requirement. The AF corporate process (AF panels, Board, Council) will then take steps to rectify the training capacity shortfall, or accept the risks associated with an under-manned, less capable force.

4.3.3. **Training Requirements - PPBS Linkage.** There is a direct and essential linkage between the ATDR process outlined above and the PPBS cycle which provides the funding for the execution of the training requirements developed during the ATDR process. The timeline shown in Figure 4.2 below outlines the sequence of events in the ATDR process and illustrates this linkage.

4.3.4. **Breaks in Training (BITs).** BITs can be built-in, such as TDYs/PCSs between phases of training, or unintended (commonly caused by lower than planned attrition leading to over-production in one phase and insufficient training quotas in the next phase to accommodate the over-production). Built-in BITs may be needed to permit travel between bases, but may also be due to base training capacities and Joint training requirement. Commands that provide formal training are charged with continuous improvement efforts to minimize built-in BITs. When unintended BITs occur, potential courses of action to accommodate the students waiting for training are to increase training quotas (typically done

“out of hide” [overworks instructors and reduces instructor continuation training] and results in MWS over-absorption [reduces combat readiness]), or to adjust future production (may take several years due to lead times involved, but avoids “out of hide” training and over-absorption).

4.4. CEA and Other Non-Career Production/Training. HQ AETC ensures training pipelines for Career Enlisted Aviators and non-career aircrew members provide progressive training for members in these career fields. The recommended sequence is in accordance with the respective Career Field Education and Training Plan. Personnel retraining from non-aviation specialties into a CEA specialty start their training pipeline with the Enlisted Aircrew Undergraduate Course (EAUC) continue through survival training, initial skills (3-level) training, and weapons systems training. HQ AETC is responsible for ensuring completion of all prerequisite training (through award of the 3-skill level). Once prerequisite training is completed, HQ AFPC provides assignment instructions and schedules follow-on weapons system training.

Table 4.1. ATDR Cycle Event Sequence and Timeline and ATDR/PPBS Linkage.

The table below outlines one complete cycle of the ATDR process from the initial data call through execution of the first year of the FYDP program covered by the data call. It illustrates the linkage between ATDR and the PPBS cycle it is designed to support. The total elapsed time for a single cycle is almost 4 years (for example FY 10 POM data call starts Feb 07 execution starts Oct 09). Because this is an annual cycle tied to the PPBS, there will be three ATDR cycles in some stage of activity at any given time.			
Event	Timeline	Principals	Notes
Undergraduate PRD & Distribution Plan Data Call	Feb-Mar (year 1)	AF/A3O-AT sends to: Lead AD MAJCOMs AFRC ANG SAF/IA	Distribution plan for active duty only; Unconstrained requirements inputs for UPRD
Draft UPRD & Distribution Plan	Mar	AF/A3O-AT	Published consolidated data call input
Capacity & Resource Analysis (UPRD)	Apr	AETC/A3R	Determine capacity, resources issues
Shortfall Report (Undergraduate)	Apr	AETC/A3R	Identify shortfall and cause/fixes
Constrained UPRD	May	AF/A3O-AT	Baseline for GPGI data call
Graduate PRD Data call	May	AF/A3O-AT sends to: Lead AD MAJCOMs AFRC ANG SAF/IA	Pipeline requirements driven by constrained UPRD, unconstrained non-pipeline
Draft GPRD	Jun	AF/A3O-AT	
Capacity Analysis	Jun	Training Commands	
Shortfall Report	Jun	Training Commands	

Brief AFCS on shortfalls	Jul	AF/A3O-AT	Both undergraduate and graduate shortfalls briefed to AFCS to determine what shortfalls can/should be fixed. Results will drive PPGL build
Undergraduate PPGL & Graduate PPGL	Aug	AF/A3O-AT to training commands	Program guidance for POM build (constrained by capacity or corporate decisions)
POM Build	Oct-Mar (year 2)	MAJCOMs	
POM Submission			
Post – POM Approved PGL		AF/A3O-AT	Reflects any changes driven during POM deliberations
FINPLAN	Apr-May	MAJCOMs	Address budget year disconnects
PFT Conference (graduate only)	Dec (year 3)	Training commands and customers	Fine tune quota allocation within funded capacity available
Amended PGL (graduate) (Note 1)	Feb	AF/A3O-AT	Documents results of PFT conference
Build/Publish PFT	Feb –May	Training commands	
Execute program	Oct-Sep (year 4)	Training commands	
<p>Note 1: The PGL that is amended as result of the PFT conference is the previous cycle's document not the one that is being worked in the concurrent POM/APOM cycle (e.g. FY 09 PFT results would amend the FY 09 APOM Graduate PPGL, not the FY 10 POM PPGL) since the prime year for the PFT is FY 09 and is outside the FYDP covered by the FY 10 POM documents.</p>			

Chapter 5

AIRCREW MANPOWER REQUIREMENTS

5.1. General. Aircrew requirements are validated lieutenant colonel-and-below funded manpower authorizations and man-year allocations for Pilots, Combat System Operators, Air Battle Managers, and Career Enlisted Aviators. The goal is to have enough aircrew requirements to enable the AF to perform the line and support functions directly and indirectly associated with accomplishing the AF's operational flying missions on a continuous basis, as well as to meet various institutional requirements for professional development (e.g., producing operational and strategic level leaders for the Air Force and Joint communities). Requirements are established based on a number of factors, including operational taskings and force structure, formal training requirements, management staff, test, and professional development. In addition to the guidance in this AF instruction, AFI 38-201 (*Determining Manpower Requirements*) and AFI 65-503 (*US Air Force Cost and Planning Factors*) contain responsibilities and procedures for establishing and justifying aircrew requirements. (NOTE: Proper terminology is important to address the issues outlined in Chapters 5 and 6. Terms related to Chapter 5 issues are: manpower; positions; requirements; authorizations; billets; redline; and spaces. Terms related to Chapter 6 are: manning; inventory; bodies; blueline; and faces.)

5.2. Responsibilities. HQ USAF/A3O-AT is the focal point for and has oversight responsibility for all lieutenant colonel-and below aircrew requirements. Regardless of how it is established (by aircrew ratio, manpower standard, or otherwise), each aircrew manpower authorization requires HQ USAF/A3O-AT and A1MR coordination and/or approval.

5.2.1. As laid out in AFI 38-201, MAJCOMs are required to perform annual aircrew requirements reviews and report the results to HQ USAF/A3O-AT. In addition, MAJCOMs with Air Component roles are charged with limiting/controlling AF aircrew requirements, including both PCS personnel exchange program (PEP) / extended training service support (ETSS) billets and continuously-manned TDY slots within the area of responsibility, in Unified Commands; and other MAJCOMs listed below have oversight responsibility due to functional relationships or proximity.

Command;	ACC	--	Central Command; Southern Command; Strategic Joint Forces Command
	AFSPC	--	NORTHCOM; NORAD
	AFSOC	--	Special Operations Command
	AMC	--	Transportation Command
	PACAF	--	Pacific Command
	USAFE	--	European Command; NATO; AFRICOM
	AETC	--	Air University

5.2.2. An AF Form 480 (Aircrew AFSC/Active Flying Justification), or Aircrew 480 System electronic equivalent, is required for all Lt Col and below aircrew requirements (to include P/N-prefixed billets). HQ USAF/A3O-AT maintains oversight responsibility for AF Form 480s for HAF, SAF, OSD, JCS, CoCom, FOAs/DRUs, and any other positions that do not fall under MAJCOM purview. HQ USAF/A3O-AT, in close coordination with the

MAJCOMs and other 480 users, will ensure a management system is in place to effectively and efficiently manage the AF Form 480 program. AF/A3O-AT uses the Aircrew 480 System to provide managerial oversight of the AF Form 480 program.

5.2.3. Redline/Blueline -- Semiannually HQ USAF/A1PP publishes updates, in coordination with AF/A3O-AT and AF/A1PF, to official projections of all 11XX, 12XX, 13BX, and 1AXXX aircrew requirements for each year throughout the FYDP. These requirement projections are based on the funded AF program at the time, and are the Redline portion of the Redline/Blueline calculations used to forecast aircrew requirements-inventory deltas. AF/A1PF supplies actual/forecast aircrew force inventory as reported in AFRAMS and is the Blueline.

5.3. Key Points. Key points regarding managing aircrew manpower requirements follow.

5.3.1. The most important aircrew requirements are the line operational API-1/2/9/A positions and the training requirements necessary to sustain them. Line requirements are important because they define the core component (operational aircrews) of the Air Force's operational flying capability. In general, the greater the number of Active Component (AC) line positions, the greater the AF's combat/absorption/sustainability capabilities and the lower the OPS/PERSTEMPO. If the AF has sufficient numbers of API-1/2/9/A positions and the required trainers, it has the necessary flying combat capability and ability to sustain it to meet its flying operational taskings, and is able to do so at a reasonable OPS/PERSTEMPO. Similarly, it can absorb/experience enough aircrews, while maintaining unit readiness, to fill a reasonable number of non-flying overhead requirements. The numbers of operational API-1/2/9/A authorized positions are determined by the crew ratio/composition processes laid out in this AFI.

5.3.2. The numbers/types of required support authorizations are dictated by how much and what work needs to be done. However, working within logical absorption (i.e., maintain force readiness) and retention (based on historical retention data) bands, aircrew shortages will likely exist if the size of the support (Training/Staff/Test/Non-absorbable Force) is out of balance with the force size (ops line positions). The vast majority of support authorizations (the exception being the relatively small number of FAIP authorizations) and a fair portion of line operational authorizations require experienced aircrew members; and, essentially the sole source of experienced aircrew members is the Active Duty force (operational flying units). In an imbalance situation, to achieve a sustainability balance necessitates: reducing overhead requirements by finding more efficient ways to get the work done or reducing the amount of overhead work; increasing line force requirements; or, a combination of both.

5.3.3. Maintaining healthy overhead-to-line (also called blue box - to - yellow box) ratios by MWS and/or by MDS helps ensure aircrew force sustainability. If the overhead-to-line ratios are kept below 2.0, the various MDSs/MWSs are normally sustainable; i.e., the MDS/MWS operates efficiently (relatively small overhead) enough to enable manpower requirements to be fully manned.

5.3.4. "No Rated Staff Growth" Policy. Public Law 101-189 SEC. 633 states that "No increase in the number of nonoperational flying duty positions in the Armed Forces (as a percentage of all flying duty positions in the Armed Forces) may be made after September 30, 1992, unless the increase is specifically authorized by law." This is the source document for the "No Rated Staff Growth" policy. The AF policy is to strictly limit/control growth in

aircrew requirements, except for that growth associated with absorbable force structure (e.g., it would be acceptable to add an operational airlift squadron that can accept inexperienced aircrew members). This policy ensures AF compliance with Public Law. In order to establish a new overhead aircrew requirement, an offset of an already-existing funded authorization must be provided. AFI 38-201 (Ch 9) establishes the procedures for justifying and maintaining aircrew requirements. From an Aircrew Management perspective, this policy helps keep MDSs/MWSs in balance, or prevent them from getting more out of balance if their overhead is already too large and/or line force too small. Left unchecked, overhead aircrew requirements would increase to a point where rated inventory shortages become chronic. Tightly controlled overhead growth, using offsets, helps keep the aircrew force line to overhead ratio and force manning levels healthy.

5.3.5. The requisite criterion for an aircrew authorization is that the duties of the position principally require aircrew expertise.

5.3.6. The ability to fill a rated manpower authorization is not a factor in determining whether that rated position is needed. Requirements are established to ensure the Air Force mission is successfully accomplished. Ensuring appropriate rated expertise is applied to the requirement is a separate and distinct function. Documenting rated requirements, particularly during inventory shortage periods, can help make the case for increased resources necessary for increased absorption and proactive inventory/retention improvement initiatives.

5.4. Details. For the most part aircrew requirements are aircrew funded manpower authorizations; they are positions listed in manpower documents and coded, categorized, and grouped to facilitate effective tracking and management. In addition to the documented positions, aircrew requirements include man-year adjustments to account for average annual numbers of aircrew members in Student, Transient, or Personnel Hold (STP) status. Finally, special duty positions (e.g., USAF Academy instructors) are institutional requirements whose manning ideally is sourced from all AFSCs, including those of aircrews. Man-year adjustments are also used to factor these unspecified requirements into the total aircrew requirements calculations. The combination of aircrew manpower authorizations and man-year adjustments enables the Air Force to accurately portray its total aircrew requirements.

5.4.1. Aircrew Position Indicator (API) Codes and Special Experience Identifiers (SEIs). Each aircrew authorization must have a single-digit API code that identifies the type and level of flying duty or responsibility associated with that aircrew position. A complete listing of API Codes can be found in AFI 11-401 (Table 2.1). In addition to API codes, Career Enlisted Aviator career field (AFSC 1AXXX) requirements are identified by SEIs as listed in the Enlisted Classification Directory.

5.4.2. Rated Categories. Rated Categories group AF aircraft to facilitate effective aircrew management. The Rated Categories are Fighter, Bomber, Mobility, C2ISREW, CSAR, Trainer, Special Ops, Unmanned, and Unspecified. In Table 5.1, aircraft designated with a ‘*’ indicate absorbable aircraft (i.e., new aircrews can be assigned to those aircraft and become experienced in the corresponding MWS). Rated authorizations will be identified by Rated category to the maximum extent possible. Authorizations that can be filled by any MWS-/MDS-designated aircrew member are placed in the “Unspecified” category.

5.4.2.1. **Specific Aircrew Requirements.** Specific aircrew requirements are aircrew funded authorizations that require MWS-specific or aircraft-specific (also termed mission design series, or MDS-specific) expertise.

5.4.2.2. **Unspecified (Generalist) Requirements.** Unspecified, or generalist, requirements are those that are not tied to a specific MWS and can be filled from the general inventory (e.g., 11G, pilot generalist billets, can be filled by any pilot; 12G, navigator generalist billets, can be filled by any navigator).

5.4.3. **Aircrew Manpower Requirement Subgroups.** Each aircrew category has subgroups that include Force, Training, Test, and Staff requirements. The Force, Training, and Test subgroups are further subdivided into Primary and Support areas.

5.4.3.1. **Force Manpower Requirements:** Wing-and-below aircrew authorizations for operational flying units. In aggregate, these positions comprise the Air Force's aircrew requirements for conducting its operational flying missions.

5.4.3.1.1. Primary: Line aircrew authorizations required for the employment of operational aircraft. All aircrew manpower authorizations based on aircrew ratios/compositions fit into this category; they have API-1/2/9/A codes.

5.4.3.1.1.1. Aircrew Ratio/Composition (ACR/C) Processes. This section applies only to MAJCOMs (including ANG) with operational units; i.e., organizations that have units equipped with primary mission aircraft inventory (PMAI) and in a few cases primary other aircraft inventory (POAI), and thus have their manpower authorizations determined by aircrew ratios/compositions. MAJCOM/ANG responsibilities for coordinating, submitting, and obtaining approval of requests to change or establish an aircrew ratio/composition are outlined in AFI 38-201. MAJCOM/ANG requests must include a detailed aircrew ratio/composition analysis/justification that addresses both mission tasking levels and aircrew readiness (i.e., show that sorties/crewmember/month available will meet/exceed HCM/SCM required to maintain mission ready status for all line aircrew members). To assist with the operational analysis/justification, various aircrew ratio/composition considerations are outlined in paragraph 3.4.1.1.2 of this instruction. Once an aircrew ratio/composition has been approved by the Air Staff, MAJCOMs should seek funding approval through the normal budget process. HQ USAF/A3O-AT incorporates approved and funded aircrew ratios/compositions into AFI 65-503 *USAF Cost and Planning Factors Guide*, Tables A36-1, A37-1, and A38-1 (Authorized Aircrew Composition for Active, Reserve, and ANG forces, respectively). Additionally, ANG and AFRC are required to submit to AF/A3O/XPM for approval/coordination the breakout between Active, Technician, and Traditional Guard/Reserve authorizations and provide by-squadron total line aircrew authorization data.

5.4.3.1.2. Support: Wing-and-below operational flying unit command and staff positions (API-3/6/B/C codes). Examples include squadron commander, squadron operations officer, and wing/operations group staff positions (weapons and tactics, stan/eval, safety, et al).

5.4.3.2. Training Manpower Requirements: Wing-and-below aircrew authorizations for formal flying training units.

5.4.3.2.1. Primary: Line aircrew instructor authorizations required for the execution of Program Flying Training (i.e., formal flying training, such as basic/initial, re-qualification, upgrade, and special mission courses); they have API-1/2/9/A codes. The AF uses the Flying Training Resource Analysis and Programming (FTRAP) system to determine how many instructors are needed for undergraduate flying training programs, and applies FTRAP logic to graduate training (e.g., training conducted at FTUs). The FTRAP system is a set of integrated resource and capacity models used by the commands to translate Air Force tasking (as documented in the Program Guidance Letter and approved syllabi) into the resources (instructors, aircraft, flying hours) needed to execute that tasking. The FTRAP outputs form the basis for POM submission and allocation/distribution of resources for these programs. Exception: Per international agreement, the IP requirements for the Euro-NATO Joint Jet Pilot Training (ENJJPT) program, including instructor training are determined by the ENJJPT Steering Committee and the ENJJPT Plan of Operations (PO). ENJJPT is a fighter/bomber program, and its USAF instructor requirements are considered to be Fighter/Bomber MWS authorizations. HQ AETC/A3RA determines requirements for instructor aircrews in undergraduate flying training (UFT) programs, such as Specialized Undergraduate Pilot Training (SUPT). HQ USAF/A3O-AT validates and approves the total requirements; then, after AFRC and Joint billets are factored out, apportions the remaining Active AF requirements among the MWSs based on their relative absorption levels. Included in the Active instructor requirements category is First Assignment IPs (FAIPs). The number of FAIP requirements is driven not only by operational unit requirements (i.e., to improve experience mix), but also by training squadron instructor mix/dynamics. Normally, senior AF leadership approves any significant changes to the total number of FAIP requirements, including their MWS breakout, at Rated Summits.

5.4.3.2.2. Support: Wing-and-below training flying unit command and staff positions; they have API-3/6/B/C codes. Examples include squadron commander, squadron operations officer, and wing/operations group staff positions (stan/eval, safety, et al). Additionally, a small number of API-1/2 line flying positions are non-PFT justified authorizations that directly support the primary training force missions (e.g., T-37/38 CTP instructors, Initial Flight Screening instructors, etc.).

5.4.3.3. Test Manpower Requirements. These are wing-and-below (or equivalent) aircrew authorizations for test flying units.

5.4.3.3.1. Primary: Line aircrew authorizations required for the flight testing of weapon systems (e.g., aircraft, munitions, tactics); they have API-1/2/9/A/F codes.

5.4.3.3.2. Support: Wing-and-below (or equivalent) test flying unit command and staff positions; they have API-3/6/B/C codes. Examples include squadron commander, squadron operations officer, and wing/operations group staff positions (stan/eval, safety, et al).

5.4.3.4. Staff Manpower Requirements. Staff requirements are flying and non-flying aircrew manpower authorizations that either directly or indirectly lead/support line

Force/Training/Test flying units. All Active Duty Staff aircrew authorizations are defined by specific manpower standards or by AF/A3O-AT-approved AF Form 480s (Aircrew AFSC / Active Flying Justification) in accordance with AFI 38-201.

5.4.3.4.1. Staff. The “staff” portion of these requirements technically includes all aircrew manpower authorizations coded as API-3/4/6/8/B/C/D/E, and therefore encompasses Force, Training, and Test wing-and-below command/staff billets. Aircrew managers are cautioned to avoid double counting wing-and-below staff positions since, depending on the analysis, some API-3/6 slots can be included as part of Force/Training/Test or part of the Staff category. Frequently, “Staff” is used to refer to only those API-3/4/6/8/B/C/D/E positions outside/above the operational wing level.

5.4.3.4.2. Positions with P/N-prefixed Non-rated AFSCs. By definition, non-career positions do not require rated expertise (e.g., aeronautical engineer billets); however, some would require rated knowledge/background. In accordance with AFOCD, HQ USAF/A3O-AT may authorize “P” (pilot required) or “N” (CSO/ABM required) prefixes in these cases. P/N-prefix positions are considered rated requirements.

5.4.4. **Aircrew Man-year Requirements.** In addition to specific aircrew funded manpower authorizations, man-year requirements are determined to account for the average annual number of aircrew members in advanced student (i.e., aircrew members TDY to units for ETCA formal flying training), PCS development education (e.g., IDE and SDE), transient (leave/travel between PCS moves), prisoner, or patient status. HQ USAF/A3O-AT works with HQ USAF/A1M/A1P, AFPC, and MAJCOM counterparts to determine the man-year allocations, including breakout by MWS.

5.4.5. **Special Duty Identifier and Reporting Identifier Positions.** To fully capture the AF’s aircrew needs, AF/A3O-AT factors unspecified requirements into the total aircrew requirements calculations. In instances where unspecified positions have been coded with a “P” or “N” prefix approved by AF/A3O-AT, these billets are included in the aircrew manpower authorizations category.

5.5. CEAs and Non-rated Aircrew Member Authorizations. All non-CEA enlisted and some officer aircrew positions are non-rated. Career Enlisted Aviator (CEA) authorizations are aircrew member positions coded with a 1AXXX AFSC. Non-rated, non-CEA aircrew positions are identified by an 'X' prefix such as X1NXXX (Intel), X4N0X1 (Aero Med), X3V0XX (Visual Info), X14N (Officer Intel) and X33S (Info Sys), X46F (Flight Nurse). Non-rated aircrew member positions are identified by API 0 (officer) and API Z (enlisted). New nonrated officer requests are submitted through MAJCOM channels with justification on AF Form 480s for A3O-AT approval IAW AFI 11-402. All MWS earned aircrew (including non-rated enlisted/officer) crew ratios/compositions are outlined in AFI 65-503.

5.5.1. Enlisted Aircrew Grade Structure. To ensure consistent and standardized management of CEA members throughout the Air Force, HQ USAF/A3O-AT, in coordination with HQ USAF/A1M counterparts and MAJCOMs, establishes authorized grade structure allocations for the 1AXXX specialty. Adherence to these allocations is essential to effectively project required accessions and align personnel with the crew ratio-gained force structure. Changes to enlisted aircrew grade structure allocations must be coordinated with the CEA career field manager in HQ USAF/A3O-AT. HQ USAF/A1PF and HQ AFPC/DPAA/DPAOM4 provide

information to MFMs, through MAJCOM/A1 counterparts, concerning the status of CEAs, including, but not limited to: manning, distribution by grade, and retention rates. HQ USAF/A3O-AT will use this information, coupled with historical data, to assess current and projected requirements.

Chapter 6

RETENTION, INVENTORY, AND DEVELOPMENT

6.1. Retention. Like absorption, retention affects virtually every aspect of aircrew management. The AF retention goal is to facilitate aircrew force sustainability (continuously having the numbers and types [i.e., by MDS/MWS and experience/qualification] of aircrews required to match aircrew requirements) by means of sound aircrew management practices (i.e., matching force structure with tasking levels and achieving readiness parameters both optimize retention) along with consistent, credible, long-term-focused personnel policies and actions. (NOTE: Proper terminology is important to address the issues outlined in Chapters 5 and 6. Terms related to Chapter 5 issues are: manpower; positions; requirements; authorizations; billets; redline; and spaces. Terms related to Chapter 6 are: manning; inventory; bodies; blueline; and faces.).

6.1.1. Retention Considerations.

6.1.1.1. **The economy**, particularly the aviation industry for pilots, has historically been the primary determinant of aircrew retention, and the AF has limited influence on this external factor. If the economy is strong, AF retention usually suffers, and vice versa. Aviator Continuation Pay (i.e., Bonuses), can lessen, but not eliminate, the economy's effect on retention.

6.1.1.2. While direct analytical correlations have been problematic, exit surveys have shown that **high OPS/PERSTEMPO** can negatively affect retention. Additionally, a high OPS/PERSTEMPO across the Total Force negatively affects the ARC's ability to recruit personnel leaving the active duty component.

6.1.1.3. **Turbulence** that can result from unpredictable and short-notice taskings, is another potentially adverse retention factor in the OPS/PERSTEMPO area.

6.1.1.4. **Erosion** of pay/benefits (especially health care) can have an adverse impact on retention.

6.1.2. Retention Options. Retaining aircrews the AF has trained and experienced is much more effective, efficient, and responsive than replacing them, since replacement requires substantial time and money to access, train, and experience new aircrews. Options for improvement include:

6.1.2.1. Establishing/maintaining longer Active Duty Service Commitments (ADSCs) for initial training.

6.1.2.2. Increasing compensation -- Aviation Career Incentive Pay (ACIP), Aviator Continuation Pay (ACP), Career Enlisted Flyer Incentive Pay (CEFIP), retirement/health benefits, etc.

6.1.2.3. Improving/maintaining Quality of Life -- maintaining readiness, reducing OPS/PERSTEMPO, increasing tasking stability/predictability (minimize short/no-notice taskings; optimize unit rhythm) improving family support (living facilities, health care, etc.).

6.1.2.4. Selective continuation of deferred aircrew members.

6.1.2.5. Allowing limited number of active component personnel to move to reserve component units via Palace Chase (provided operational flying/mission readiness is maintained).

6.1.2.6. Though not a long-term retention option, the use of Stop Loss has historically had a negative impact on retention dynamics for aircrews. Although it helps in the short term, a Stop Loss program adversely impacts QoL and therefore hurts long-term retention in the aircrew community.

6.1.3. **Promotions.** Competitive aircrew promotion rates are an essential ingredient of successful retention. The HQ USAF/A3O-AT aircrew career field managers (CFMs), along with HQ USAF/A1PP and MAJCOM aircrew managers, are responsible for considering potential promotion implications in analyzing aircrew management policy recommendations/decisions, which typically have MDS/MWS-wide and/or AF-wide effects. For instance, if an MDS over-absorbs new aircrews, its operational units become overmanned. If not accompanied by increased flying hours, this overmanning reduces unit readiness/capability due to low HCM/SCM, and can erode individual flying skills. This can result in poor flying performance (e.g., check rides) that could adversely affect his/her OPRs/PRFs/EPRs. If severe overmanning persists, aircrew members are less likely to upgrade (e.g., to aircraft commander, flight lead, instructor) than their peers in other MDSs that are properly manned. In extreme cases, some aircrews may actually be reassigned from their first operational assignment without becoming experienced; the downstream impact can be reduced job/promotion opportunities (e.g., flight commander billets).

6.1.4. **TARS and CCR.** Two common retention measures are cumulative continuation rate (CCR) and Total Active Rated Service (TARS). CCR measures retention of year groups (e.g., 6-11, 6-14 years) near initial ADSC completion. TARS looks at retention for all Lt Col and below year groups (1-28 years). TARS and CCR are historical, not predictive, metrics. However, TARS can be used to make simplified inventory projections. HQ AFPC computes current and retains historical AF retention data. See Attachments 2 and 3 for definitions and equations.

6.1.4.1. **Total Active Rated Service (TARS).** TARS is an expression in years, of the average number of years an officer serves in the rated force, from award of rating to separation, promotion to colonel, grounding or retirement based on current retention percentages. HQ AFPC/DPAPA calculates the historical TARS and publishes it in the annual Rated Officer Retention Analysis Report. The greater the retention, the higher the TARS.

6.1.4.2. **Cumulative Continuation Rate (CCR).** CCR is the percentage of rated officers who remain in service after a given period of time. The two most common views are 6-11 years and 6-14 years. A CCR of 60% for 6-14 years means that 60% of the rated officers entering their sixth year of service are expected to remain in service through their fourteenth year, assuming current retention patterns continue. The higher the retention, the higher the CCR.

6.2. Aircrew Inventory. **Aircrew Inventory** is defined by career field category (Pilot, CSO, ABM, CEA) as the number of Lt Col-and-below (and SMSgt-and-below) qualified aircrew members in the USAF. For inventory purposes, an aircrew member is considered "qualified" when he/she completes initial/basic flight training and is awarded their rating. For example, an

individual is counted in the pilot inventory when he/she graduates from SUPT and is awarded an aeronautical pilot rating IAW AFIs 11-401 and 11-402. Aircrew members continue to be counted as inventory for as long as they retain an aircrew rating. Permanently disqualified aircrew (to include ASC 02) are not part of the official aircrew inventory for accounting purposes; however, they may continue to be employed in non-flying rated positions dependent upon AF needs.

6.2.1. Inventory Considerations. Having sufficient aircrew inventory is essential to AF combat capability/readiness, training, and management of our aircrew force to ensure mission accomplishment. The HQ USAF/A3O-AT aircrew career field managers have lead responsibility for aircrew requirements and overall aircrew management. HQ USAF/A1PP is the OPR for aircrew-related personnel policies that work in conjunction with A3O-AT's aircrew management policies.

6.2.2. Inventory Calculations. HQ USAF/A1PF uses the AFRAMS model to provide official total Active aircrew inventory projections, as well as projections for Active aircrew inventory by MWS. Simplified calculations that are sometimes used to do inventory projection excursions are the following:

6.2.2.1. Total Active Inventory = Total Active Annual Production X Active TARS

(Example: 1100 pilots/yr produced X 12.0 yrs TARS = 13,200 Total Active Pilots)

6.2.2.2. MWS Active Inventory = MWS Active Annual Absorption X Active MWS TARS

(Example: 330 fighter pilots/yr absorbed X 13 yrs TARS = 4,290 Active Fighter Pilots)

Simplified Calculation CAUTIONS:

6.2.2.3. Typical excursions involve varying production/absorption while keeping TARS constant. However, varying production/absorption requires that TARS be adjusted, because changing production/absorption affects retention.

(Example: 270 FTR pilots/yr absorbed X 14.4 yrs TARS = 3,888 FTR pilots)

300 FTR pilots/yr absorbed X 13.0 yrs TARS = 3,900 FTR pilots

330 FTR pilots/yr absorbed X 11.6 yrs TARS = 3,828 FTR pilots)

6.2.2.4. These calculations assume steady-state production/absorption and retention for a 28-year period (i.e., TARS span of time). Due to changes in production/absorption capacity and in the economy, historical data shows that both production/absorption and TARS vary from year to year.

6.2.3. Inventory Management. HQ USAF/A3O-AT is responsible for aircrew management guidance, which is implemented to some extent via personnel policies and accounting practices throughout the various phases of the aircrew life cycle, including:

6.2.3.1. Accessions Policy OPR: HQ USAF/A1P (levels provided by HQ USAF/A3O-AT).

6.2.3.2. Assignment, Joint Officer Management, and Classification Policy OPR: HQ USAF/A1PPA.

6.2.3.3. Promotions and Evaluations Policy OPR: HQ USAF/A1PPP.

6.2.3.4. **Development Policy** OPR: HQ USAF/A1D.

6.2.3.5. **Retirements and Separations Policy** OPR: HQ USAF/A1PPS.

6.2.3.6. **Inventory Data.** HQ AFPC/DPAP, in coordination with HQ USAF/A1PF, provides official aircrew inventory data, which includes, but is not limited to, manning, distribution by grade or year group, and gate months completed. HQ AFPC/DPAP also measures and provides current and historical information concerning aircrew retention to HQ USAF A/3/5 and HQ USAF/A1 upon request.

6.2.4. **Rated Distribution and Training Management (RDTM) Codes.** Rated officers are uniquely identified by their RDTM Code (Table 6.2) for the purposes of inventory management. RDTM Codes are assigned to each MDS within an MWS. The RDTM Code will reflect the crewmember's appropriate MWS, but does not imply the member is actively flying or maintaining currency in that aircraft. Pilots and navigators who most recently completed training in a trainer aircraft (an aircraft associated with the trainer RDTM Code) but who earlier were identified with another MWS category code will retain their previous code. Only pilots assigned to a training aircraft and not earlier awarded another MWS category code will be identified by the trainer RDTM Code (e.g., FAIPs). HQ AFPC/DPAO is OPR for the RDTM codes.

6.2.5. **Unique Qualifications.** Aircrew members may also be identified by unique qualifications or codes. Examples of such identifiers include grade, currency, qualification, year group, Special Experience Identifier (SEI), and completed Operational Flying Duty Accumulator (OFDA) gates.

6.3. Development. Development of aircrews is vitally important. This ensures both near term occupational needs and longer-term needs, such as leadership, are met. Development tools generally fall into the following categories: education, training, and assignments. Development may be provided by the Air Force or it may be self-developed.

6.3.1. **Assignments.** Aircrew management guidance and other assignment policies drive aircrew assignments.

6.3.1.1. **Readiness Parameters:** AF senior leadership has established MDS readiness parameters – unit experience mix, average time on station, and manning level objectives – that significantly influence assignments, because AFPC is required to manage assignments so as to achieve the AF-approved readiness parameter objectives. In making each aircrew assignment AFPC must consider the effect on readiness parameters.

6.3.1.2. **Aircrews in Aircrew Manpower Authorizations.** AFI 38-201 *Manpower and Organization – Management of Manpower Requirements and Authorizations* requires that a rated AFSC only be designated for “positions with duties clearly requiring rated skills,” and AFI 36-2110 *Assignments* requires that Rated officers “...are assigned primarily to fill rated requirements”. Air Force policy is that rated officers should not be assigned to non-rated billets. Exceptions to this policy are permitted when the assignment is determined to be in the best interests of the Air Force.

6.3.1.3. **Assignment Guidance.** Assignment of temporary or permanently disqualified rated personnel to non-flying rated positions closely associated with active flying (e.g., ALO) will be on a case-by-case basis according to AFI 36-2110.

6.3.1.3.1. **First Assignment Instructor Pilots (FAIPs).** CSAF policy is that FAIP tours will be no longer than pilot instructor training (PIT) plus three years, at which time the FAIP will be assigned to a MWS. Specific MWS determination/assignment is made after observing FAIP performance for approximately two years. FAIPs will be given highest priority for MWS training three years after completion of PIT.

6.3.1.3.2. **Service Liaison Officers.** Service liaison officer billets (e.g., Air Liaison Officer (ALO), Air Mobility Liaison Officer (AMLO), etc.) will be filled as prescribed in the Memorandum of Agreement (MOA) between the Air Force and other Services.

6.3.1.3.2.1. **Air Liaison Officers (ALOs).** Air Liaison Officers (ALOs). ALO billets will be filled by designated officers IAW allocation plans (e.g., fighter pilots and weapons system officers; bomber pilots and navigators; ABMs; electronic warfare officers (EWOs); Special Tactics Officers (STOs)). The goal is to fill no less than 50% of the unit level ALO billets with fighter crewmembers and no less than 55% of the ALO billets Air Force-wide with fighter crewmembers.

6.3.1.3.2.2. **Air Mobility Liaison Officers (AMLOs).** AMLO billets should be filled IAW Allocation Plans by mobility (tanker/airlift) aircrew members.

6.3.1.3.3. **Total Force Absorption Program (TFAP) Aircrews.** An initiative to help sustain total requirements by training and experiencing limited numbers of Active Duty (AD) inexperienced (INEX) and limited experienced (LIMEX) aircrews in Air Reserve Component (ARC) operational flying units. TFAP was implemented by AF/XO in Jan '02 with goal of reducing AD unit overmanning and ARC unit under-manning, while continuing to optimize Total Force absorption of AD pilots.

6.3.1.3.4. **Fighter Associate Program (FAP).** FAP was instituted to replace the fighter portion of the Total Force Absorption Program (TFAP) and all provisions of the TFAP Concept of Operations (CONOPS) for existing limited experience (LIMEX) TFAP fighter pilots assigned to AFRC units. The program is administered via a MOU between COMACC and AFRC/CC. (NOTE: FAP will be phased out as TFI Active and Reserve Associate programs are stood up.)

6.3.1.3.5. **Flight Surgeons, Pilot-Physicians, and Exchange Officers.** Total number of active (i.e., API-5) Air Force Flight Surgeons can not exceed one flight surgeon per crew position per squadron and will be assigned as determined by AFMOA guidance. No more than one exchange officer per aircrew career field (e.g., pilot, nav/EWO, ABM) is authorized per operational flying squadron, and no more than two exchange officers per career field per training squadron are authorized. SAF/IA maintains the CSAF-approved listing of the units and level of participation in the exchange program. Any change to the exchange program list requires AF/A3O coordination/approval. Any changes to the flight surgeon and pilot-physician assignment policies require AF/A3O and AF/SG3P coordination/approval (see AFI 11-405 *The Pilot-Physician Program* for detailed guidance on Pilot-Physicians).

6.3.1.4. **Career Enlisted Aviator (CEA) Management.** To facilitate healthy CEA manning among all 1AXXX AFSCs, when in the best interests of the Air Force, the Air

Force has the option to crossflow CEAs laterally into another CEA AFSC in cases where similar skills would facilitate such a transition (e.g., from 1A0 to 1A2 and vice versa). Any projected assignment action along these lines requires coordination between HQ USAF/DPE (Chief's Group), HQ AFPC/DPAOM4, HQ AF/A3O-AT (CEA Career Field Manager), and MAJCOM Functional Managers (MFMs). Training availability, OFDA Gate Credit, Controlled Duty Assignment (CDA), and associated ADSCs are important considerations in managing this process. For Guard and Reserve, approval authority for CEA Crossflow is NGB/A3 and AFRC/A2/3, respectively.

6.3.1.4.1. Criteria for release to Special Duty Identifier (SDI) or Reporting Identifier (RI) tours:

6.3.1.4.1.1. Must have completed 1st OFDA Gate IAW FY00 NDAA and AFI 11-401.

6.3.1.4.1.2. Must be able to meet 2nd and/or 3rd Gate upon completion of SDI/RI tour.

6.3.1.4.1.3. Must not be on a Controlled Duty Assignment (CDA).

6.3.1.4.1.4. Must not be drawing an SRB or AFSC on the Chronic Critical Skills listing.

6.3.1.4.1.5. Major Weapons System manning must be 96% or higher.

6.3.1.4.2. Career Enlisted Aviators may be released from their AFSC for a three-year maximum tour to the following Special Duty Identifiers (SDIs) and Reporting Identifiers (RIs) as indicated in Table 6.1.

Table 6.1. Special Duty Identifiers (SDI) and Reporting Identifiers (RI).

Special Duty Identifiers	Reporting Identifiers
8A100 Career Assistance Advisor	9C000 CMSgt of the Air Force
8B000 Military Training Instructor	9E000 Senior Enlisted Advisor
8B100 Military Training Leader	9G100 Group Superintendent
8B200 Academy Military Training NCO	9L000 Interpreter/Translator
8D000 Linguist Debriefing	9S100 Technical Applications Specialist
8F000 First sergeant	
8P000 Courier	
8P100 Defense Attaché Specialist	
8R000 Recruiter	
8T000 PME Instructor	

6.3.2. Other development tools. Other development tools are education and training. They may be provided by the Air Force or they may be self-developed. Generally these tools promote occupational or institutional competencies. It is important that aircrew members be developed for leadership positions as well as for aircrew requirements. Proper development will ensure upward mobility for aircrew members which should lead to appropriate promotion opportunities and enhance retention.

Table 6.2. Rated Distribution and Training Management (RDTM) Codes.

Pilot		
AFSC	BOMBER	RDTM
11BxA	B-1	EB
11BxB	B-2	EA
11BxC	B-52	EC
N/A	T-37 ACE/CTP	DB
N/A	T-38 ACE/CTP	DC
11BxU	ALO	ZZ
11BxY	General	ZZ
11BxZ	Other	ZZ
AFSC	TEST	RDTM
11ExA	Bomber	E5
11ExA	Tanker	F5
11ExA	Strategic Airlift	G5
11ExA	Tactical Airlift	H5
11ExB	Fighter	A5
11ExC	Helicopter/VSTOL	J5
11ExQ	Msn Spt (T-38, etc)	ZZ
11ExY	General	ZZ
11ExZ	Other	ZZ
AFSC	FIGHTER	RDTM
N/A	A-7	AK
11FxB	A-10	AN
N/A	F-4	AF
N/A	F-4G	AB
N/A	RF-4	AO
11FxF	F-15	AM
11FxG	F-15E	AJ
11FxH	F-16	AI
11FxJ	F-22	A7
N/A	F-111	AG
N/A	EF-111	AC
11FxM	F-117	A6
11FxN	F-35	A9

CSO (Nav/EWO/WSO)		
AFSC	BOMBER	RDTM
12BxC	B-1 WSO	EB
12BxD	B-52 EWO	EC
12BxE	B-52 Nav/Radar Nav	EC
12BxU	ALO	ZZ
12BxW	EWO, General	ZZ
12BxY	General	ZZ
12BxZ	Other	ZZ
AFSC	TEST	RDTM
12ExA	Bomber	E5
12ExA	Tanker	F5
12ExA	Strategic Airlift	G5
12ExA	Tactical Airlift	H5
12ExB	Fighter	A5
12ExW	EWO, General	ZZ
12ExY	General	ZZ
12ExZ	Other	ZZ
AFSC	FIGHTER	RDTM
N/A	F-4	AF
N/A	F-4G	AB
N/A	RF-4	AO
12FxF	F-15E WSO	AJ
12FxG	F-15E EWO	AJ
N/A	F-111	AG
N/A	EF-111	AC
12FxU	ALO	ZZ
12FxV	EA-6B	A8
12FxW	EWO, General	ZZ
12FxY	General	ZZ
12FxZ	Other	ZZ
AFSC	Trainer	RDTM
12KxA	SUNT, Nav General	DZ

11FxQ	IFF (AT-38B/T-38C)	AP
N/A	EA-6B	A8
11FxU	ALO	ZZ
11FxY	General	ZZ
11FxZ	Other	ZZ
AFSC	Helicopter	RDTM
N/A	HH-1H	JB
N/A	UH-1H	JA
11HxC	UH-1N (UH-1/TH-67)	JA
N/A	HH-3	JD
11HxE	HH-60	JH
11HxF	CSAR-X	JN
11HxG	CVLSP	JP
11HxT	SUPT-H Instr	JT
11HxW	CSAR, General	ZZ
11HxY	General	ZZ
11HxZ	Other	ZZ
AFSC	Trainer	RDTM
11KxA	T-1	DG
11KxC	T-37	DB
11KxD	T-38	DC
N/A	AT-38	AP
11KxF	T-6	DB
11KxG	T-34	DO
11KxH	T-44/TC-12	DN
11KxY	General	ZZ
11KxZ	Other	ZZ
AFSC	Mobility	RDTM
11MxA	C-5	GN
11MxB	C-130E/H	HB
11MxC	C-130J	HJ
N/A	C-141	GL
11MxD	C-27J (JCA)	GE
11MxE	VC-25	GI
11MxF	KC-135	FC
11MxG	KC-10	FA

12KxB	SUNT, EWO	DZ
12KxC	SUNT, WSO	DZ
12KxD	CSO	DZ
12KxY	General	ZZ
12KxZ	Other	ZZ
AFSC	Mobility	RDTM
N/A	C-5	HR
12MxB	C-130E/H	HB
N/A	C-141	HS
12MxE	VC-25	HU
12MxF	KC-135	FC
N/A	C-135/C-137	HI
12MxS	Airlift General	ZZ
12MxT	Tanker General	ZZ
12MxU	ALO	ZZ
12MxV	Inter-Theater, General	ZZ
12MxW	Intra-Theater, General	ZZ
12MxY	General	ZZ
12MxZ	Other	ZZ
AFSC	C2ISREW	RDTM
12RxA	E-3	FT
12RxB	E-4	FU
12RxC	EC-130 EWO	HM
12RxD	EC-130	HM
12RxE	HC-130	HH
12RxF	WC-130	HG
N/A	EC-135	FH
12RxH	RC-135 EWO	FG
12RxJ	RC-135	FG
12RxK	WC/OC-135	FJ
12RxL	E-8	FR
12RxM	EC-130J WSO	LU
12RxN	RC-26	LY
12RxP	HC-130J (Recap)	LZ
12RxW	EWO, General	ZZ
12RxY	General	ZZ
12RxZ	Other	ZZ

11MxH	C-9	GM
11MxJ	C-12	GP
N/A	C-27A	GE
11MxK	C-17	GJ
11MxL	C-20/C-37	GG
11MxM	C-21	GQ
11MxN	C-26	GF
11MxP	C-32	GH
11MxQ	C-40	GD
11MxR	KC-45 (KC-X)	FN
11MxS	Airlift General	ZZ
11MxT	Tanker General	ZZ
11MxU	ALO	ZZ
11MxV	Inter-Theater, General	ZZ
11MxW	Intra-Theater, General	ZZ
11MxY	General	ZZ
11MxZ	Other	ZZ
AFSC	C2ISREW	RDTM
11RxA	E-3	FT
11RxB	E-4	FU
11RxC	EC-130	HM
11RxD	HC-130	HH
11RxE	WC-130	HG
N/A	EC-135	FH
11RxG	RC-135	FG
11RxH	WC/OC-135	FJ
11RxJ	TR-1/U-2	EH
11RxL	E-8	FR
11RxM	MC-12 (RC-12)	LO
11RxN	RC-26	LY
11RxP	HC-130J (Recap)	LZ
11RxY	General	ZZ
11RxZ	Other	ZZ
AFSC	Special Ops	RDTM
11SxA	MH-53	JK
N/A	MH-60	JL
11SxC	AC-130H	H6
11SxD	AC-130U	HF
11SxE	MC-130P	H2

AFSC	Special Ops	RDTM
12SxA	AC-130H EWO	H6
12SxB	AC-130H FCO	H6
12SxC	AC-130H	H6
12SxD	AC-130U EWO	HF
12SxE	AC-130U FCO	HF
12SxF	AC-130U	HF
12SxG	MC-130P	H2
12SxH	MC-130E EWO	H8
12SxJ	MC-130E	H8
12SxK	MC-130H EWO	HL
12SxL	MC-130H	HL
12SxM	Air Commando	H4
12SxN	MC-130W	H3
12SxP	MC-130J	H9
12SxU	ALO	ZZ
12SxW	EWO, General	ZZ
12SxY	General	ZZ
12SxZ	Other	ZZ
AFSC	Unmanned	RDTM
12UxA	MQ-1	UA
12UxB	MQ-9	UB
12UxC	RQ-4	UG
N/A	X-45 (UCAV)	UC
12UxU	ALO	ZZ
12UxY	General	ZZ
12UxZ	Other	ZZ

ABM		
AFSC	ABM	RDTM
13BxB	E-3	WA
12BxC	Air Defense	WG
12BxD	Mobil Air Control	WG
13BxK	E-8	WJ
N/A	EC-130	WC
13BxU	ALO	ZZ
13BxY	General	ZZ
13BxZ	Other	ZZ

11SxF	MC-130E	H8
11SxG	MC-130H	HL
11SxJ	CV-22	JM
11SxM	Air Commando	H4
11SxN	MC-130W	H3
11SxP	MC-130J	H9
11SxU	ALO	ZZ
11SxY	General	ZZ
11SxZ	Other	ZZ
AFSC	Unmanned	RDTM
11UxA	MQ-1	UA
11UxB	MQ-9	UB
11UxC	RQ-4	UG
N/A	X-45 (UCAV)	UC
11UxU	ALO	ZZ
11UxY	General	ZZ
11UxZ	Other	ZZ

Astronaut		
AFSC	Astronaut	RDTM
13AxA	Pilot	SY
13AxB	Mission Specialist	SZ

Chapter 7

AIRCREW REQUIREMENTS-INVENTORY DELTA MANAGEMENT

7.1. Overview. The AF goal is to consistently match aircrew inventory and requirements; i.e., at a minimum, have the right numbers and types (e.g., mission qualified, experienced, instructor) of aircrews to man all aircrew positions while also taking into account man-year requirements. This chapter outlines the methods and approaches for forecasting aircrew shortages/overages, and for avoiding, correcting, and/or mitigating them. When working to eliminate requirements-inventory deltas, past lessons substantiate the importance of making smooth, incremental MWS-specific adjustments over time vice major, non-specific corrections.

7.2. Redline/Blueline (RL/BL) Charts: Requirements-Inventory Delta Forecasts. Charts that depict requirements and inventory data use red lines for requirements and blue lines for inventory; they are referred to as “Redline/Blueline” charts. RL/BL charts are the official aircrew requirements-inventory projections; they are prepared semiannually by HQ USAF/A1PPR. AF/A1PF provides the Blueline data and AF/A3O-ATA provides the Redline data. RL/BL charts are made available to senior AF leaders and MAJCOM/A3/A1 Aircrew Managers for their use in conjunction with readiness and other data to make informed aircrew management decisions. While RL/BL charts for an entire career field provide aggregate data, MDS/MWS-specific RL/BL solutions are critical for effectively rectifying aircrew shortages/overages. MDS/MWS-specific solutions help match inventory and requirements.

7.2.1. Redline Requirements. The Redline includes all Lt Col-and-below aircrew manpower authorizations, as well as man-year allocations (e.g., for advanced students, PME, etc.).

7.2.2. Blueline Inventory. The Blueline inventory includes all Lt Col-and-below qualified aircrew members. It does not include medically disqualified aircrews unless they retain an aircrew rating (e.g., UAV pilot).

7.3. Reduce/Eliminate Aircrew Shortfalls. The preferred methods for reducing/eliminating aircrew shortfalls are to:

7.3.1. Improve Retention (See Chapter 6 for improvement options.) Retaining the aircrews the AF has trained and experienced is much more effective, efficient, and responsive than replacing them, since replacement requires substantial time and money to access, train, and experience new aircrews. However, retention improvement has its limits. If the force structure (line API-1/2/9/A positions) is undersized in relation to the size of the inventory, experienced aircrews will likely encounter limited opportunities to return to fly to update flying credentials and attain mandated flying gates.

7.3.2. Reduce Support Requirements. Note that this option is limited to support requirements; deleting line operational requirements will reduce absorption capability, and thus result in an increased inventory shortfall. Care should be taken when reducing support requirements to consider the impact on developmental goals. Options include:

7.3.2.1. Delete obsolete requirements. Annual MAJCOM and Air Staff aircrew requirements reviews directed by AFI 38-201 are intended to help ensure outdated requirements are deleted. Obsolete staff requirements can be used as ‘offsets’ for new

staff requirements. AF/A3O-AT should be consulted prior to completely deleting a staff requirement.

7.3.2.2. Find more effective and/or efficient ways to do business -- consolidate overhead organizational structure laterally or vertically, automate operations, and so on. If line operational positions are eliminated for budgetary or other reasons, a reduction in overhead requirements is necessary to maintain a healthy overhead-to-line requirements balance. However, such cuts can become problematic in cases where certain overhead functions (e.g., Test) are needed regardless of the number of operational squadrons being supported.

7.3.2.3. Convert Active positions to Reserve Component (RC) or civilian positions. Any conversions to RC positions should be a collaborative effort with the respective Components and due consideration for limiting factors (e.g., end strength caps). If Active positions are converted to RC, they should be done so on a temporary basis (e.g., within the FYDP) and be reverted back to Active downstream. Permanent government civilian positions can bring stability and corporate/institutional knowledge to an organization. However, the caution for conversions to civilian positions in support/staff areas is to make sure the organization continues to have some Active slots to retain the potential for the presence of personnel with recent field/operational experience and to provide Force Development opportunities. As an alternative to converting, consider Limited Extended Active Duty (LEAD) tours, temporary AGRs, and bringing IMAs onto MPA tours in multiple-month increments.

7.3.3. **Increase Absorption Capability** (i.e., increase flying hours and training resources).

7.3.4. **Use Alternate Staff Manning.** Make use of all available alternate sources of military aircrew expertise where practical. Options include voluntary retired recall program, voluntary limited period recall program, and government civilian temporary over-hire. These, either by law or by design, should be temporary options that afford the Air Force the flexibility to increase/decrease them as Active requirements-inventory deltas change. Other alternate manning options include use of other aircrew members in non-flying staff positions where shortages exist (e.g., CEA's in certain AOC positions). Still other manning options include converting non-flying staff positions to civilian positions and hiring civilian contractors with appropriate experience. Flying positions, especially Force and Training slots, should be manned by Active/Reserve Component personnel to optimize the Air Force's drawdown/surge and training capabilities.

7.4. Common Missteps. The two most common missteps in seeking to balance inventory and requirements are:

7.4.1. Excessively over-absorbing new aircrews without funding necessary resources to maintain combat capability/readiness.

7.4.2. Cut line operational positions -- reduces requirements, but also reduces absorption capability, and therefore inventory, such that the net effect is typically an increase in the delta.

7.5. Rated Allocation Plans. AF/A3O-AT, in coordination with AF/A1PP, prepares rated allocation plans that man organizations in accordance with priorities set by senior AF leadership. Allocation plans are intended to provide a disciplined, objective approach for the Air Force to

bear aircrew shortfalls in areas where they can be best mitigated. When practical, Rated Allocation Plans should balance near-term operational needs with long-term leadership needs. Historically, the Air Force's priorities have been to man Force and Training requirements at the 100% level and place any over-/under-manning burdens in the Test/Staff/Other areas. The detrimental effects of under-manning the Force are discussed in Chapter 3. Under-manning Force/Training units could not only reduce combat and absorption capabilities, but also hurt retention. Under-manning Staff units could not only reduce capabilities, but it also could hurt the ability to develop leaders with the breadth and depth of experience required at the most senior levels inside and outside the Air Force. As has been the case with allocation plans for shortages, allocation plans for overages have traditionally manned Force/Training at 100% while placing the overages in Staff/Other/Test and special duty positions. An overage plan helps ensure a disciplined management approach is maintained for aircrews, and also facilitates minimizing any negative effects on other career fields that could result from assigning rated personnel to non-rated management positions. Rated Allocation Plans are normally published after RL/BL updates.

7.5.1. Guidance and Procedures. AF leadership approves aircrew manning priorities at four-star meetings, such as CORONAs and Rated Summits. AF/A3O is responsible for developing the process for coordinating and implementing allocation plans, and is the Air Force focal point for submitting any proposed changes in aircrew manning priorities to CSAF for approval. AF/A3O-AT serves as the "honest broker" for allocation plans.

7.5.2. Rated Priorities. Air Force Rated priorities are reflected in periodic updates via the Rated Staff Allocation Plan (RSAP). AF/A3O-AT, in coordination with AF/A1PP, develops the RSAP for CSAF approval. Applying the tenets of equity, flexibility, responsiveness, and visibility in its construction, the RSAP provides organizations with 'Entitlements', against which AFPC/DPA assigns the available Rated inventory. AFPC/DPA ensures visibility by periodically publishing the goal vs. execution metrics of the RSAP.

7.6. CEA Priorities. Air Force CEA priorities provide for equitable distribution of all resources. This ensures each weapons system shares in any production constraints. CEA resources are distributed based solely on validated requirements. Unless directed otherwise by CEA Career Field Manager, the CEA priorities are as follows:

Operational Line Units	100% or worldwide average (whichever is less)
Training Units	100% or worldwide average (whichever is less)
Overseas Units	Worldwide average
MAJCOM Level Stan/Eval positions, Staff, Test, SDI/RI and Other	Based on MWS manning
CEA CFM	IAW CEA CFM Prioritization Plan

7.7. Forms Adopted. AF IMT 847, *Recommendation for Change of Publication*.

7.8. Forms Prescribed. AF Form 480, *Aircrew AFSC/Active Flying Justification* (see Atch 3).

PHILIP M. BREEDLOVE, Lt Gen, USAF
DCS, Operations, Plans and Requirements

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

Air Force Enlisted Classification Directory (AFECD). Accessible via the AFPC website; replaces AFMAN 36-2108

Air Force Officer Classification Directory (AFOCD). Accessible via the AFPC website; replaces AFMAN 36-2105

Aviation Career Incentive Act of 1974. Provides departmental policy on eligibility for aviation career incentive pay and operational flying duty credit and establishes reporting procedures for the Military

Departments. Identified certain conditions of entitlement and restrictions on authorization and payment.

Aviation Career Improvement Act of 1989. The ACIA was intended by both the Congress and the military services as a measure to improve pilot retention and was primarily directed at military compensation by increasing flight pay and continuing the pilot bonus. It also affected career management issues that included changing the flying gates and the active duty service commitment for flight training.

AFPD 10-9, *Lead Operating Command Weapon Systems Management.* Designates a lead command when more than one AF MAJCOM or agency possesses the same type of weapon system, 8 Mar 2007

AFI 10-201, *Status of Resources and Training System (SORTS).* Implements AFPD 10-2, *Air Force Readiness*, 13 Apr 2006

AFI 11-202 (Volume 1, *Aircrew Training, 17 May 2007*; Volume 2, *Aircrew Standardization/Evaluation Program, 8 Dec 2006*).

AFI 11-401, *Aviation Management.* Implements AFPD 11-4, *Aviation and Parachutist Service*, and Department of Defense (DoD) Directive 1340.4, *Proficiency Flying Programs*, July 17, 1972, with Change 1. Establishes procedures for managing Air Force flying resources and provides guidance that applies to administering aircrew flight management programs. Applies to all US Air Force flight managers, commanders of flying units, and aircrew personnel. Establishes authorization for flights in US Air Force aircraft. Explains Aircrew Position Indicator (API) codes, Flying Activity Codes (FAC), Aviation Service Codes (ASC), Flying Status Codes (FSC), Operational Flying Duty Accumulator (OFDA) gate rules, and establishes procedures for logging operational flying time credit. Lists eligibility and approval authority for orientation and public affairs flights. Lists CSAF-approved general officer operational flying positions, 7 Mar 2007

AFI 11-402, *Aviation and Parachutist Service Aeronautical Ratings and Badges.* Sets procedures and standards for implementing aviation and parachutist service policy and procedures. Mandates rules for initiating and terminating aviation and parachutist service and lists requirements for award of ratings/badges. Establishes Flying Evaluation Board (FEB),

Aircrew Evaluation Board (AEB), and Aeronautical Rating Board (ARB) procedures, 25 Sep 2007

AFI 11-412, *Aircrew Management*. Provides aircrew management approach, policy/guidance, and processes for optimizing the aircrew readiness-sustainability balance and allocating aircrews consistent with AF priorities. Creates a formal aircrew management structure, clarifies responsibilities, and documents corporate decisions, 25 Apr 2005

AFI 11-421, *Aviation Resource Management*. Sets procedures for the management of the Air Force Aviation Resource Management career field and Aviation Resource Management System used to track all aircrew and parachutist member's qualifications, flying and training accomplishments, flight and jump record folder management, and entitlements to flight/jump incentive pay, 11 Nov 2004

AFPD 11-4, *Aviation Service*. Directs the Air Force to maintain sufficient qualified flying personnel to accomplish its mission, 1 Sep 2004

AFMAN 33-363, *Management of Records*. Implements DoD Directive 5015.2 (DoD Records Management Program) and establishes procedures for managing records.

AFI 36-2101, *Classifying Military Personnel (Officer and Enlisted)*. Develops the classification system that identifies required qualifications for every specialty, 7 Mar 2006

AFI 36-2201V2, *Developing, Managing, and Conducting Training*. Assigns to the Air Force Career Field Manager (AFCFM) responsibility to determine training needs and requirements, and to establish training programs, 13 Jan 2004

AFI 36-2205, *Applying for Flying Training, Air Battle Manager, and Astronaut Programs*. Sets Eligibility guidelines, application procedures, and responsibilities for UFT, ABM, and Astronaut programs for officers and enlisted members on extended active duty, 29 Oct 2004

AFMAN 36-2105, *Officer Classification*. Replaced by Officer Classification Directory

AFMAN 36-2108, *Enlisted Classification*. Replaced by Enlisted Classification Directory

AFI 36-2616, *Trained Personnel Requirements (TPR)*. Provides guidance to allocate personnel resources for training and individual skills in order to satisfy the officer and enlisted Trained Personnel Requirement (TPR). Implements AFPD 36-26, *Military Force Management*. Air Force uses this process to allocate officer and enlisted accessions and crossflows (retrainees) for training; compares projected authorizations to projected assigned strength, specifies the number of people for training, 10 Dec 1993

AFPD 36-20, *Accession of Air Force Military Personnel*. Provides policies to ensure we access the right quantity and quality of people who possess the aptitudes necessary to meet Air Force requirements, 23 Dec 2008

AFPD 36-26, *Total Force Development*. Develops and maintains a comprehensive Force Development program for the Total Force, 27 Aug 2008

AFI 38-201, *Determining Manpower Requirements*. Provides guidance for determining manpower requirements and allocating military grades. Specifically addresses aircrew requirements, including procedures to justify aircrew staff positions using AF Form 480 (Aircrew AFSC/Active Flying Justification), 30 Dec 2003

AFI 65-503, U.S. Air Force Cost and Planning Factors. Provides official approved/funded crew ratio/composition data for Active, AFRC, and ANG operational MDSs, 4 Feb 1994

AF/A30-AT Program Guidance Letter. Provides approved HQ USAF guidance to establish quotas for Undergraduate Flying Training (UFT) and related courses. HQ USAF/A30-AT publishes the PGL during the first quarter of the fiscal year. The PGL is used as the baseline for developing UFT Program Flying Training (PFT) documents and for working resource requirements. Formally updated several times a year when major changes occur, with interim draft updates passed electronically for coordination.

AF/A30-AT Pilot, Navigator, and Air Battle Manager (ABM) Distribution Plans. Provides approved HQ USAF guidance to distribute UFT graduates and non-MWS pilots into initial-entry MWS training at Formal Training Units. Formally issued by letter, normally whenever the PFT Guidance Letter is updated. Interim draft updates passed electronically for coordination.

AF/A30-AT Rated Requirements Estimate. Official Air Force estimate of pilot, navigator, and ABM requirements throughout the current FYDP. Developed from the Consolidated Manpower Data Base (CMDDB), force structure position from the latest budget exercise, and MAJCOM inputs for student man-year allowances. Updated whenever major changes occur, and forms the “Requirements line” for the official AF Requirements/Inventory (Redline/Blueline) charts.

Aircrew Management Document. Document normally published annually by AF/A30-AT, intended as an archive source of general aircrew management information. Valuable as a historic snapshot of rated management positions, policy, and guidance.

Education Training Course Announcements (ETCA). The ETCA is the official course catalog for all formal training. It includes course titles and descriptions, prerequisites, course length, travel rules, and clothing/equipment requirements.

Public Law 101-189, Section 633, Reduction in Nonoperational Flying Duty Positions. States that “No increase in the number of nonoperational flying duty positions in the Armed Forces (as a percentage of all flying duty positions in the Armed Forces) may be made after September 30, 1992, unless the increase is specifically authorized by law.” This is the source document for the “No Rated Staff Growth” policy.

Air and Space Basic Course (ASBC). The Air and Space Basic Course (ASBC) is the first school in the Air Force's officer developmental education (DE) program. Newly commissioned officers with about one year or less total active federal commissioned service are eligible for this course.

Terms:

Absorption: Absorption is the process of gaining new undergraduate flying training (UFT) graduates and/or prior qualified (e.g., FAIP, OSA) aircrews, by career field (i.e., Pilot; CSO/Nav/EWO/WSO; ABM; CEA) into operational unit line flying positions (i.e., API—1/2/9/A) for their first operational assignment. Numerically, it is the total number of inexperienced aviators that ops units can take in each year and maintain the appropriate experience mix, maintain combat capability, and develop/age the new aviator in a timely manner.

Absorbable Unit:—A flying unit that accepts inexperienced aircrew members into its crew force. Table 5.1 of this AFI annotates absorbable aircraft.

Active Component (AC):—Active Duty forces.

Air Force Career Field Manager (AFCFM):—Individuals appointed by Air Staff DCS's to manage education, training, and resources for a specific career field(s).

Air Reserve Component (ARC):—the combination of both AF Reserve Command (AFRC) and Air National Guard (ANG) forces.

Aircrew Fundamentals Course (AFC): A screening course implemented for enlisted aircrew candidates to reduce attrition in expensive follow—on weapons systems training. Also prepares volunteer aircrew candidates for specific aviation career fields. The course is the only point in training where pipeline students may self-eliminate from aviation service without prejudice.

Aircrew Evaluation Board (AEB): An administrative, fact—finding proceeding designed to ensure the quality control of the CEA, non-rated officer or non-CEA aircrew force. A board consists of officers (rated and non-rated) and NCOs who are qualified for aviation service and are serving in an active ASC. Board members examine a crewmembers professional qualification for aviation service, evaluate potential for use in future aviation duties, and make recommendations to higher authorities.

Aircrew Management Document (AMD): Document normally published annually that summarizes decisions of the AMEC and other aircrew management—related guidance/taskings/information/briefings since the previous AMEC. Also include the Redline/Blueline, current distribution, and requirements data.

Aircrew Management Executive Council (AMEC): Aircrew Managers (O—6 and below). Key forum for Air Staff and MAJCOMs to discuss and review policy and plans. AMEC replaces the Rated Management Executive Council (RMEC) and the Enlisted Aircrew Management Council (EAMC).

Aircrew Position Indicator (API): Formerly Rated Position Indicator (RPI). Single digit code that identifies the type and level of flying duty or responsibility associated with a rated/CEA authorization. All non—aircrew authorizations have default values of '0' (officers) and 'Z' (enlisted).

ALFA:—an acronym that stands for ALO, LIFT, FAC, and ATC. Though the origin dates to the Vietnam era, the term 'ALFA Tour' is still used to describe assignments that are "bills" to pay by the operational flying community (i.e., manned by Experienced Aviators).

Allocations:—For the purpose of this AFI only, the rated inventory provided to each MAJCOM/FOA to fill its authorizations, as determined by the Rated Staff Allocation Plan. In this context, the term allocations and entitlements are used interchangeably.

Authorizations:—A funded manpower requirement with detail that defines the position in terms of its function, organization, location, skill, grade, and other appropriate characteristics that commands use to extend end strength manpower resources to their units. The Manpower Programming and Execution System (MPES) is the system of record documenting AF manpower requirements. AF/A3O-AT extracts rated requirements and is OPR for crew ratio changes and approval authority for all non-manpower-determined rated positions. Files are updated monthly and extracts of end fiscal year authorizations are used for planning purposes.

Average Time on Station:—The average tour length (e.g., 2.95 years) for operational (Force) line aircrew members; calculated for each aircrew category (e.g., pilot, ABM, etc).

Aviation Career Incentive Pay (ACIP):—Incentive pay (an entitlement pay) for rated officers in an aviation career as authorized in the Aviation Career Incentive Act of 1974 and the Aviation Career Improvement Act of 1989.

Aviator Continuation Pay (ACP):—Retention bonus (NOT an entitlement pay) offered to eligible rated officers as an incentive to voluntarily extend their active duty service commitment in exchange for bonus payments in accordance with executing a valid agreement. ACP programs must be proposed and approved each fiscal year by SAF/MR and each fiscal year's program is "stand-alone" by design and by law.

Awaiting PCS Training (APT) Pool:—The pool of UFT candidates who are waiting for a training slot/quota to begin formal flying training

Blocked Cockpits:—Line unit authorizations not available for absorption in order to accommodate pilots/CSOs/ABMs with previous MWS experience returning to flying; or pilots/navigators/ABMs who left their MWS before becoming experienced and/or upgrading to aircraft commander.

Blue Box:—Overhead (Training/Staff/Test/Other) API -1/2/3/4/6/8/9/A/B/C positions that require experienced aircrews.

Budget Categories:—Rated requirements are expressed in the budget categories of force, training, staff, pipeline, transients and AFIT/PME. Rated inventory allocation plans and supporting management products are constructed to align with this budget format.

Career Enlisted Aviators Career Field (AFSCs 1AXXX):—Career field encompassing functions of program formulating, policy planning, inspecting, training and directing, and performing combat operations pertinent to enlisted primary aircrew activities. Encompasses the primary aviation enlisted AFSCs 1A0XX through 1A8XX.

Career Enlisted Flyer Incentive Pay (CEFIP):—Incentive pay for career enlisted flyers; authorized under U.S. Code Title 37.

Cumulative Continuation Rates (CCR):—CCRs represent the product of multiple year retention rates. CCR is normally calculated using the 6 to 11 year groups (or 6 to 14) and represents an estimate of the percentage of officers entering their sixth year of service who, given current retention patterns, are expected to remain in the service through their 11th year. Continuation rates may also be used to assess the expected average service that is associated with a loss rate pattern. This computation yields our expected man-years of service. Data may be computed for either Total Active Rated Service (TARS) or Total Active Federal Commissioned Service (TAFCS).

Delayed Entry:—For purposes of this instruction only, a program to bring newly commissioned officers, who are destined for UFT, on active duty in non-flying duties for a limited period of time.

Distributed Mission Operations (DMO):—An Air Force readiness effort. It is not a single program, but a federate of integrated, complimentary training domains. Each domain is focused on a specific set of warfighters and the Air Force mission essential capabilities and tasks they perform. DMO provides the warfighter with the potential to expand the usefulness of training

systems by making available individual training, inter and intra -team training, and mission rehearsal scenarios. DMO utilizes advanced mission simulators, L-V-C simulations, and real-world systems networked together to form a distributed synthetic battlefield.

Distributed Mission Training (DMT):—Utilizes advanced mission simulators, L -V-C simulations, and real-world scenarios to form a distributed synthetic battlefield. DMT provides a specific set of warfighter training scenarios that focus on individual, team and inter-team mission essential competencies.

Distribution:—For purposes of this instruction only, AF/A3O -approved guidance published by HQ USAF/A3O-AT which aligns the numbers of aircrew inputs to MWS training, including UFT graduates, and OSA/FAIP return assignments. MAJCOMs project openings, training capacity, and pipeline absorption requirements, all of which contribute to periodic distribution updates.

Entitlement:—See Allocation.

Experience:—A measure of a unit's flying maturity which is a primary factor in determining overall unit readiness. Experience is comprised of two parts: 1) Criterion --minimum level of flying time and/or time in crew position, which a crew member must have in order to be "experienced." 2) Objective--minimum number of crew ratio-earned unit authorizations which must be occupied by experienced crewmembers in order to meet readiness constraints. (Based on 100% manning and is normally expressed as a percentage.)

First Assignment Instructor Pilot (FAIP):—A new SUPT graduate whose first assignment is as an SUPT instructor.

Flight Evaluation Board (FEB):—An administrative, fact -finding proceeding designed to ensure the quality control of the rated force. A board consists of rated officers who are qualified for aviation service and are serving in an active ASC. Board members examine a rated officer's professional qualification for aviation service, evaluate potential for use in future rated duties, and make recommendations to higher authorities.

Flight Lead (FL):—Pilot qualified to lead a flight (2 or more aircraft).

Flying Training CONOPS:—The process which tied validated training requirements to the Air Force Programming, Planning, and Budgeting System (PPBS). Replaced by Aircrew Training & Distribution Requirements (ATDR) Process (see Chapter 4 of this AFI for details).

Flying Training Resource Analysis and Programming (FTRAP) System:—A set of integrated resource and capacity models used to translate Air Force formal flying training taskings (as documented in Program Requirements Documents and approved syllabi) into the resources needed to execute that tasking. The principal outputs of the system are flying hour requirements, aircraft requirements, and instructor requirements for undergraduate pilot training and instructor training courses. The models in FTRAP calculate capacity for each base/aircraft, distribute the production tasking among the bases, and then calculate the resources required by base/aircraft. The FTRAP system is also used to help analyze FTU and other aircrew training requirements.

Formal Training Unit (FTU):—a permanent flying unit whose dedicated mission is to provide formal syllabus training at the graduate level using Training (TF) coded assets.

Functional Manager:—For aircrew management purposes, individuals appointed by MAJCOM/DOs to manage education, training, and resources for aircrew career fields for that MAJCOM. From a wider AF viewpoint, functional managers are designated at the Air Staff for all AFSCs. For example, the Air Force pilot, navigator/EWO, ABM, and CEA career field managers reside in HQ USAF/A3O -AT.

Generalist Aircrew Requirements:—Aircrew authorizations that are not tied to a specific MWS and can be filled from the general inventory (e.g., 11G, pilot generalist billets, can be filled by any pilot, and 12G, navigator generalist billets, can be filled by any navigator). Generalist authorizations have also been referred to as “unspecified requirements.”

Graduate Programmed Requirements Document (GPRD):—reflects specific MAJCOM graduate -level formal flying course training requirements.

Hazardous Duty Incentive Pay (HDIP):—Incentive pay authorized for nonrated officers and non -CEA X prefixed (Aircrew Members) or J prefixed or authorized jump AFSC (Parachutist Members) required to perform hazardous duty required by orders issued IAW AFI 11-401s and 11-402. Examples of hazardous duty include flying duties as a crewmember on a frequent and regular basis, jumps performed by a parachutist on a frequent and regular basis, explosives demolition, duties inside a high- or low-pressure chamber.

Hours per Crewmember per Month (HCM):—The number of primary/secondary hours an aircrew member flies per month. Average HCM data by MDS for line inexperienced aircrew members (API -1s/2s/9s/As) is compared with planned/programmed HCM to help assess aging/experiencing rates.

Inventory:—Inventory is defined by career field category (pilot, navigator/EWO, ABM, CEA) as the number of Lt Col -and-below qualified aircrew members in the USAF. For inventory purposes, an aircrew member is considered “qualified” when he/she completes initial/basic flight training and is awarded his/her wings. Lt Col-and-below aircrew members continue to be counted as aircrew inventory for as long as they retain their aircrew rating and are medically qualified to perform duties.

Joint Duty Assignment List (JDAL):—The official listing of Lt Col -and-below aircrew positions for which “Joint credit” is authorized in compliance with the Goldwater-Nichols Act of 1976.

Lead Command:—The Command designated as the primary advocate for a weapon system assigned to more than one MAJCOM as described in AFPD 10-9 *Lead Operating Command Weapon Systems Management*.

Limited Experience (LIMEX) Aircrews:—Inexperienced aircrews who have completed mission qualification training, but have not yet accumulated the hours required to be declared “experienced” [e.g., 500 PAA hours required for new fighter pilots].

Loss Rates:—Derived from historical data and used in forecasting inventories. Retention rates (percentage of a population which continues past a given year) and loss rates (1 minus the retention rate) are computed for each year (2 through 28) and each MWS group.

Major Weapon System (MWS):—One of a limited number of systems or subsystems which, for reasons of military urgency, criticality, or resource requirements, is determined by the Department of Defense as being vital to national interest, (i.e., fighters, bombers, tankers, etc.)

Non-major weapon systems are usually mission support (C-9/-12/-21; UH-1) or training (T-1/-6/-37/-38). An MWS includes several similar aircraft; for example the tanker MWS includes KC-135s and KC-10s.

Man- year:—A specific budgetary obligation of funds to support payment of incentive pay for one person, for one fiscal year.

Maximum Absorption:—The maximum number of Undergraduate Flying Training graduates and prior qualified pilots/navigators that a weapon system/weapons systems group can accept per year. Absorption may be limited by training availability, minimum experience level, stability goals, or number of vacancies in absorption units.

MCOPR- MAJCOM of Primary Responsibility (Lead Command):—The Command designated as the primary advocate for a weapon system assigned to more than one MAJCOM as described in AFPD 10-9, *Lead Operating Command Weapon Systems Management*.

Mission Design Series (MDS):—Specific aircraft designations (e.g., C -17, KC-10). Several like MDSs comprise a Major Weapon System (MWS) category (e.g., the bomber MWS is comprised of the B-1, B-2, and B-52 MDSs).

Non- rated or Non-CEA Aircrew Member:—A non-rated officer or non-CEA enlisted member aircrew member qualified for aviation service, assigned to an approved aircrew prefixed position, listed in an aircraft's crew composition complement in AFI 65-503, Table A36-1 and required to perform aircrew duties on a full-time basis in order for the aircraft to perform its primary mission. They are responsible for the safe ground and flight operations of the aircraft and onboard systems.

Officer Assignment System (OAS):—Assignment system developed in FY95 that modified the Officer Volunteer Assignment System rules. Significant changes included elimination of "15-year rule", establishment of assignment availability trigger (3-year time-on-station/DEROS/completion of controlled tour), "alert" notices of eligibility, and a system for filling vacancies with non-volunteers if requesting MAJCOM deems necessary.

Officer Professional Development (OPD):—old term; now called Officer Force Development

Operational Aircraft:—Aircraft assigned to operational (vice, training, test, other) flying units; these aircraft are PMAI (primary mission aircraft inventory) coded for the most part, and are used in operational unit manning calculations along with crew ratios/composition.

Operational Support Aircraft (OSA):—Aircraft, such as the C -21, that are used for operational support missions.

Operational Support Aircraft (OSA) Pilot:—For aircrew management purposes, a pilot whose initial assignment from SUPT is to fly an OSA. An OSA pilot does not earn an MWS identifier until he/she is subsequently assigned to an MWS.

Operations Support:—An individual whose primary, full-time duty does not require flying. The Air Force may require these individuals to fly on an occasional basis in order to perform a specific, essential in-flight duty that a regularly assigned aircrew/mission crewmember cannot perform.

Over- absorption:—Absorbing more new aircrew members into an MWS than the maximum absorption capacity.

Overproduction:—Actual production exceeding programmed production.

Primary Mission Aircraft Inventory (PMAI):—Aircraft assigned to a unit for the performance of its wartime mission; these aircraft are coded CC, CA, or IF.

Prior- qualified Pilot (PQP):—A pilot who has completed a flying tour but has no experience in his/her current weapon system. Most PQPs' post-UPT flying experience is not associated with an MWS (FAIPs or OSA pilots).

Programmed Flying Training (PFT) Documents:—Consolidated documents whose goals are to meet total force training requirements. MAJCOMs that provide training develop three -year PFT documents to facilitate smooth training flow through long-term planning. The first year of the PFT document contains detailed information with specific course information and projected student data. The second and third years of the PFT contain less specific data, but should provide projected course dates and training capacity information.

Quality of Life (QOL):—Phrase used to refer to the overall quality of life for a Service member; affected by a combination of factors including average time on station (stability), PERSTEMPO, compensation, housing, and medical benefits.

Rated Distribution and Training Management (RDTM):—The official term for rated management. RDTM formalizes the concepts of predicting requirements, projecting inventory, and establishing production and follow -on training for assignment into each MWS.

Rated Management Decision Support System (RMDSS):—The official Air Force computer model for projecting rated inventory used until 2001, when it was replaced by AFRAMS (see Atch 3 for details).

Rated Management Executive Council (RMEC):—Predecessor to Aircrew Management Executive Council.

Rated Aircrew Requirement:—An authorization requiring a pilot, navigator/EWO, or air battle manager, identified by a 10C0, 11XX, 12XX, or 13BX AFSC, or by an AFSC with an “N” or “P” prefix.

Rated Staff Allocation Plan:—Produced by AF/A3O -ATA in conjunction with the Redline/Blueline, implements senior leadership guidance and priorities regarding the use of rated resources.

Rated Supplement:—A program (phased out at the end of FY94) to use rated officers in nonrated positions as a means to beddown surplus aviators, provide career -broadening opportunities, and provide a surge capability for the rated force.

RDTM Code:—An identifier initially established when an officer is placed on assignment from UFT. The RDTM code consists of two -characters: the first represents the MWS group and the second identifies the specific weapon system or MDS.

Ready Aircrew Program (RAP):—Annual sortie/event training requirements for Fighter and Bomber aircrews to maintain combat mission ready (CMR) status.

Recat:—Officer candidate who has had a change of career field prior to entering active duty.

Requirements:—Technically speaking, a requirement is a “funded authorization”. Most rated requirements (force, training, test, and staff) are expressed as funded authorizations since they

can be documented with an authorized position number and AFSC. However, some requirements (advanced student/pipeline, transient, and AFIT/PME) are not authorizations but man-year allocations; they are not identified with position numbers. For analytical purposes, man-year allocations are treated as requirements.

Sorties per Crewmember per Month (SCM):—The number of sorties an aircrew member flies per month. Average SCM data by MDS for line aircrew members (API -1s/2s/9s/As) is compared with RAP and other sortie requirements.

Sources of Commissioning (SOCs):—Officer commissioning sources, which include the USAF Academy, ROTC, and OTS.

Specific Aircrew Requirements:—Aircrew authorizations that require MWS -specific or aircraft-specific (also termed MDS-specific) expertise (e.g., the Air Staff's Combat Forces Requirements Division has a specific requirement for an aircrew member with bomber expertise).

Spreadsheet Absorption Model (SPAM):—An old steady -state “model” once used for computing absorption.

Stability:—Three types of stability: 1) PCS Stability - Length of time an individual remains at one base prior to a PCS. 2) Weapon System Stability - Length of time an individual remains flying in a particular weapon system. 3) Aircraft Commander Stability - Length of time an individual remains in an aircraft after upgrade to aircraft commander.

Sustainability:—The concept of producing aviators as required to maintain the desired inventory (normally equal to requirements), based on replacing losses and ignoring constraints in production, training, or absorption capacity. Numerically, sustainment is the total number of new aircrew members needed each year to replace losses for a given level or requirements (flying and non -flying).

Third Pilot:—A temporary program that was used to place UPT graduates as limited duty KC -135 pilots in AMC in lieu of banking; this program has been terminated. These pilots got limited flying hours and shared navigator duties. Most upgraded to copilot in about two years.

Total Active Rated Service (TARS):—The number of years an officer serves in the rated force, from award of wings to separation, promotion to colonel, grounding, or retirement. TARS is computed by summing 2 through 28 years of CCRs. TARS is one of the factors used in making inventory (Blue Line) projections. It can also be used to make simplified inventory projections. Two points to keep in mind are: 1) the TARS calculation is based on a 28-year steady state environment; and 2), when any variable is changed that affects retention, TARS also changes.

Total Force Development (Total FD):—Very broad and includes institutional and occupational components. Institutional development generally results in leadership, management, enterprise, and warrior skill proficiency. Occupational development generally results in flying and technical skill proficiency. Force Development generally utilizes a combination of the following means: Education programs such as Professional Military Education, Executive Education, graduate degree programs, or undergraduate degree program; Training programs such as technical training, on -the-job training, flying training, ancillary training, expeditionary airman training; and Experience gained through an appropriate series of job assignments or special programs such

as intern programs, education with industry, or fellowships in research organizations, and leveraged through appropriate mentoring. See AFI 36-2640 for further reference.

Trained Personnel Requirements (TPR):—The number of personnel programmed to be trained against Air Force requirements to maintain the Active force.

Airmen.—The number of airmen, by AF specialty, to be trained or retrained to meet production requirements during the current and two subsequent years, as stated in the Airman Trained Personnel Requirements Document by the Director of Personnel Programs, HQ USAF. (Source AFCAT 36-2223 Glossary).

Officer.—The number of officers, by AF specialty, to be trained to meet entry requirements during the current year, as stated in the Officer Trained Personnel Requirements Document by the Director of Personnel Programs, HQ USAF. (Source AFCAT 36-2223 Glossary).

Underproduction:—Actual production falling short of programmed production.

Undergraduate Flying Training (UFT):—flying training programs that result in formal award of aviator wings (e.g., UPT, JSUNT)

Undergraduate Programmed Requirements Document (UPRD):—indicates the number of graduates required from each undergraduate formal flying training course.

Unspecified Requirements:—See Generalist Requirements.

Usable Inventory:—The actual inventory available to fill rated positions (Lt Col and below). It is derived from the total rated inventory after adjustments for rated officers who are serving in Colonel positions or lack retainability

Yellow Box:—Line operational API -1/2/9/A positions to which inexperienced aircrews can be assigned.

Attachment 2

FORMULAS, MODELS, SYSTEMS, AND TOOLS

A2.1. The following are formulas used in Aircrew Management. The most critical metrics are for Force (Operational) flying squadrons, since they are the basic war fighting units and the ones identified and measured in the AF's Status of Resources and Training System (SORTS) [ref AFI 10-201]. NOTE: The calculations in this section are samples intended for illustration. Thorough analysis would necessitate calculating the formulas for all crew positions and/or AFSC's for a given aircraft.

A2.1.1. Authorizations. Squadron Line Authorizations. Line authorizations for Force (Operational) flying units are determined based on calculations at the squadron (or smaller unit) level by crew position and/or by AFSC for aircrew management purposes.

Force (Operational) Unit Manning Calculations:

Squadron Authorized Aircrew Members for each Aircrew Position (e.g., pilot; copilot; navigator; flight engineer) = (# Squadron PMAI) x (Aircrew Ratio) x (# of particular crewmember)

Examples:

F-16 Sqdn: $18 \text{ PMAI} \times 1.25 \times 1 \text{ (1 Pilot)} = 22.5$ rounded to 23 authorized pilots

C-130H Sqdn: $16 \text{ PMAI} \times 2.00 \times 2 \text{ (Pilot Complement)} = 64$ authorized Pilots (32 AC + 32 CP)

$16 \text{ PMAI} \times 2.00 \times 1 \text{ (Nav Complement)} = 32$ authorized Navs

$16 \text{ PMAI} \times 2.00 \times 1 \text{ (FE Complement)} = 32$ authorized FEs

$16 \text{ PMAI} \times 2.00 \times 2 \text{ (LM Complement)} = 64$ authorized LMs

Note: For fractions, always round to next higher whole number.

Note: Line authorizations for wing, NAF, MAJCOM, or by MDS / MWS, are calculated by summing the squadron authorizations of all the units under/within the larger organization/category, e.g. F-16 Wing API-1s are $(18 \text{ PMAI} \times 1.25 \times 1) + (18 \text{ PMAI} \times 1.25 \times 1) = 23 + 23 = 46$.

Squadron Total Authorizations. Include Line authorizations above and squadron leadership (i.e., Commander and/or Operations Officer).

Examples:

F-16 Sqdn (18 PMAI): $23 \text{ API-1} + 2 \text{ API-6 (Commander and Ops Officer)} = 25$

C-130H Sqdn (16 PMAI): $64 \text{ API-1} + 2 \text{ Pilot API-6 (CC and DO)} = 66$ pilots

$32 \text{ API-2} + 0 \text{ Nav API-6 (CC and DO)} = 32$ Navs

$32 \text{ API-A} + 0 \text{ FE API-B} = 32$ FEs

$64 \text{ API-A} + 0 \text{ LM API-B} = 64$ LMs

Note: Any API-6 Navs/ABMs are counted within their own category.

Wing Authorizations. Include Squadron Total Authorizations above and API-6 (Lt Col and below) flying staff positions earned by manpower standards (e.g., Safety; Current Ops).

NOTE: API-3 (non-flying) positions are not counted in formulas.

Examples:

F-16 Wing (with two 18 PMAI squadrons, OSS, and group/wing staff):

$$(23 \text{ API-1} + 2 \text{ API}) + (23 \text{ API-1} + 2 \text{ API}) + (9 \text{ API-6}) + (7 \text{ API-6}) = 66$$

pilots

C-130H Wing (with two 16 PMAI squadrons, OSS, and group/wing staff):

$$(64 \text{ API-1} + 2 \text{ API-6}) + (64 \text{ API-1} + 1 \text{ API-6}) + (5 \text{ API-6}) + (6 \text{ API-6}) =$$

142 Pilots

$$(32 \text{ API-2} + 0 \text{ API-6}) + (32 \text{ API-1} + 1 \text{ API-6}) + (5 \text{ API-6}) + (2 \text{ API-6}) =$$

72 Navs

$$32 \text{ API-A} + 32 \text{ API-A} + 3 \text{ API-B} + 3 \text{ API-B} = 70 \text{ FEs}$$

$$64 \text{ API-A} + 64 \text{ API-A} + 12 \text{ API-B} + 3 \text{ API-B} = 143 \text{ LMs}$$

Note: Any API-6 Navs/ABMs are counted within their own category.

A2.1.2. Manning. Squadron Line Manning Percentages. For aircrew management purposes, Squadron Manning Percentages are calculated by crew position and/or by AFSC. Manning percentages are determined based on calculations at the squadron (or smaller unit) level. Manning for wing, NAF, MAJCOM, or by MDS / MWS is calculated by dividing the sum of the squadron assigned by the sum of the squadron authorized for all the units under/within the larger organization/category.

$$\text{Squadron Line Manning Percentage} = (\# \text{ API-1 Assigned}) \div (\# \text{ API-1 Authorized})$$

Examples:

$$\text{F-16 Squadron: } 25 (\# \text{ Assigned API-1 Pilots}) \div 23 (\# \text{ Authorized API-1 Pilots}) = 109\%$$

$$\text{C-17 Squadron: } 83 (\# \text{ Assigned API-1 Pilots}) \div 72 (\# \text{ Authorized API-1 Pilots}) = 115\%$$

Squadron Manning Notes:

1) On loan from squadron should count against the squadron number (Key determinant: Where is the billet?)

2) Overmanning may be necessary to maintain squadron experience mix or when overproduction and/or a decrease in force structure occurs. If a wing is overmanned, the overmanning is typically accounted for at the squadron level.

3) Manning percentages are rounded to the nearest whole number.

Squadron Total Manning Percentage. = $(\# \text{ API-1} + \# \text{ API-6 Assigned}) \div (\# \text{ API-1} + \# \text{ API-6 Authorized})$

Examples:

$$\text{F-16 Squadron: } 27 (\# \text{ Assigned API-1 and API-6 Pilots}) \div 25 (\# \text{ Authorized API-1 and API-6 Pilots}) = 108\%$$

$$\text{C-17 Squadron: } 85 (\# \text{ Assigned API-1 and API-6 Pilots}) \div 74 (\# \text{ Authorized API-1 and API-6 Pilots}) = 115\%$$

Wing Manning Percentage. For aircrew management purposes, wing manning percentages are calculated by crew position and/or by AFSC.

$$\text{Wing Manning Percentage} = (\text{Total Wing Assigned}) \div (\text{Total Wing Authorized})$$

Examples:

F-16 Wing (with Two 18 PMAI Squadrons, OSS, and Group/Wing Staff):

70 Pilots Assigned ÷ 66 Pilots Authorized = 106% Manning

C-17 Wing (with Three 12 PMAI Squadrons, OSS, and Group/Wing Staff):

283 Pilots Assigned ÷ 239 Pilots Authorized = 118% Manning

Wing Manning Notes:

1) If a wing is undermanned, the wing staff (including the Operations Support Squadron) should normally bear the burden of any experienced aircrew shortfalls so that the operational flying squadrons can maintain full combat capability/readiness.

2) Wing and/or base manning percentages are mainly used by AFPC; the more important number for aircrew managers is squadron manning level.

A2.1.3. Experience Mix (or Level). Squadron Line Experience Mix (or Level). For aircrew management purposes, Squadron Experience Mix is calculated by crew position and/or by AFSC. Line authorizations for Force (Operational) flying units are determined based on calculations at the squadron (or smaller unit) level. Line authorizations for wing, NAF, MAJCOM, or by MDS / MWS are calculated by summing the squadron authorizations of all the units under/within the larger organization/category. Objective experience levels by aircraft, MAJCOM and AFSC are addressed in MDS Vol 1's or documented on the Aircrew Requirements Community of Practice.

Squadron Experience Mix = (# API-1 Experience Assigned) ÷ (# API-1 Total Assigned)

Examples:

F-16: (12 API-1 Exp Pilots Assigned) ÷ (25 API-1 Total Pilots Assigned) = 48%

C-17: (46 API-1 Exp Pilots Assigned) ÷ (83 API-1 ACs & CPs) = 55%

NOTE: The squadron line formula is particularly useful as a programmatic formula (e.g., to determine the aging portion of MDS flying hour programs).

Alternate formula to calculate squadron experience: 1 - (#Inexperienced API 1 ÷ #API 1 authorizations)

NOTE: Because API 1 authorizations are used in the denominator, for overmanned units this definition may overstate how inexperienced a unit is, while for undermanned units it may understate it. For this reason, the product of this formula should always be accompanied with an annotation of manning level.

Squadron Total Experience Mix. Include Line Experience and squadron leadership (i.e., Commander and/or Operations Officer).

Examples

F-16: (12 API-1 Exp Pilots Assigned + 2 API-6 Exp Pilots Assigned) ÷ (25 API-1 Total Pilots Assigned + 2 API-6 Exp Pilots Assigned) = 14 ÷ 27 = 52%

C-17: (46 API-1 Exp Pilots Assigned + 2 API-6 Exp Pilots Assigned) ÷ (83 API-1 ACs & CPs Assigned + 2 API-6 ACs Assigned) = 48 ÷ 85 = 56%

NOTE: The squadron total formula is particularly useful as an execution formula (e.g., to monitor the balanced distribution/assignment of AF approved Distro Plans of UFT grads).

Wing Experience Mix

Wing Experience Mix = (Total Wing API-1 Exp Assigned) ÷ (Total Wing API-1 Assigned)

Examples

F-16 Wing (with Two 18 PMAI Squadrons, OSS, and Group/Wing Staff):

44 API-1 Experienced Pilots Assigned ÷ 70 API-1 Pilots Assigned = 63%

C-17 Wing (with Three 12 PMAI Squadrons, OSS, and Group/Wing Staff):

161 API-1 Experienced Pilots Assigned ÷ 283 API-1 Pilots Assigned = 57%

Note: Wing and/or base experience mix percentages are mainly used by AFPC; the more important number for aircrew managers is squadron experience mix.

A2.1.4. Average Time on Station (TOS). For aircrew management purposes, average TOS is calculated by crew position and/or by AFSC. It is a measurement of the average tour length of aircrew members on long (excludes remotes) flying tours in operational wings.

Average TOS has a major impact on unit readiness and formal training requirements. It is typically measured for an entire MDS for use in absorption calculations. Ideally, average TOS is calculated quarterly using the last four quarters of data. Average TOS is calculated based on those

individuals that PCSed/PCAed out of an ops unit within the past year.

Average TOS equals the total TOS for those individuals that PCSed/PCAed divided by the total number of aircrew members with the AFSC is the respective MDS who PCSed/PCAed out of an ops unit.

Average TOS = (AMTOS₁ + AMTOS₂ + AMTOS₃ . . . + AMTOS_n) ÷ (AM₁ + AM₂ + AM₃ . . . + AM_n)

where AMTOS = time on station for an aircrew member and AM = aircrew member.

Pilot Example:

<u>TOS (months)</u>	<u>Pilot</u>
32	Joe
36	Bill
33	Sue
<u>27</u>	<u>Sam</u>
128 total TOS	4 pilots PCSed/PCAed

Average TOS = 128 total TOS ÷ 4 pilots = 32 months average TOS per pilot

A simplified example shows the potential effects of average TOS on training.

<u>API-1s</u>		<u>Average TOS (yrs)</u>		<u>Turnover/Year</u>
1200	÷	4.0*	=	300
1200	÷	3.0	=	400

If an MWS has 1200 operational line API-1 pilot positions and the average TOS is 4.0 years, it would require 300 positions to be vacated and filled (i.e., 600 moves - 300 out and 300 in) to keep the MWS 100% manned. If the average TOS were 3.0 years, the turnover would be 800 (400 moves out and in). Some turnover could be ops-to-ops or FTU instructor-to-ops moves; nevertheless, a lower average TOS will increase the formal flying training requirements.

*NOTE: TOS is often stated as month and year (e.g., 2.8 equates to 2 years, 8 months).

A2.1.5. Total Active Rated Service (TARS): The number of years an officer serves in the rated force, from award of wings to separation, promotion to colonel, grounding, or retirement. TARS is computed by summing 2 through 28 years of CCRs. TARS is one of the factors used in making inventory (Blue Line) projections. It can also be used to make simplified inventory projections. Two points to keep in mind are: 1) the TARS calculation is based on a projected steady state environment; and, 2) when any variable is changed that affects retention, TARS also changes.

A2.1.6. Inventory. Total Inventory = Total Production X Total TARS

MWS Inventory = MWS Absorption X MWS TARS

Simple Retention (SR) = # of Flyers Remaining at End of YOS / # of Flyers Starting YOS

Cumulative Continuation Rate (CCR) $_{6-11} = SR_{6YOS} \times SR_{7YOS} \times SR_{8YOS} \times \dots \times SR_{11YOS}$

A2.2. Descriptions. The following are descriptions of the approved **models, systems, and tools used in Aircrew Management:**

Flying Training Resource Analysis and Programming (FTRAP) System. A set of integrated resource and capacity models used to translate Air Force formal flying training taskings (as documented in Program Requirements Documents and approved syllabi) into the resources needed to execute that tasking. The principal outputs of the system are flying hour requirements, aircraft requirements, and instructor requirements for undergraduate pilot training and instructor training courses. The models in FTRAP calculate capacity for each base/aircraft, distribute the production tasking among the bases, and then calculate the resources required by base/aircraft. The FTRAP system is also used to help analyze FTU and other aircrew training requirements. FTRAP is maintained by HQ AETC/A3R and is the official AF instructor manning model.

Air Force Rated Aircrew Management System (AFRAMS). AFRAMS is an entity-based Arena simulation model used to provide official aircrew inventory projections for use in requirements-inventory (Redline/Blueline) and prioritization plan preparations. Beginning with actual rated inventory (“hand-scrubbed” by AFPC for accuracy), the model simulates major events in the rated personnel lifecycle for every officer, with distinct model runs for pilots, CSOs, and ABMs. All model inputs (e.g., production, bonus take rate, etc.) are developed and/or coordinated among HQ AF/A1PF, HQ AF/A1PPR, and HQ AF/A3O-ATA.

Aircrew 480 System (A480S). A480S is the web-based tool used to securely manage all of the active duty aircrew position descriptions worldwide. The capability automates the AF Form 480 process, defines all of the active duty parameters for each aircrew (flying and staff) position, and provides selectively-controlled review, update, and approval access to the information for the authorized, global user community.

Automated Aircrew Management System (AAMS). AAMS is a web-based Aircrew Management metric tool developed to ensure weapon systems are optimally manned and flying hours are efficiently executed. The system manages aircrew absorption, training, aging, experience, and upgrade progress and can predict future aircrew issues so they can be corrected before they impact the mission.

Comprehensive Aircrew Resource Projection (CARP). Excel based model which uses projected program data (Force Structure, Crew Ratio, Crew Complement, Experience Aircrew Criteria, etc.) to provide estimates of future sustainable aircrew inventories.

Enigma. An Excel based desktop decision support model that allows senior-level decision-makers to quickly examine the impacts and effectiveness of potential rated management policy decisions. Through real-time analytic calculations, Enigma balances rated production with resource constraints and provides insight into the ability to sustain future rated force requirements. Enigma provides the capability to consider how changes to any of the 5,000 input variables impact the rated management system inventories and requirements. Variables include aircraft inventory, crew ratios, experience mixes, initial rated inventories, undergraduate production, aircraft UTE, experience requirements, continuation rates, and emerging staff requirements. Manipulating these variables allows for consideration of virtually any scenario.

Attachment 3**MEMBERSHIP**

The AMEC is comprised of colonel-/CEM-level MAJCOM and other organization representatives involved with aircrew management. Aircrew Management Executive Council members include:

(*HQ ACC/A3T
HQ ACC/A1K
HQ ACC MFM
(*HQ AETC/A3R
HQ AETC/A1K
HQ AETC MFM
HQ AETC CEA Pipeline Training Manager
(*HQ AFMC/A3V
HQ AFMC/A3O
HQ AFMC MFM
(*HQ AFPC/DPA
HQ AFPC CEA Assignments Manager
(*HQ AFRC/A3T
HQ AFRC/A1T
HQ AFRC MFM
(*HQ AFSOC/A3T
HQ AFSOC/A1A
HQ AFSOC MFM
(*HQ AFSPC/A3N
HQ AFSPC/A1F
HQ AFSPC MFM
(*HQ AMC/A3T
HQ AMC/A1K
HQ AMC MFM
(*HQ PACAF/A3T
HQ PACAF/A1F
HQ PACAF MFM
(*HQ USAF/A1PP
(*HQ USAF/A3O-AT
HQ USAF/A3O-ATA
HQ USAF CEA Career Field Manager
(*HQ USAFE/A3T
HQ USAFE/A1A
HQ USAFE MFM
(*NGB/A3T
NGB/A1F
NGB CEA MAJCOM Functional Manager (MFM)

NOTES:

1. '*' Indicates voting member
2. In addition to AMEC Members, AMEC attendees include additional subject matter experts as determined by AF/A3O-AT and/or AF/A1PP.