The United States Air Force Posture Statement 1999

Comprised of the world's finest aerospace professionals, America's Air Force provides a flexible force that can quickly respond over long distances operating across the spectrum of peace and conflict, from combat to humanitarian relief.

Always a progressive service, the Air Force continues to innovate. With its Expeditionary Aerospace Force (EAF) initiative the Service is reorganizing its forces to provide better trained aerospace forces to US Commanders-in-Chief while adding predictability and stability to the lives of our airmen. Through innovative business practices, the Air Force is pushing quality up and costs down.

Today, the Air Force is preparing itself for the challenges of the 21st century. Our investments in airmen, infrastructure, and modernization will ensure the Service's ability to meet the needs of the United States in a dynamic national security environment.

MICHAEL E. RYAN, GENERAL, USAF
CHIEF OF STAFF

F. WHITTEN PETERS
ACTING SECRETARY OF THE AIR FORCE

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America's Air Force in 1998

America's Air Force is smaller today than at any point in its history. At its birth in September 1947, the active duty Air Force numbered 387,000 members; today it stands at 367,000. The Total Air Force includes 108,000 Air National Guardsmen, 71,000 Air Force Reservists, and 173,000 civilians, for a total of 719,000 people.

Air Force professionals are responsible for operating and sustaining 20 fighter wing equivalents, 190 bombers, 120 intelligence, surveillance, and reconnaissance platforms, 1,450 mobility aircraft, 550 intercontinental ballistic missiles, and 59 satellites. They live and work at 172 installations around the

world; on any given day, approximately 95,000 members are either deployed or on permanent duty in forward locations. An additional 138,000 airmen are ready to deploy on short notice to support America's national security needs.

The Air Force is globally engaged on a daily basis. While the active duty portion of the Air Force has dropped 33 percent since the fall of the Berlin Wall, the number of deployed forces has risen 400 percent. In 1998, the Air Force flew more than 2,200 missions in the Balkans, 27,000 missions over Southwest Asia, and 30,000 airlift missions. During this same period, Air Force members participated in over 1,600 exercises in 35 countries, and conducted almost 300 military-to-military contact visits in Europe and the Pacific. Additionally, Air Force airlifters conducted almost 100 Denton Amendment humanitarian relief missions to 30 countries, and supported numerous joint force deployments throughout the year. From Air Force space ranges, the Service launched 13 military, 13 civil, and 17 commercial satellites, keeping the nation first in space.

Introduction

Today's national security environment requires flexible military forces that are able to quickly respond over long distances and accomplish many different missions. The Air Force is uniquely suited to this environment—its inherent speed, range, flexibility, and global perspective make it the military rapid response force of choice for post-Cold War US decision makers. Whether advancing national interests from space, deploying to distant theaters to enforce American policy, or airlifting life-saving food and medical supplies to victims of natural or man-made disasters, the Air Force has proven time and again the pivotal role of aerospace power in meeting the nation's security needs.

Aerospace power is critically important to national command authorities and to joint force commanders. With its highly trained professionals, the Air Force is skilled at bringing unmatched aerospace power to bear on any crisis, no matter the distance. The Air Force core competencies, aerospace superiority, global attack, precision engagement, global mobility, information superiority, and agile combat support integrate well into joint campaigns, providing the most rapid and effective way to achieve national objectives, while reducing risk to our men and women in uniform.

From beginning to end, Air Force aerospace power enables joint operations. Prior to conflict, global intelligence, surveillance, and reconnaissance (ISR) assets provide strategic awareness to national leaders. On the eve of combat, global aerospace mobility assets bring critical manpower and supplies to the theater. During combat operations, Air Force ISR provides theater commanders the operational and tactical information edge they need to fight and win. The Air Force wins aerospace superiority for the joint force—freeing it from the threat of attack from aerospace and allowing it the freedom to use the medium to

maneuver and attack. Uniquely, Air Force long-range airpower and air refueling assets give the joint force the ability to deliver precise effects throughout the depth of the battlespace to win decisive victory. In non-combat scenarios, Air Force global mobility assets are the world's best at delivering humanitarian relief. Air Force space-based systems are on-duty 24 hours a day providing strategic warning, as well as facilitating communication and precise navigation. Across the spectrum of peace and conflict, the Air Force provides the joint force commander key military capabilities.

A unique dimension of Air Force aerospace power is its ability to project the full range of these capabilities on a global scale, quickly, effectively, and when necessary, lethally. If needed, Air Force global attack aircraft can leave airfields in the United States, fly directly to any target on the globe and deliver overwhelming, precise firepower to achieve strategic, operational, or tactical effects.

The Air Force Role in National Security

"Anyone who has to fight, even with the most modern weapons, against an enemy in complete command of the air, fights like a savage against modern European troops, under the same handicaps and with the same chances of success."

Field Marshal Erwin Rommel

The United States integrates its many instruments of power to influence the international security environment. In October of last year, the President published an updated National Security Strategy. This document, in combination with the National Military Strategy, directs the Department of Defense to work with other government agencies to shape and respond to today's security challenges and prepare for those of the 21st century. The Air Force actively executed this strategy during 1998.

Shaping

The Air Force shapes the international security environment in many ways. With more than six forward-stationed fighter wings, 95,000 people permanently or temporarily assigned to forward locations, and satellite constellations constantly

on watch, Air Force presence immediately and continuously influences world events. The Air Force's ability to employ aerospace power for combat, peacekeeping, or humanitarian operations anytime, anywhere gives national leaders the ability to react to any crisis, often at a very early stage.

In addition, the Air Force shapes the international landscape with a comprehensive program of cooperative engagement. Clearly recognized as the world's most capable aerospace force, the Air Force is building sound security relationships with allies and coalition partners around the world through substantive international exercises, education and training programs, and foreign military sales.

Deterring

Preventing conflict—deterrence—is an important dimension of shaping and a mission accomplished by the Air Force daily. The broad range and forward posture of aerospace forces—whether conventional or nuclear, theater- or CONUS-based—deter aggression and demonstrate US commitment to the international community. During 1998, airmen stood watch in the Pacific, Europe, and Southwest Asia with forward-based units; maintained around-the-clock alert in order to deter conflict with Peacekeeper and Minuteman III intercontinental ballistic missile forces in the United States; and flew B-1, B-2, and B-52 Global Power missions from the US to distant locations, underscoring US commitment and willingness to defend its interests throughout the world.

Promoting Stability

The Air Force seeks to promote international stability by building broad relationships with the militaries of other nations. These ties increase mutual understanding and enhance interoperability. Air Force engagement programs facilitate cooperation and access during contingencies and enable future coalitions of willing and capable allies.

Recently, Air Force international engagement and stability efforts have focused on support of Joint Chiefs of Staff (JCS) and other international exercises, the Partnership for Peace Program, Military Contact and International Armaments Cooperation Programs, as well as Security Assistance efforts. Last year, the Air Force was actively engaged in 88 international exercises in 82 locations throughout the world. These included 17 exercises with 27 Partnership for Peace countries and nearly 300 focused Military Contact Program events. The Service maintains more than 250 agreements under the International Armaments Cooperation Program to encourage the exchange of information with allies and coalition partners. These exchanges involve cooperative research and development, scientist and engineer exchanges, equipment loans, and scientific and technical information exchanges.

In 1998, the Air Force's Foreign Military Sales (FMS) program managed over 4,000 contracts for aircraft, spare parts, munitions, and training worth more than

$105 billion. Meanwhile, the International Military Education and Training (IMET) Program continued to emphasize management training and professional military education. Under the IMET Program, the Air Force trained 1,156 students from 88 countries; 225 graduated from US specialized undergraduate pilot training.

Responding

Contingency Operations

Should shaping and deterrence prove inadequate to meet US security needs, the Air Force is prepared to respond across the spectrum of conflict. For small-scale contingencies, the Air Force offers US policy makers the ability to provide humanitarian assistance, enforce no-fly zones, evacuate US citizens and conduct limited strikes and interventions.

In the 1998 National Security Strategy, national leaders identified halting operations as a linchpin in the nation's two Major Theater War (MTW) strategy. This strategy uses fast responding US capabilities to defeat aggression in distant theaters, quickly and decisively. This strategy allows warfighting commanders to seize the initiative, minimize territory that must be won back, and maintain coalition integrity. The traditional attributes of aerospace power—speed, range, flexibility—and its global reach and perspective; combined with stealth and precision, make aerospace power the force of choice to execute the halt. The Air Force can rapidly deploy a powerful maneuver force to any location and conduct sustained operations with precise effects. Importantly, using aerospace power to stop an aggressor allows our warfighters to win with minimum risk to US personnel—a strategy consistent with enduring national values.

During 1998, aerospace power advanced the interests of the United States in every corner of the world. This was especially true in Southwest Asia and the Balkans, where the Air Force put teeth into United Nations resolutions and the Dayton Peace Accords. Using powerful, day/night, all-weather, surveillance and reconnaissance capabilities, the Air Force ensured that allied leaders and US commanders retained dominant battlespace awareness in both regions.

In the Arabian Gulf, Air Force units in operations NORTHERN WATCH and SOUTHERN WATCH, patrolled no-fly zones and maintained the ability to employ decisive force in support of UN resolutions on Iraq. Three times in 1998 the international community reacted to violations of these resolutions by Iraqi leadership. The Air Force, central to the coalition team, rapidly increased its deterrent presence. Behind the scenes, CONUS- and space-based assets provided support to, and enhanced, this potent in-theater force. Faced with clear resolve and imminent employment of aerospace combat power, Iraqi leadership twice backed down. In December, because of continuing Iraqi intransigence,

National Command Authorities ordered DoD to execute Operation DESERT FOX—a strong, sustained series of air strikes against Iraq.

The Air Force played a crucial role in Operation DESERT FOX employing its air and space weapons systems to ensure aerospace and information superiority, and to precisely attack Iraqi military targets. The Service's space systems provided targeting, threat, and navigation support to coalition forces. Air Force bombers precisely struck targets from distant bases, once again demonstrating the range, striking-power, and flexibility of these weapons systems. The B-1 Lancer proved itself in combat, destroying Iraqi military barracks. B-52 Stratofortresses launched from Diego Garcia and employed Conventional Air Launched Cruise Missiles (CALCM) against a range of targets, illustrating the long-range power and effectiveness of Air Force aircraft with standoff weapons. And, theater based F-16s and A-10s conducted precision attacks.

The Air Force remains the key contributor to our nation's commitment to stability in Southwest Asia. The Service's intelligence, surveillance, and reconnaissance assets provided the majority of resources that informed national leaders about activities in the region. Additionally, the Air Force flew 75 percent of the sorties in NORTHERN WATCH, 68 percent of the sorties in SOUTHERN WATCH, and nearly all of the air refueling sorties essential to Air Force, Navy, and Marine operations.

Air Force participation in operation JOINT FORGE helped keep peace in the Balkans. Fusing imagery and other information from space, manned aircraft, and unmanned aerial vehicles, the Service created a unified picture of the region, allowing UN forces to control what flew in the air and moved on the ground. The ability of aerospace power to provide battlespace awareness and hold at risk targets that aggressors value provided diplomats the leverage they needed to negotiate an agreement to end the violence in Kosovo. Within hours of inking the Kosovo agreement, Air Force aircraft were flying over the area, executing operation EAGLE EYE, the NATO mission to monitor compliance. The speed, range, and flexibility of aerospace power were again on display.

Counterdrug Operations

Throughout 1998, Air Force counterdrug operations demonstrated both the versatility of aerospace power and the innovative ways the Service uses its assets to counter non-traditional threats. Airborne and ground-based radars and sophisticated intelligence collection platforms identified suspected drug traffickers before they could enter US airspace. Reserve fliers tracked drug smugglers far from our borders, and the Civil Air Patrol aided law enforcement agencies at home. On the ground, Air Force working dogs detected significant quantities of illegal drugs at US ports, which barred their entry.

Humanitarian and Relief Operations

The Air Force continues to use its global mobility assets to save lives and relieve suffering. When the US embassies in Kenya and Tanzania were bombed, the Air Force deployed Initial Response Teams of medical personnel and security forces in less than 24 hours from Prince Sultan Air Base. Their timely arrival reduced suffering and helped to stabilize the situation. This marked one of the first times that the Service deployed forces from one contingency operation to another. In addition, twice this year, the Air Force reacted to natural disasters in China airlifting emergency supplies to remote areas. To the delight of the world's children, the Air Force also airlifted Keiko, the whale, from Oregon to a new home in Iceland, demonstrating the flexibility of our people and equipment.

At home, when heavy winter storms ravaged the East Coast and Rocky Mountains, the Air Force airlifted critical disaster relief supplies to the affected areas. Livestock stranded by these conditions were kept alive by airdrops in Vermont and New Mexico. When catastrophic wildfires engulfed large parts of Florida, the Air Force helped reduce the destruction, moving 72 fire trucks and 269 fire fighting personnel from the western US to decisive points in Florida to fight these fires. Their efforts protected thousands of residents and greatly limited damage.

Preparing

The Air Force was in constant demand during 1998 with deployments continuing at four times the Cold War pace. The Air Force met this demand with one-third fewer people and 40 percent less force structure. We did significantly more, with significantly less. The combination of increased commitments and reduced resources while operating within a Cold War organizational structure have led to a higher tempo and increased strain on people and equipment. To improve the way that it accomplishes its mission, while lessening the impact of increased tempo on our airmen, the Air Force is implementing its Expeditionary Aerospace Force initiative.

Expeditionary Aerospace Force—Innovating for the Future

Today's national security environment requires America's Air Force to be continuously engaged in contingency operations across the spectrum of peace and conflict, frequently in austere locations, while remaining ready to fight in two major theater wars. To meet this need, the Air Force is revamping its concept of operations—transforming how it organizes, trains, and deploys forces into theaters of operation, accomplishes its missions, and then redeploys. The

Expeditionary Aerospace Force (EAF) concept represents an evolutionary transition from a threat-based, Cold War garrison force, oriented on containing the Soviet Union, to a capabilities-based force focused on responsiveness and engagement.

Under EAF, the Air Force will reorganize its forces by January 2000, operationally linking geographically separated units to form ten Aerospace Expeditionary Forces (AEFs). Each AEF package will consist of a full complement of air and space assets with manpower drawn from the Total Force: Active duty, Air National Guard, and Air Force Reserve. Fighter, bomber, tanker, airlift, command and control, radar, and electronic warfare aircraft combined with communication, intelligence, surveillance and reconnaissance air and space systems will provide customized AEF units with unparalleled lethality and responsiveness. The AEF reorganization utilizes new operational concepts and developing information-based technology to create these units without moving significant force structure.

AEFs will be scheduled on a 15-month cycle with 90-day vulnerability periods for deployment. During each vulnerability period, two AEFs will be available to support short notice taskings as well as scheduled forward presence missions such as the Balkans and Southwest Asia.

AEFs will provide US combatant commanders more capable, highly trained forces. Training as a team during their spin-up cycle, AEFs will form fully integrated aerospace units that combine the capabilities of the Service's weapons systems to create a powerful composite force. AEF deployment schedules will be published a year or more in advance allowing commanders to structure training programs to put these units at the peak of readiness as they enter their vulnerability period. A known commitment period will also permit AEFs to refine training and planning to match current world events, resulting in shorter response times and a tailored force that better meets the needs of US commanders in the field.

Advanced scheduling is an important dimension of the AEF; it adds predictability and stability to the lives of airmen. Letting airmen know ahead of time when they are likely to deploy will permit them to predictably plan professional and family events and mitigate the impact of high operations tempo on them. The AEF also will allow better use of the Air Reserve Component. Knowing in advance when they will be committed to AEF taskings will permit Air National Guard and Air Force Reserve personnel to better manage their civilian work schedules enabling them to participate. This predictability will benefit the Air Force, its reservists, and their civilian employers. In this way, the move to the EAF concept will allow the Air Force to make fuller use of its versatile, hard-working Reserve Component.

The EAF is much more than an innovative way of organizing and employing aerospace power. It is a change in the way the Air Force assigns its forces.

Currently, the Air Force sizes its support forces based on the number of permanent bases that it operates. Support forces for expeditionary sites are then drawn from this pool of manpower with the result that over 10,000 personnel—enough to man three average-sized fighter wings—are deployed from their assigned locations every day. Consequently, there are not enough support personnel to go around, and airmen left at home work longer, and harder than they should, without relief. The EAF initiative addresses this problem by realigning manpower authorizations to support the Air Force's AEFs. By increasing the size of deploying support career fields, the Air Force will be able to better sustain expeditionary operations and manage the effect of tempo on airmen. In part, this realignment of manpower is being made possible through improvements in business practices. As the Service finds better ways of accomplishing tasks that do not require uniformed personnel, it is redirecting authorizations to career fields that deploy and support expeditionary operations.

Total Force

America's Air Force is a well-integrated Total Force that relies on critical contributions from active-duty members, guardsmen, reservists, civilians, and contractors. Each has unique and complementary characteristics that, when combined, produce a strong and versatile team. This year, building on its reputation as the DoD Total Force benchmark, the Air Force expanded the role of the Reserve Component in its flying training and security force missions, more fully utilizing the special skills reservists bring to these important mission areas. Continuing to look ahead, the Air Force commissioned a study, Future Total Force, to determine how to achieve the right force mix in the 21st century. A key to tomorrow's Total Force is continued support of Reserve Component personnel by their civilian employers. The Air Force is working with employers to make guardsmen and reservists' military service as beneficial to them, as it is to the nation.

Focus Areas

Force Protection

The Air Force has an impressive force protection capability. The Service's long-range objective is to institutionalize force protection—making it a cornerstone of daily operations. The Air Force continues to enhance force protection by training airmen, equipping and reorganizing security forces, and exploiting technology to protect home-station and deployed units. In 1998, the Service continued to adapt its security forces to face the evolving threat. For example, to meet the needs of expeditionary operations, the 820th Security Forces Group provides

stand-alone, rapidly deployable security forces squadrons consisting of security forces, intelligence, Office of Special Investigation, medical, communications, and engineering personnel. Tailor-made to support rapid deployments into forward theaters and sustained, secure operations from forward locations, the 820th provided the security for two Air Expeditionary Wing deployments to Southwest Asia in 1998.

To improve the security of its permanent and expeditionary locations, the Air Force is conducting vulnerability assessments at every installation. The Service is mitigating the deficiencies that the teams identify while pursuing long-term remedies. This review is strengthening the security of Air Force installations at home and abroad.

Space Operations

Composed of both air and space, the continuous, indivisible aerospace medium is the operating environment of the Air Force. Since its founding, the Service has dominated the aerial environment. It is now evolving its doctrine, equipment, personnel, and culture in order to continue that dominance throughout the entire aerospace dimension.

Today, Air Force space operations enable many of the current capabilities of all the US Armed Forces. The Air Force's space-based systems are increasingly responsible for the global awareness that national leaders and regional Commanders-in-Chief count on. Air Force satellites provide aircrew the intelligence and weather data they need to plan and conduct their missions. The Service's constellation of Navstar Global Positioning System (GPS) satellites helps all of the Armed Forces navigate and deliver weapons precisely on assigned targets. Constellations of Air Force communication satellites facilitate the command and control of the joint force.

The Air Force is working hard to better integrate its air and space systems. For example, the Multi-Source Tactical System (MSTS) brings a range of space products such as weather, surveillance and navigation information directly into cockpits. Another example, Combat Track, provides airborne aircraft precise GPS location data, two-way message text, and planning information.

As a strong steward of space for the nation, the Service is collaborating with several governmental and private organizations to best use its resources and improve space operations. One example is the Space Partnership Council, which consists of the Air Force, the National Aeronautics and Space Administration (NASA), and the National Reconnaissance Office (NRO). Working together, the Council integrates planning efforts, reduces risk, avoids duplication, and identifies ways to save money. In 1998, for example, the Council realized substantial savings in the areas of precision targeting and long haul communications. In a similar effort, the Air Force and NASA combined base

operating support contracts at their Florida launch facilities, significantly reducing costs for both organizations. Additionally, the Air Force Research Laboratory is partnering with NASA to leverage research and development funds, maturing important technologies while saving tax dollars.

The Air Force has also formed partnerships with industry. With its Warfighter-1 technology demonstration program, the Air Force is taking advantage of commercial infrastructure and investment to assess the military utility of hyperspectral remote sensing from space—a new technology with great promise. Also in 1998, the Air Force reached agreement with major companies using the launch facilities at Cape Canaveral Air Station, Florida and Vandenberg AFB, California. The Commercial Space Operations Support Agreement created a standard for commercial use of the Air Force's unique space infrastructure, making it simpler and cheaper for US concerns to reach space.

Information Operations/Assurance

The Air Force depends on timely, reliable, and secure information. The Service executes Information Operations (IO) in air, space, and cyberspace to gain and maintain information superiority. Toward this end, the Air Force published its IO doctrine and issued a comprehensive policy for defensive IO last year. It also completed a sweeping Electronic Warfare (EW) Operational Shortfall Study aimed at ensuring the superiority of Air Force EW capabilities into the 21st century.

The Air Force continues to focus on defensive counter-information operations, particularly information assurance, by deploying technologies that improve intrusion detection and response capabilities to protect computer networks. The Service fielded the Automated Security Incident Measurement (ASIM) system at all its bases worldwide. ASIM gives the Air Force the ability to identify and track those that attempt to penetrate its networks. Additionally, the Service deployed a new suite of firewall, network management, and protection tools in December 1998, giving it an up-to-date, robust capability to assure the operational availability and integrity of networks and the information contained within them.

The Air Force is also creating organizations and capabilities at all levels to control, monitor, and protect its networks. These organizations are establishing reporting and compliance procedures to ensure that the vulnerabilities of the Service's networks are identified and remedied. These precautions will also ensure that information placed on publicly accessible systems is properly reviewed and does not include personal or operational data.

Finally, the Air Force is undertaking a program known as Operationalizing and Professionalizing the Network to treat networks similar to its weapons systems. "Operationalizing" focuses on applying operational rigor to network functions including inspections and evaluations, graduated response, operational reporting,

and rules of engagement. "Professionalizing" networks involves actions required to organize, train, equip, and sustain networks and the personnel that operate them. Specific initiatives include applying engineering discipline to in-garrison and deployed networks, designing layered "information protection" throughout the network, certifying and licensing network professionals and users, assigning data ownership, and standardizing network equipment based on common Air Force technical architecture. The Air Force is instilling in every airman that information security is everyone's job and that lives depend on it.

An important information assurance task is the transition to the Year 2000. The Air Force will ensure that mission-critical functions continue without interruption or error on January 1, 2000 and beyond. To do this, the Air Force has evaluated, prioritized, and updated its systems. Eighty-two percent of its mission-critical weapons and information systems were certified Y2K compliant by December 31, 1998. Certification of remaining systems is on-track to meet requirements before January 2000. The Air Force began executing a thorough Y2K testing and operational evaluation program in 1998 completing "end-to-end" tests of the F-15, B-1, and Advanced Medium Range Air-to-Air Missile. Evaluations will continue in 1999 and include tests with sister services, defense agencies, and other joint activities. The Service will have continuity of operation plans in place for all mission tasks and systems—the Air Force will be mission ready and flying on January 1, 2000.

Readiness Under Fiscal Constraints

"Airpower is like poker. A second-best hand is like none at all-it will cost you dough and win you nothing."

Lt Gen George Kenney

Readiness—the ability of a Service to conduct its primary mission is a complex quality. It depends on bringing many components together to develop and focus combat power. Some of these components are tangible, such as the number of top-notch and fully trained airmen, mission-ready aircraft, or orbiting satellites. Others, like individual and unit morale, unit cohesion, and unit effectiveness, are less tangible. As Air Force senior leaders have reported, the Air Force remains ready to meet today's demands. However, the combination of several years of constant high operations tempo, aging equipment, and the cumulative effect of too few dollars has taken its toll on current readiness and created concerns about future readiness.

Readiness is declining, especially for stateside forces. Because the Air Force gives forward units priority for resources to keep them at peak strength, stateside units suffer lower readiness rates. The strains—and the limits—of doing more

with less are clearly evident. Major unit readiness decreased by 18 percentage points in the past two and a half years, with stateside combat readiness declining by 56 percentage points in that same period. Nearly half of that decline occurred in the last ten months of 1998. In response, the FY 2000 President's Budget increases readiness spending, which should address the readiness decline.

Our Airmen are a Treasure to the Nation

Recruiting and Retaining

"Only the most dedicated, well-trained personnel with first class leaders will succeed in the complex and fast-paced environment of future military operations"

Gen Shalikashvili,1997 National Military Strategy

America's airmen are the foundation of the Air Force and a national treasure. We must recruit and retain the very best. Although the Air Force met its recruiting goals in FY 1998, its increasing difficulty in meeting these goals and a slight decline in the quality of recruits caused concern. Therefore, the Air Force enlarged its recruiting force, significantly increased its enlistment bonus program and increased the size of its advertising budget to ensure that it continues to attract top-notch people.

Attracting good people is only the first step in building and maintaining the world's finest air force; retaining them is just as important. Retention has become a serious problem. Air Force people have earned an enviable reputation as disciplined and highly skilled workers—civilian employers actively recruit them. The combination of several years of high operations tempo, a less attractive retirement package, civilian-military pay disparities, and a strong economy, are making it difficult to keep our people in uniform.

Retention is challenging across all ranks and career fields. For many, especially pilots, the pull from the civilian sector is powerful. The stable family lifestyle, as well as excellent pay and benefits offered by the airline industry, are strong enticements. At the start of this year, the Service was 855 pilots short of its needs, that number is expected to increase to approximately 2,000 in FY 2002. The Reserve Component is also having difficulty manning its full-time flying billets. To address these shortages, the Air Force has increased pilot production and added two years to the initial pilot training commitment. These changes will

make a difference; however, they have a long-term focus and will not be felt for several years.

Retention is also a serious concern for enlisted personnel, especially mid-level non-commissioned officers. These airmen represent an experience and leadership base that is critical not only for today's readiness, but also for training tomorrow's Air Force leaders. In 1998, the reenlistment rate for those completing their second term of enlistment was 69 percent. This is below the Air Force goal of 75 percent and dropped for the fifth year in a row. In fact, many key warfighting career fields, such as security forces, avionics, aircraft maintenance, and air traffic control are experiencing even larger drops in reenlistment. First-term and career reenlistments also fell below Air Force goals. For the first time since 1981, the Service has failed to meet retention goals for all three categories of its enlisted force: first-term; second-term; and, career professional airmen. Losing these individuals is a costly blow to readiness. To combat these trends, the Air Force more than doubled the number of career fields eligible for Selective Reenlistment Bonuses to 117. The Service believes that the improvements in the retirement system and military pay, proposed in the FY 2000 President's Budget, will enhance retention.

Quality of Life (QoL)

America's sons and daughters become Air Force airmen because they want to be part of a quality organization—an organization that offers a higher calling and special way of life. To provide for, motivate, and retain its airmen, the Air Force continues to support several Quality of Life initiatives: a valued retirement benefit; fair and competitive compensation; safe, affordable, and adequate housing; quality health care; balanced tempo; robust community and family programs; and, expanded educational opportunities. These are the initiatives commanders, first sergeants and airmen indicate are important to them.

Traditionally, the retirement benefit has been perceived as a powerful retention tool. Airmen say that the reduced retirement plan adopted by Congress in 1986 is having the opposite effect. The reduced program is widely viewed as inadequate and has become an oft-cited reason not to remain in uniform for an entire career. The Air Force strongly supports the President's proposal to return the 20-year retirement to 50 percent of base pay.

Airmen also report that chief among their QoL concerns is fair and competitive compensation. Military pay has not kept pace with the civilian economy. The Air Force enthusiastically supports the improvements to military pay proposed in the FY 2000 President's Budget, including both overall pay increases and the pay table restructuring that rewards promotion over longevity. Further, the Service is committed to ensuring the value of compensation keeps pace with inflation and wage growth in the private sector.

Housing, for both single members and families, continues to be an important Air Force concern, especially given the increase in the real property maintenance backlog driven by fiscal constraints. Air Force commitment to the new DoD 1+1 dormitory standard, where airmen share a kitchen and bath, but have a room of their own, is a visible and popular QoL improvement for our junior enlisted personnel. The Air Force is also addressing family housing concerns. The Air Force is committed to reducing out-of-pocket housing expenditures for those members living in the civilian community, and to revitalizing over 61,000 aging, on-base homes. Where feasible, privatization offers one way to update base housing quickly and affordably. At Lackland AFB in Texas, private funds are being used to replace 272 housing units and construct 148 new units on base. With such positive results, the Air Force is studying nine additional housing privatization projects, with more to come.

Quality health care is fundamentally a readiness issue that affects every Air Force member. Airmen must be physically able to meet the challenges of expeditionary warfare and they cannot be distracted by worries about their families' health care when they are deployed. To deliver timely, reliable, cost efficient health care, the Air Force is re-sizing facilities for community needs, promoting healthy lifestyles, and employing managed care via the TRICARE program. The Air Force operates 48 of the DoD's 115 hospitals and 30 of its 471 clinics. Air Force hospitals and clinics are top-notch, meeting the same high standards as their civilian counterparts. Health and wellness programs offer a range of nutrition and exercise options aimed at keeping airmen healthy, rather than treating them after they become ill.

With the last three regions coming on line in June of last year, DoD fully deployed TRICARE, the military form of managed care. TRICARE is a significant change in military health care and its implementation has had its share of growing pains. Surveys show that confidence in the system improves as the program matures. At the direction of Air Force senior leadership, the Inspector General is conducting a focused management review, known as an EAGLE LOOK. This EAGLE LOOK will review available data and current policies to assess active duty and family member satisfaction with TRICARE. It will recommend courses of action in order to improve airmen's satisfaction level with the system.

Meanwhile, the Air Force supports alternative efforts to deliver affordable healthcare to its retired members. The DoD's Medicare Subvention Demonstration Project, TRICARE Senior Prime, began testing this year at a number of Air Force medical treatment facilities. With Subvention, Medicare is permitted to reimburse select facilities for care they give to Medicare-eligible beneficiaries. The Air Force is also participating in the congressionally sponsored demonstrations of the Federal Employees Health Benefits Program and expansion of the National Mail Order Pharmacy Program. If successful, these initiatives will deliver improved health care to those who served so commendably during another era. The current active-duty and reserve force is watching how we treat our retirees. We must do the right thing.

The Air Force manages tempo as a QoL initiative, seeking to limit an individual's time away from home station to a maximum of 120 days per year. To do this and still meet operational needs, the Air Force reduced its exercise and inspection schedules, increased reliance on its Reserve Component, and reduced the typical length of an aircrew deployment from 90 to 45 days. The EAF concept reinforces this initiative by spreading deployments more evenly among operational units, increasing the size of deploying career fields, and providing more predictable deployment periods.

Community and family programs knit our people together at home and provide for families while airmen are deployed. Through Air Force-sponsored family support, childcare and youth centers, commissaries and military exchanges, and morale, welfare, and recreation programs, the Air Force demonstrates commitment to its airmen and their families. The Air Force has also created a new position at each base, the Family Readiness Non-Commissioned Officer, to provide a single-point information and referral source for families of deployed airmen.

For the Air Force, education has always been the gateway to the future. Through the Community College of the Air Force, active duty airmen can combine college credits and Air Force-related education and experience to earn an Associate Degree in Applied Science. Additionally, the Air Force tuition assistance program pays up to 75 percent of tuition costs at accredited colleges and universities, many of which offer classes on base. The Air Force civilian tuition program answers a similar need for our non-uniformed employees. Taken together, Air Force educational programs constitute a meaningful, motivational, and highly valued QoL benefit.

Training

The highly technical Air Force will always need top-notch, well-trained, and highly motivated airmen. To ensure that basic training produces the world's finest professional airmen, consistent with the recommendations of the Kassebaum-Baker Panel, the Air Force made several improvements this year. The Service strengthened the basic military training (BMT) physical fitness regime and added a field training exercise to better prepare airmen for expeditionary operations. The Air Force also added additional military training instructor positions to reduce the trainee/trainer ratio. Through incentives, such as increasing special-duty pay and uniform clothing allowances, a new ribbon, and granting follow-on assignment preferences, the Air Force will continue to attract the best Military Training Instructors.

The Air Force strongly supports gender integrated military training. This judgement is, in part, based on 25 years of highly successful experience in this training environment. Air Force training is firmly linked to our combat mission—a mission that requires men and women to work together as a team. The

aerospace team depends on professional relationships at all levels and among all peoples. These relationships are best cultivated from the first day of military training, rather than delayed until airmen reach operational units. Importantly, throughout BMT, trainee safety and security are paramount. Accordingly, gender-separated living areas in dormitories are secured and monitored twenty-four hours a day, seven days a week.

The Air Force is improving leadership training with the introduction of the Aerospace Basic Course (ABC). Officers and civilians attend the ABC shortly after beginning their Air Force careers. This course is designed to better prepare company-grade officers and select civilians for the future. It provides a foundation in the profession of arms and a working knowledge of the unique contributions of aerospace power. Through this entry-level professional military education program, Air Force lieutenants and key civilian interns gain a deep appreciation of Air Force values, history, doctrine, and the skills required to operate and fight from austere, forward bases, as well as to fully exploit the medium of aerospace for the joint force.

Training warrior-leaders begins with the Aerospace Basic Course and extends throughout each officer's career. The Service develops its leaders deliberately, using a proven process that exposes them to Air Force and joint operations, Professional Military Education (PME), and increasing command and staff responsibilities. The depth of an airman's expertise is developed through a series of operational assignments that make him or her an aerospace power authority. Having always placed a premium on education, for both officers and enlisted members, the Service's PME system prepares its leaders for the challenges they will face in their immediate future. As airmen progress through their careers, the Air Force competitively selects the very best to command its squadrons, groups, and wings. The Service relies on a comprehensive series of additional leadership and command courses to supplement continuous mentoring in order to produce commanders who are able to make the right call, whether in peace or war. Leadership and command have always been an Air Force strength, one it will continue to rely on in the 21st century where commanders must quickly, and confidently, make life and death decisions.

The Air Force prepares its airmen for specific operational duties through advanced training programs. The Air Force is aggressively expanding and updating one of these, specialized undergraduate pilot training (SUPT). To address its growing pilot shortage, the Air Force is expanding its annual pilot production from a low of approximately 500 active duty graduates per year in the early nineties, to 1,100 per year in FY 2000.

The Air Force has also made several training force changes that improve SUPT, while permitting more efficient use of resources. The Air Force is consolidating its "Introduction to Fighter Fundamentals" training and increasing the size of its primary flying training force structure. In 1998, the Air Force developed an enhanced training syllabus for advanced bomber training. It features the T-1

aircraft instead of the T-38 and focuses on developing crucial crew coordination skills. Placing greater reliance on the T-1 for bomber training, allows the Air Force to dedicate more of its T-38 fleet to fighter training.

The Air Force is also pursuing new ways to train its operational aircrews. Distributed Mission Training (DMT) is an area that holds great promise. Using state-of-the-art simulation technology, DMT permits aircrews to train in synthetic battlespace, connected electronically to other aircrews at distant air bases. Importantly, DMT delivers this enhanced training from the home station, helping the Air Force limit the amount of time airmen spend deployed and will facilitate the training of AEFs as they prepare for deployment.

Air Force civilians are an integral part of the aerospace team. To prepare them for the 21st Century, the Air Force overhauled its civilian development program and increased opportunities for professional development. The goal is to produce technically proficient civilians who are well versed in Air Force missions, structures, and doctrine.

Equipment—Sustaining an Aging Fleet

The Air Force's weapons systems are older than ever before. In 1999, the average age of our aircraft will be 20 years and despite current modernization plans it will increase to 30 years in 2015. Many weapon systems already have exceeded their initial estimated service lives. Fatigue, corrosion, and parts obsolescence progressively are driving up the costs of maintaining these older aircraft and systems. For example, an older model F-15, nearing its third decade of service life, costs 37 percent more to maintain than newer models. For the Air Force to stay ready, and to keep readiness affordable, it must replace weapon systems that are beyond their useful lives and revitalize those that are still viable.

Faced with competing needs—to both operate and modernize in a budget-constrained environment—the Air Force has been forced to make difficult choices. Over the past few years, the costs for spares and depot repairs have continued to outstrip funding. As a result, the rate at which we must use our aircraft as a source for spare parts to keep the rest of the fleet flying—the cannibalization rate—has increased 78 percent since 1995. Additionally, mission capable rates have dropped by nearly ten percent since 1991, with a two percent drop in FY 1998 alone. These indicators point to significant readiness challenges now, and in the future. In order to address these trends, the Air Force greatly increased spending on spares and repairs for FY 1998 and FY 1999. The FY 2000 President's Budget adds additional funds to these accounts. The Service believes these increases will arrest the decline in mission capable rates. In the long term, this remains an area of concern given the increasing costs associated with an aging fleet.

Infrastructure

In the past decade, manpower and force structure reductions have outpaced infrastructure cuts. As a result, the Air Force is spending scarce resources on unneeded facilities and spreading its airmen too thin. The need to fund higher priority programs has caused the Air Force to under-invest in base operating support, communications support, real property maintenance, family housing, and military construction. To enhance readiness, the Service must be allowed to right size its infrastructure so that it matches strategy and force structure.

Key parts of Air Force infrastructure are range complexes. Test and training ranges are crucial to readiness and in many cases a national asset. The Service is working collaboratively with the Department of the Interior to renew the legislative withdrawal of public lands that comprise several of its ranges, especially the Barry M. Goldwater Range in Arizona and the Nellis Range in Nevada. Additionally, in 1998 the Air Force completed an agreement with the commercial space launch industry that optimizes use of its unique space launch ranges.

Readiness

The Air Force can support the National Security Strategy today, but to do so in the future at an acceptable level of risk, requires increased funding. To arrest the readiness decline, the Service needs additional funding to resolve shortfalls in programs that affect its airmen and its equipment. The Air Force believes improvements in the retirement system and military pay, proposed in the FY 2000 President's Budget, will aid retention, and therefore readiness. The EAF concept, introduced in 1998, will enhance the Service's ability to conduct sustained expeditionary operations and reduce the impact of the tempo they require of airmen. Additionally, the FY 2000 President's Budget proposes additional funding for spares and repairs that are intended to affect cannibalization and mission capable rates. In the longer-term however, the Service must modernize and upgrade its weapon systems to keep its aging fleet sustainable at an affordable cost.

Modernization—Future Readiness

"In the development of air power, one has to look ahead and not backward and figure out what is going to happen, not too much what has happened."

Brig Gen Billy Mitchell

The Expeditionary Aerospace Force will respond rapidly and globally to deliver decisive combat power or life-saving humanitarian relief. Expeditionary operations require a force that is light, lean, and lethal. This force is quick to deploy, easy to sustain, and powerful for its size. Air Force modernization efforts focus on developing and fielding systems that enhance the Service's expeditionary capabilities.

The Air Force is both procuring revolutionary new weapons systems and revitalizing existing equipment that is still viable. In some cases, a fielded, proven weapon system may be upgraded for enhanced capability, survivability, or reliability and maintainability. In others, the best decision is to procure new. The choice turns on whether current capabilities can affordably meet and defeat anticipated threats within acceptable levels of risk. The C-5 modification program is an example of a successful upgrade strategy. The Air Force's plan to update the Galaxy's engines and avionics will keep this unique airlifter viable well into the next century at minimum cost to the nation. The F-22 program demonstrates the imperative to procure new weapons systems. The leap-ahead capabilities of the Raptor will enable it to win aerospace superiority in tomorrow's skies—the key to successful joint operations—against advanced threats, affordably. In all cases, modernization supports the Air Force core competencies and enhances the aerospace power that the Air Force delivers to joint force commanders. The FY 2000 President's Budget provides funds to maintain key modernization programs like the F-22, C-17, and Evolved Expendable Launch Vehicle, and will address shortfalls in combat aircraft force structure. At the same time, while this budget maintains key modernization programs, it does so at slower than optimal rates.

Aerospace Superiority

"Once real mastery of the air was obtained, all sorts of enterprises would become easy."

Winston Churchill

Joint Vision 2010, the Chairman of the Joint Chiefs of Staff blueprint for the future, envisions the US military dominating all aspects of a conflict—Full Spectrum Dominance. The history of modern warfare tells us that to dominate the battlefield, on land or at sea, a military must first control the high ground—aerospace. Aerospace superiority is the pivot point for every US joint operation. By winning aerospace superiority, the Air Force gives every member of the joint team the ability to operate free from attack and free to attack. Air Force

modernization includes a comprehensive and complementary plan that will give the nation the ability to control the vertical dimension well into the 21st century.

The Air Force's highest aerospace superiority priority, and its most pressing modernization need, is the F-22 Raptor. The F-22, replacing the aging F-15 Eagle, gives the nation the technology edge that it has come to depend upon. Blending stealth, speed, and integrated avionics, the F-22 brings an unmatched capability to the battlespace. In the hands of Air Force aviators, the F-22 will dominate the aerial arena of the 21st century.

The Raptor proved itself with extensive flight tests last year; demonstrating airworthiness throughout a large portion of the flight envelope, and meeting all requirements to enter limited rate production. The F-22 will begin operational service in 2005. Funding stability is critical.

The weapons for the F-22 and current aerospace superiority fighters are the AIM-120 Advanced Medium-Range Air-to-Air Missile (AMRAAM) and the Air Intercept Missile (AIM-9X). The AMRAAM, the world's best air-to-air missile, is undergoing an upgrade to improve its range, ability to counter electronic threats, and warhead effectiveness. Similarly, the AIM-9X will regain dominance over other comparable infrared missiles in foreign inventories.

The Airborne Laser (ABL) will add an important capability to aerospace superiority. Presently in development and moving toward a lethality demonstration in 2003, the ABL brings several revolutionary technologies together to form a formidable theater missile defense capability. The ABL will merge state-of-the-art optics and tracking technologies to identify, track, shoot, and destroy enemy theater ballistic missiles during their initial ascent, long before they place American or allied troops at risk. ABL's long range sensors and laser tracking systems also will enhance the performance of land- and sea-based theater missile defense systems with precise cueing of their radars; they also increase attack options by transmitting launch points to C2 nodes. Last year, the Air Force successfully tested the ABL's flight-weighted laser module, demonstrating the ability of the laser to produce 110 percent of its required power output. Importantly, the ABL is a critical technology waypoint along the development path of the complementary Space-Based Laser. The ABL program is being restructured to reflect a 10-12 month delay due to congressional actions that reduce funding and direct additional risk reduction tasks.

The Space-Based Laser (SBL) Program is the result of an Air Force partnership with the Ballistic Missile Defense Office (BMDO). SBL could provide theater missile defense and defense against intercontinental missiles launched at the United States. Advancing the potential of SBL is part of the Air Force's charter as the nation's military space arm; the Service will do so consistent with international treaties and national policy.

Space-based assets play critical roles in aerospace superiority. With the Space-Based Infrared System (SBIRS), the Air Force is developing two constellations of

satellites that provide improved detection and warning of strategic and theater missile launches. SBIRS also will cue ABL, SBL, and all other missile defense systems allowing them to destroy weapons before they can threaten deployed troops or the US homeland. The Air Force is scheduled to launch the first SBIRS High satellite in FY 2004; the first SBIRS Low satellite in FY 2006.

To operate in space, the Air Force must have reliable and cost effective launch vehicles. The Evolved Expendable Launch Vehicle (EELV) delivers this capability. The EELV program teams with industry to develop a launch vehicle meeting military, civil, and commercial requirements with little or no modification. This dual-use procurement strategy ensures that military spacelift requirements are met while stimulating the nation's commercial launch industry.

Global Attack

" Airpower has become predominant, both as a deterrent to war, and-in the eventuality of war-as the devastating force to destroy an enemy's potential and fatally undermine his will to wage war."

Gen Omar Bradley

Central to US warfighting strategy is the ability to rapidly defeat aggression. Halting operations prevent aggressors from reaching their objectives and create the conditions for a successful counter-offensive should it be deemed necessary. To quickly halt enemy forces, the US must maintain the ability to project power rapidly, precisely, and globally—a job tailor-made for the Expeditionary Aerospace Force and the global attack assets that it contains. Air Force bombers can deliver decisive combat power from either the continental United States or in-theater bases. The responsiveness and overwhelming firepower of long-range aircraft greatly increase the options available to regional Commanders-in-Chief.

The B-2 Spirit is the Air Force's newest multi-role heavy bomber capable of delivering both conventional and nuclear munitions. The Spirit's low-observable characteristics paired with its inter-continental range give it the ability to penetrate an enemy's most sophisticated defenses and hold his highest valued targets at risk. Last year, the B-2 demonstrated the ability to attack buried hard targets, such as bunkers, by delivering sequential penetrating bombs separated by less than one second. The Air Force continues to enhance the Spirit's low observable coatings and to integrate additional advanced weapons.

The B-1 Lancer is the Air Force's primary long-range conventional bomber. The Lancer proved its mettle during Operation DESERT FOX, when it destroyed Iraqi

military barracks with its heavy bomb load. Once primarily a nuclear bomber, the B-1 is in the midst of a Conventional Mission Upgrade Program (CMUP). CMUP, a phased upgrade, will give the B-1 the ability to deliver a wide range of precision weapons and update its defensive systems, allowing it to counter evolving threats. The Air Force took delivery of the first four B-1s modified in the initial phase, Block D, in 1998; Block D upgrades will be complete in FY 2001. Follow-on phases, Blocks E and F, should be completed by FY 2009.

Although most of the airframes are 40 years old, the B-52 continues to be a workhorse of the long-range bomber fleet. The Stratofortress and its AGM-86C Conventional Air Launched Cruise Missiles (CALCM) form a powerful team—a team that destroyed high-value targets in heavily defended portions of Iraq during Operation DESERT FOX. The B-52 can also deliver a wide range of precision weapons. Upgrades to its communication and navigation systems will keep the B-52 viable well into the 21st century.

Air Force modernization both procures new weapons systems and revitalizes existing ones. Pursuing this strategy enables the Service to deliver aerospace power in the presence of advanced threats in a cost-effective manner. The Air Force's roadmap for long-range aviation is a good example of this process at work. With this plan the Service is modifying its bombers, improving their effectiveness, at a fraction of the cost of procuring new aircraft.

Precision Engagement

"Battle should no longer resemble a bludgeon fight, but should be a test of skill, a maneuvere combat, in which is fulfilled the great principal of surprise by striking from an unexpected direction against an unguarded spot."

Captain Sir Basil Liddell Hart

The ability to achieve the precise physical and psychological effects that win wars and compel adversaries are an Air Force strength. The Service's precision engagement core competency integrates Air Force capabilities to give it the ability to locate and accurately attack targets with reduced risk of collateral damage. This capability allows the Air Force to achieve desired effects faster, with fewer sorties and weapons. By giving the Air Force the ability to destroy more targets with fewer resources, precision engagement makes the Service lighter, leaner, and more lethal—a hallmark of the Expeditionary Aerospace Force. Because precision engagement is crucial to US joint operations, the Air Force's modernization is guided by a comprehensive plan to ensure that the

Service will be able to locate, attack, and assess damage to the targets that will decide the conflicts of the next century.

Virtually every Air Force fighter and bomber is able to deliver precision weapons. Among this group of weapons systems is the F-16 Falcon, the Service's primary offensive fighter aircraft. This year, the Air Force decided to procure additional F-16s in order to enhance its ability to suppress surface-to-air threats and maintain the current size of Air National Guard units that fly the Falcon. The F-16 is a highly capable fighter, however, like the A-10 Thunderbolt II, it is aging. The world is developing weapons that threaten the technological edge of both these aircraft, and they are increasingly costly to maintain. To counter these trends, the Service is making reliability and maintainability modifications and acquiring the Joint Strike Fighter (JSF) to replace both aircraft. Combining stealth and high performance in an affordable multi-role fighter, the JSF will complement the Air Force F-22 aerospace superiority fighter, giving the nation the one-two punch that will dominate aerospace well into the next century.

The centerpiece of the Air Force's precision engagement capability is its family of precision weapons. The best known precision weapon is the Joint Direct Attack Munition (JDAM), currently in production. The JDAM gives the joint force commander an all weather, low cost, accurate weapon by adding Global Positioning System (GPS) and inertial navigation capability to existing bombs. The JDAM will arm the F-16, F-15E, B-1, B-2, B-52, and the JSF. JDAM low rate initial production began in FY 1997 with the first weapons delivered in FY 1998.

Precision engagement weapons also include the Wind Corrected Munitions Dispenser (WCMD) and the Joint Stand-Off Weapon (JSOW). The WCMD adds a guidance tail kit to existing weapons to make them highly accurate. WCMD corrects for wind effects that degrade the accuracy of free-fall weapons, improving the Air Force's ability to deliver existing munitions with great accuracy from medium and high altitude. The JSOW is a near-precision, all-weather, standoff munition. These two weapons use advanced systems to guide them to a target area, where they then dispense smaller bomblets to destroy tanks, trucks, air defense, and command and control systems.

The Joint Air-to-Surface Standoff Missile (JASSM), currently in development, will provide a precise, low-observable cruise missile for Air Force aircraft. This missile will be launched from both fighter and bomber aircraft, and will be stealthy enough to penetrate the most heavily defended targets. JASSM, procured at a fraction of the cost of current standoff missiles, will enter the inventory in FY 2002.

Rapid Global Mobility

"Strategic mobility allows the United States to be first on the scene with assistance in many national or international crises and is key to successful American leadership and engagement."

President Clinton,
1998 National Security Strategy

Rapid global mobility is the key to responding with the right force, at the right time, in the right place. Airlift and air refueling forces provide tremendous flexibility in deploying, employing, and sustaining America's military forces allowing them to rapidly arrive in the theater. Studies have consistently cited a shortage of strategic airlift, relative to the two major theater war scenario.

The Air Force showed the versatility of its global mobility fleet last year when it reacted to the devastation in Central America caused by Hurricane Mitch. The Air Force built an air bridge between the US and the region, rapidly moving food and medical supplies to those in need. By February 1999, the Service will have delivered 10 million pounds of donated cargo to Central America. This relief effort is a tribute to the Total Force with the bulk of the airlift missions being flown by the Air Reserve Component under the Denton Amendment.

For the past generation, inter-theater global mobility has rested on the shoulders of the C-141 Starlifter and C-5 Galaxy, while intra-theater lift was accomplished by the C-130 Hercules. As requirements change and operating costs of these aircraft increase, the Air Force is replacing and refurbishing them.

The C-17 Globemaster III, fast becoming the superstar of global mobility, is a little over one third through its production run. The Air Force's innovative C-17 multi-year procurement strategy is an unqualified success. Aircraft deliveries are ahead of schedule and on cost. This year, the Air Force decided to purchase additional Globemaster IIIs, allowing it to better support special operations and strategic lift requirements. The C-17's ability to directly deliver out-sized and over-sized cargo from anywhere in the world to austere, forward airfields makes it a key strategic asset. As the C-17 fleet reaches maturity, the C-141 will be retired, with the last Starlifter projected to leave the inventory in 2006.

The C-5 fleet is a national asset, comprising 45 percent of the military's organic strategic airlift capability. The C-5, first flown in 1968, will continue to be a central platform for strategic airlift. The Galaxy is showing its age in unacceptably low mission capable rates. The Air Force will begin to update the Galaxy's avionics in 1999 and has programmed funds to replace engines and other major subsystems starting in FY 2000. These upgrades will result in the delivery of a refurbished C-5 in 2004.

The C-130 fleet, with many aircraft approaching 40 years old, is being refitted with new avionics and electronics subsystems to carry them into the new

millennium. This upgrade will consolidate several different variants into a single, more sustainable configuration. The Air Force is exploring the best way to replace 150 of the oldest C-130s with the new model C-130J. The C-130J will enter the inventory in 1999.

The Service is also updating its air refueling fleet. The Pacer CRAG upgrade, a reliability and maintainability modification, was completed on the first KC-135 Stratotanker in 1998; the fleet will be complete in FY 2002. This program will significantly reduce the cost of operating the Stratotanker. Both the KC-135 and KC-10 will be modified with the Global Air Traffic Management (GATM) system, enabling these aircraft to operate in increasingly busy skies under new international mandates.

Modifications give these aircraft the future ability to operate in prime, high-density civilian airspace and improve safety. They are critical to extending the life of the global mobility fleet. Safety modifications include the Terrain Awareness and Warning System (TAWS) and Traffic Collision Avoidance System (TCAS) that help protect aircraft from collision. This year, the Air Force accelerated installation of TAWS and TCAS on several of its aircraft, making them safer.

Information Superiority

"In order to conquer that unknown which follows us until the very point of going into action, there is only one means, which consists in looking out until the last moment, even on the battlefield, for information."

Marshal of France Ferdinand Foch

Information superiority—the ability to collect, control, exploit, and defend information, while denying the adversary the same—is critical to success in all military operations. Controlling information has become a necessary precondition for success in combat, and is the objective of the Air Force's information superiority modernization efforts.

The Air Force manages command and control (C2) as a weapons system and is committed to fielding state-of-the-art C2 equipment and operational concepts. The Aerospace Command and Control, Intelligence, Surveillance, and Reconnaissance Center was created in 1998 to develop and implement standard Air Force C2 and ISR programs across the Service that ensure joint operability. This Center, together with the Air Force Communications and Information Center and the NRO, is rapidly moving toward advanced capabilities that will allow commanders to make decisions inside an adversary's operating cycle and use information to its fullest effect.

Airborne information superiority assets are a key component of theater command and control. The E-3 Airborne Warning and Control System (AWACS), a mainstay for airborne situational awareness, is being upgraded with an improved radar and avionics. The E-8 Joint Surveillance Target Attack Radar System (JSTARS) provides theater commanders real-time, wide-area surveillance of enemy ground movements. JSTARS demonstrated crucial capabilities in combat and is proving itself invaluable supporting contingency operations. The fourth JSTARS aircraft was delivered last year, and ten additional JSTARS are currently planned, or in production.

During 1998, the RC-135 RIVET JOINT remained in high demand, providing accurate, timely tactical signals intelligence to a broad range of users in the Balkans and Southwest Asia. RIVET JOINT marked a noteworthy anniversary during October of last year, when it passed its 3,000th consecutive day deployed to SWA—a testament to the critical intelligence this platform collects and the dedication of the airmen who operate and sustain it. Two additional RIVET JOINT aircraft will be added to the fleet in 1999, helping to alleviate this system's high operations tempo.

Air Force provided satellite communications have been a cornerstone of joint military communications (MILSATCOM) for years. Air Force MILSATCOM provides critical support, command and control, and infrastructure connectivity for joint forces worldwide. Milstar and Polar MILSATCOM provides robust protection and Global Broadcast Service (GBS) provides efficient dissemination of large volumes of information including imagery and video. In the future, systems such as Advanced EHF and Wideband MILSATCOM will replenish the Milstar, DSCS and GBS constellations.

Effective C2, depends in large measure, on the ability to accurately identify all of the hostile, friendly, and neutral entities in the battlespace. This is known as Combat Identification (CID). The Air Force Research Laboratory is leading the way in CID technology. This year, the Lab began a project that seeks to develop a small, low-cost device that will identify US or allied troops and vehicles as "friendly" when interrogated by airborne radar. This will greatly reduce the risk of fratricide.

Unmanned Aerial Vehicles (UAVs) complement the Air Force's manned aircraft to build a complete picture of the battlespace for joint force commanders. Air Force UAVs include the operational Predator and two Advanced Concept Technology Demonstration (ACTD) High Altitude Endurance (HAE) systems; Global Hawk and Dark Star. Predator recently returned from its third operational deployment to the Balkans, where it provided valuable imagery to United Nations forces. If any elements of the HAE UAV ACTD prove militarily useful, the residual assets could be used while the Sevice evolves the technology. The goal is to provide the joint force commander long-dwell imagery intelligence collection capabilities.

Agile Combat Support

"Logistics controls all campaigns and limits many."

Gen Dwight Eisenhower

The success of the Expeditionary Aerospace Force ultimately will rest on the Air Force's ability to sustain it. Agile Combat Support (ACS) provides commanders improved responsiveness, mobility, and sustainability of their forces. ACS is accomplished by substituting rapid resupply for large deployed inventories, and by acquiring new or improved weapons systems that are more reliable and have smaller mobility footprints.

Information technologies, such as the Global Combat Support System, featuring both new leading edge capabilities and technical refreshment of existing systems, are key to ACS. When combatant commanders require an item, integrated information systems will "reach back" to US locations and "pull" the resources required. Streamlined depot processes will release materiel in a timely fashion so that time-definite transportation can complete the support cycle by rapidly delivering needed resources directly to the user in the field. Integrated information systems currently being tested provide total asset visibility throughout this process, tracking resources throughout their delivery cycle. Air Force mobility assets equipped with this technology can be tracked in near-real time through Combat Track. Commercial aircraft tracking systems will be integrated into the Global Command and Control System giving field commanders visibility into contract shipments.

Enhancing Future Operations

Air Force Battlelabs

"Victory smiles upon those who anticipate the changes in the character of war, not upon those who wait to adapt themselves after the changes occur."

Gulio Douhet

In 1997, the Air Force established six Battlelabs to identify and validate innovative ideas that improve execution of the Air Force mission. The six Battlelabs—Aerospace Expeditionary Force, Command and Control, Force

Protection, Information Warfare, Space, and Unmanned Aerial Vehicle—are paying big dividends. Battlelab success stories include the Air Tasking Order (ATO) Visualization and Assessment Tool designed to streamline ATO preparation, Improved Information Reachback, which will lessen forward footprint, and the Enroute Operations Center allowing aerospace commanders to control operations enroute to the theater. Each of these markedly enhanced joint operations by placing new and cost-effective capabilities into the hands of combatant commanders.

Expeditionary Force Experiment

The 1998 Expeditionary Force Experiment (EFX 98) was the first in a planned series of experiments designed to explore new operational concepts and advanced technologies. EFX 98 concentrated on better ways to command and control the air component during expeditionary operations. It explored dividing aerospace command and control functions between rear area support centers and an in-theater Air Operations Center (AOC), reducing the personnel and logistics requirements in the forward area. EFX 98 illustrated the ability to command and control en route aerospace forces from both ground and air. It also tested the spiral development of software systems that are critical to the future AOC. By working side-by-side during EFX 98, software programmers and operators proved that spiral development reduces the cost and time required to develop and deploy new systems.

Wargaming

Wargames are valuable tools for exploring new or innovative ways to employ military forces. The Air Force conducts two major wargames each year that focus on force employment concepts and long-range planning. The first, the Global Engagement series, investigates operational issues eight years into the future. The second, the Aerospace Future Capabilities series, focuses on capability issues 20 years into the future.

Global Engagement wargames improve the understanding of the contributions aerospace power makes to the joint force. A key aspect of Global Engagement 98 was the rapid deployment and sustainment of multiple Aerospace Expeditionary Forces that included Air Reserve Component elements. The game demonstrated the use of aerospace power as a potent maneuver force for the joint force commander.

The Aerospace Future Capabilities Wargames evaluate strengths and weaknesses of capabilities contemplated by the Air Force's Vision and Strategic Plan. They also test alternative force structures in future warfighting environments. During the 1998 game, the Air Force gained valuable insights into

the opportunities provided by—and challenges associated with—standoff warfare in an anti-access environment.

Enhancing Business Practices

Defense Reform Initiative

The Defense Reform Initiative (DRI) is an effort to improve the way DoD works. Last year the Air Force implemented 45 DRI Directives, pushing costs down and quality up. The City-Base Reinvention Laboratory at Brooks AFB in Texas is one example. At Brooks, the Air Force is developing a proposal to transfer the base's infrastructure to the City of San Antonio. It will then lease back only the facilities it needs. San Antonio benefits by gaining facilities it can use to spur development while retaining the Brooks mission; the Air Force benefits by eliminating unneeded base infrastructure; and, the community benefits by keeping its long-standing ties to the Air Force. Additional infrastructure initiatives, such as housing and utilities privatization, show great promise. The highly successful housing privatization effort at Lackland AFB, Texas is replacing 272 housing units and building 148 new units on base.

Competitive sourcing is another DRI success story. During 1998, the Air Force fully executed its plan for announcement of OMB Circular A-76 studies. The Air Force is conducting a top-to-bottom review of its manpower authorizations, with an eye toward identifying additional positions to compete. Recent competitive sourcing and privatization efforts have yielded 35 percent manpower cost savings, demonstrating that this is a promising area for business reform.

Air Force Management Reform

In 1998, the Air Force established its Management Reform Office, reporting to the Under Secretary of the Air Force and the Vice Chief of Staff. This office will help implement the Defense Reform Initiative and internally generated opportunities to make certain that manpower and fiscal resources are focused on high-payoff activities. The Service continues to lead the DoD in the shift from paper-based to electronic contracting, and in expanding the use of the IMPAC card. In addition, the Air Force has challenged its major commands to expand use of activity-based costing and activity-based management. Reducing the total ownership cost of weapons systems is another area where the Service is showing how better business practices yield resources that can be applied to high priority needs.

The Air Force continues to determine its military needs programmatically through a requirements based process linked to the National Military Strategy. The Service takes advantage of technology, modernization, and Total Force integration as well as aggressively pursuing opportunities to achieve best value

in competing non-military essential support functions. Looking to the future, the Air Force will continue to size its forces to meet mission requirements, and fully resource them to ensure mission accomplishment. The Service must have the flexibility to set its required end strength levels consistent with evolving missions.

In today's era of tight budgets, the Air Force is committed to reducing overhead functions and moving maximum capability to its combat units. The Service continues to aggressively scrutinize management headquarters levels to ensure that they are the absolute minimum to execute the operational mission. In fact, reductions in management headquarters have outpaced those of overall force structure since the draw down began in FY 1987. Headquarters must be manned at levels that permit proper execution of evolving mission requirements.

Improving Air Force Depots

The Air Force also is improving depot maintenance by conducting competitions between public organizations and private firms for this work. The results, so far, have been encouraging. In the first competition, the Air Force awarded the C-5 Programmed Depot Maintenance workload to the Warner-Robins Air Logistics Center (ALC), saving the Air Force $190 million over the seven-year life of the contract. In a similar competition, Ogden ALC teaming with Boeing, won a nine year contract for repair of the A-10 and KC-135 aircraft, electrical accessories, hydraulics, and other commodities that will save the Service $638 million. A third public/private competition, for the engine workload at San Antonio ALC, will be completed in February 1999.

Acquisition Reform

Acquisition reform is another example of Air Force innovation. Lightning Bolt initiatives, the Air Force's initial program for improving acquisition, have saved taxpayers $30 billion. Building on this success, the Air Force introduced its follow-on concept for reform—the Air Force Acquisition and Sustainment Reinvention Process. This process capitalizes on proven industrial practices to deliver weapons systems faster and cheaper than traditional DoD acquisition practices.

Using partnering, the Air Force is raising acquisition reform to a new level. Partnering allows the Air Force to sponsor programs with industry and other government agencies, sharing costs and the risks associated with developing new systems and concepts. The Evolved Expendable Launch Vehicle demonstrates this powerful concept. With EELV, the Air Force and two contractors are pooling resources to build two new families of space launchers, at a fraction of what the rockets would cost if developed independently. America wins all the way around with EELV: The Air Force gets the lift vehicles it needs;

domestic industry improves its space launch competitiveness; and, the nation's space infrastructure is enhanced.

Safeguarding Key Resources

Preserving Warfighting Assets

To maintain its combat edge, the Air Force must train realistically while preserving its airmen and weapons systems. This involves accepting and managing risk. During 1998, the combination of capable leadership, accountability, and Operational Risk Management (ORM) led to a ready force with the best safety record in Air Force history. From top to bottom Air Force leaders set high standards—they ensured that airmen knew how to accomplish the mission effectively and safely. Having communicated the mission, leaders hold their people accountable through regular inspections and evaluations. Because of strong leadership, Air Force units routinely conduct potentially dangerous aerospace missions effectively and safely. The Service helps its leaders manage operational risk with its proven ORM program, a decision-making tool that systematically identifies risks and benefits to help make operational and training decisions. It helps Air Force leaders enhance mission effectiveness by minimizing risks in order to reduce mishaps, preserve resources, and safeguard the health and welfare of our airmen.

Financial Reform

The Air Force, as a prudent steward of public funds, is working diligently to comply with the Chief Financial Officer (CFO) Act and the Government Performance and Results Act (GPRA). During the past year, the Service achieved relatively clean audit opinions of its military and civilian pay accounts. Additionally, the Air Force strengthened its internal controls and management oversight to help prevent fraud and improve confidence in its financial statements, while incorporating some GPRA output measures into its financial statements and long range plans. The Service is striving to help reach the President's goal of unqualified audit opinions on government financial statements. As it improves its financial systems to help achieve this goal, the Air Force will emphasize improvements that benefit the decision-making of commanders in the field.

Environmental

The Air Force recognizes the need to balance its readiness requirements with stewardship of the resources with which it has been entrusted. For example, the

Service actively participates in collaborative processes that safeguard the natural and cultural resources on public lands withdrawn as training ranges. In virtually every case, government and private organizations credit the Air Force with preserving range environments that would otherwise have been diminished through human encroachment. Similar to its commitment to protect range lands, the Service promotes pollution prevention programs. Where past practices have disturbed the environment, the Air Force is now implementing clean-up programs.

Promoting Equal Opportunity

Dependability, trust, and teamwork are bedrock military values that directly affect readiness. Fair treatment and freedom from unlawful discrimination and harassment are essential to a professional work environment. To ensure we get the most from our people and maintain the highest levels of readiness, the Air Force promotes human dignity, a professional organizational culture, and cohesion among our military members and civilian employees through an active Equal Opportunity (EO) program.

The Air Force EO program has military and civilian components. The Military Equal Opportunity (MEO) program and the civilian Equal Employment Opportunity (EEO) program give commanders, executives, managers, and supervisors tools to establish and advance a climate of respect and fairness for all Air Force personnel. Full-time MEO professionals provide unit climate assessments, conduct a full spectrum of human relations education and training, and investigate complaints to ensure Air Force workplaces are free from discrimination and harassment. The EEO program is equally effective. A variety of avenues are available to voice and resolve complaints of discrimination, harassment, or reprisal by members of the military and civilian work force.

Through its EO programs, the Air Force has earned a reputation as an advocate for equal opportunity that allows it to attract the brightest and the best. Active duty racial minority representation has risen from 14 percent in 1975 to 24 percent today. Women now comprise 18 percent of the military force—17 percent of the officer corps and 18 percent of the enlisted troops. Women constitute 35 percent of the civilian force, while minorities represent 25 percent.

The Air Force's goal is to promote a working environment that allows each employee—military and civilian—to realize his or her full potential.

Conclusion

As the 20th century dawned, few imagined the impact that flight would have on military operations—as it closes, aerospace power has become the preeminent tool of the national command authority.

The Air Force is postured to meet the nation's security needs and is actively confronting the challenges of today's dynamic environment. In 1999, the Service will reorganize its forces under the sweeping Expeditionary Aerospace Force (EAF) initiative. As a result, the Air Force will use its Total Force to deliver improved aerospace power—whether lethal firepower or humanitarian relief—wherever, and whenever, it is needed. EAF will also add stability and predictability to the lives of airmen, mitigating the effect of continued high operations tempo and improving retention. Improving retention is one of the keys to arresting the decline the Service is experiencing in readiness. To stay ready, the Air Force requires sustained funding increases in order to recruit, train, and retain its airmen; maintain its aging weapons systems; and modernize its forces to affordably face the future. As a careful steward of funds, the Service is harnessing the power of the Revolution in Business Affairs to improve efficiency through better operating practices. Composed of the world's finest airmen, the Air Force stands ready to meet the nation's security needs now, and in the 21st century.