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SENATE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON AIRLAND FORCES
UNITED STATES SENATE

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE
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INTRODUCTION

Chairman Cotton, Ranking Member King and distinguished members of the Airland Subcommittee, thank you for the opportunity to provide an update on the United States Air Force Modernization programs and Force Structure. Today's demand for Air Force capabilities continues to grow as Airmen provide America with unmatched **Global Vigilance**, **Global Reach** and **Global Power**. We are supporting Combatant Commander requirements in response to growing challenges from Russia, China, North Korea and Iran, in addition to the ever present counterterrorism mission in the Middle East and around the world. While our forces have been heavily engaged in deterring or addressing these operational challenges, our adversaries have taken the opportunity to invest in and advance their own capabilities. To address ever narrowing capabilities gaps, we need your support in the form of increased, steady and predictable appropriations. With this support, the Air Force can invest in critical capabilities and modernization programs while sustaining capacity and recovering readiness to ensure the joint force can deter, deny and decisively defeat any enemy that threatens the United States or our national interests.

OPERATIONS UPDATE

ALWAYS THERE Your Air Force relentlessly provides **Global Vigilance**, **Global Reach**, and **Global Power** for the nation…we're always in demand…and we're always there. Our Airmen continue to provide two legs of the nuclear triad and resource 75% of the Nuclear Command, Control, and Communications (NC3) framework, made possible, in part, through one of the 12 satellite constellations our space operators command and control every day. Beyond NC3, those constellations provide other critical capabilities such as worldwide secure

communications, global positional awareness, global missile warning, and a battlefield situational awareness architecture for our joint warfighters.

Your Air Force has been globally engaged for the last 26 years in combat operations. Though our end strength has decreased 38% since 1991, we have experienced significant growth across several mission areas. Our Airmen provide joint forces with **Global Vigilance** using real-time multi-domain platforms and sensors integrated across our global intelligence and command and control (C2) networks to find, fix, and finish a range of hostile targets simultaneously across the globe. Without fail, the Air Force performs 60 combat lines of persistent attack & reconnaissance missions with remotely piloted aircraft (RPA) every day…they serve as the unblinking eye to support combatant commanders and joint warfighters and give us a competitive advantage. Through our Intelligence, Surveillance and Reconnaissance (ISR) capabilities, we provide warfighters over 6,000 intelligence products per day used to identify enemy targets and trigger 70% of Special Operations Forces (SOF) assaults on violent extremist organizations.

Additionally, the Air Force has conducted 4,000 cyber missions against more than 100,000 targets, disrupting adversaries and enabling over 200 High Value Individual kill/capture missions. In securing our networks and digital infrastructure, 2016 saw Air Force cyber operators block more than 1.3 billion malicious connections – an average of more than 40 per second.

Nearly every three minutes a mobility aircraft departs on a mission, providing **Global Reach** and access, projecting power through a network of airfields in 23 countries and 77 locations, while providing critical aerial refueling capability. In 2016, our aeromedical professionals evacuated over 5,700 patients and provided emergency medical care resulting in a

98% survival rate. Your Air Force provides unrelenting ability to maneuver, sustain, and recover personnel and assets…at home, abroad, and with our allies and partners.

With fighters, bombers, RPAs, and Intercontinental Ballistic Missiles (ICBMs), the Air Force provides conventional and nuclear **Global Power** that can strike an enemy on short notice anywhere in the world. In Iraq and Syria, the Air Force has led 65% of the more than 17,000 coalition airstrikes since 2014, delivering decisive firepower supporting joint, special operations and coalition ground forces to defeat and degrade ISIS and regain critical territory.

Stitched together, the fabric of our Air Force weaves multi-domain effects and provides U.S. servicemen and women the blanket of protection and the ability to power project America's full range of combat capabilities. Make no mistake, your Air Force is always there.

READINESS IN A CHANGING WORLD However, being "always there" comes at a cost to our Airmen, equipment, and infrastructure, and we are now at a decision point. Sustained global commitments and recent funding cuts have affected capacity and capability for a full-spectrum fight against a near-peer adversary. In 2013, sequestration forced hard decisions that sacrificed the readiness and size of the Total Force in order to ensure our technological superiority against future adversaries. In the FY16 and FY17 budgets, we made the necessary adjustments to balance near-term readiness with future modernization, but due to continuous combat operations, reduced manpower, an aging fleet, and inconsistent funding our readiness has suffered.

In a world of increasing threats, stronger adversaries and a persistent war against violent extremism, there is a greater disparity between commitments and the resources necessary to achieve our national security objectives. Instead of rebuilding readiness for near-peer conflicts, your Air Force is globally engaged in operations against lesser-equipped, but still highly lethal

and adaptive enemies. Airmen serve at home and abroad to underpin joint force success, but it comes at the expense of full-spectrum readiness.

The first step to regain full-spectrum readiness is to rebuild our Operational Training Infrastructure. This includes not only live, virtual and constructive environments, but also the ranges and space necessary to train against high-end threat systems in a multi-domain environment. Once established, our 4th and 5th generation fighter units need relief from current tasking against low-end adversaries in order to train for emerging threats. We prioritized this initiative by creating a directorate on the Air Staff dedicated solely to this monumental effort. We took the first step. However, the complexity of linking all of the systems needed for tomorrow's fight and deconflicting training requires both manpower and finances.

Your Air Force needs permanent relief from BCA, increased funding, flexible execution authority, and manpower to recover full-spectrum readiness. We will continue to do all we can to innovate, transform, and improve how we maximize our resources. We need your help in providing stability with the ability to modernize our capabilities, at the pace required to fight and win against any emerging threat.

PEOPLE Airmen are our greatest resource and our Air Force needs to increase end strength to meet national security requirements. Manpower shortfalls in key areas remain the number one issue limiting readiness and is our top priority as we rebuild squadrons across the Air Force. At the start of 2016, our end strength stood at 311,000 active duty Airmen, down from more than 500,000 during Desert Storm—a 38 percent decrease. Though we appreciate your support to build the force up to about 321,000 in 2017, we will still be stretched to meet national security requirements.

To improve readiness and attain manning levels matching our mission requirements, we are considering an increase to our Active Duty, Guard, and Reserve end strength and will work with the Secretary of Defense to develop the FY 2018 President's Budget to address personnel shortages. Our Total Force model (incorporating our Active Duty, Guard, Reserve, civilians, and our contracted capabilities) not only recognizes the value of an integrated team, but helps guarantee today's and tomorrow's capability. We will develop plans to address shortfalls in a number of key areas, including critical career fields such as aircraft maintenance, pilots, NC3, intelligence, cyber, and battlefield Airmen.

We face an aircrew shortage crisis across all disciplines. The Air Force has the world's finest aircrew who enable an incomparable duality of global mobility and combat lethality. In the aircraft maintenance field, we were short approximately 3,400 aircraft maintainers at the close of 2016. Because of this shortage, we cannot generate the sorties needed for our aircrews. As airlines continue hiring at unprecedented rates, they draw away our experienced pilots. Without a healthy pool of pilots, we risk the ability to provide airpower to the nation.

Pilots are strategic national assets and the pilot crisis extends beyond the Air Force and military. It is a national problem which requires senior-level attention in Congress, the Commercial Industry, and the DoD. To address this national challenge, since 2014 the 'Air Force -Airline Collaboration', formally known as the National Pilot Sourcing Forum has increased efforts to effectively utilize and train an adequate number of pilots to meet our nation's pilot demand signal.

However, pilot retention has declined for five straight years. Today the Air Force has a rated manpower shortfall of approximately 1,550 pilots across the Total Force. This shortfall is most pronounced in our regular Air Force fighter community which is short more than 950

pilots. We are grateful for your support to increase the pilot bonus, and we will continue to ensure our retention programs are appropriately sized and utilized. Your Air Force will utilize the new FY17 NDAA Aviation Bonus authority ($35K per year maximum) and implement a tiered-model using a directed business case model to identify areas of greatest need.

Retaining our pilot force goes beyond financial incentives…it is about culture. Your Air Force is implementing many non-monetary efforts to reinvent the culture and improve the quality of life and quality of service for our Airmen. We have reduced additional duties and superfluous training courses, as well as hired contractors in fighter squadrons to perform burdensome administrative tasks, enabling our pilots to focus on their primary duty: flying. We have also increased the transparency of the assignment process and increased flexibility to promote family stability. Your Air Force is exploring opportunities to reduce deployment burdens by enabling more Air Reserve Component volunteers for 179/365-day deployments. We must show our Airmen that we are creating a culture that reminds them they serve in something bigger than themselves…defending America.

In addition to retaining our talented personnel, the Air Force must also increase pilot production and absorption while reducing requirements. The increased end-strength provided in the FY17 NDAA will allow us to maximize the training pipeline and fill out under-manned units, which are vital to our recovery. Our fighter pilot production targets have increased 15% (to 335 Total Force pilots) per year while we surge the number of new aircraft maintainers by more than 1,500 per year to better man flying squadrons and reestablish sortie generation rates with a completion target of 3-5 years. However, other options beyond manpower increases exist to season our young pilots while accelerating readiness recovery.

The Air Force's plan to conduct an experimentation campaign this summer directed at the Air Force's light attack capabilities may provide opportunities to create a "high/low" mix for combatting low-end threats in more permissive environments. During this experimentation campaign, we will gather information before working with Congress to determine what we can afford for the future. This approach could provide more cockpits to absorb and season a greater quantity of fighter pilots and provide 4th and 5th generation aircraft the required training time to prepare for high-end threats and the operational tempo relief to extend their service life.

FORCE STRUCTURE AND MODERNIZATION

FIGHTERS Five years ago during a period of severe fiscal constraints, the Air Force rebalanced our fighter force structure using analysis which showed the Air Force could decrease fighter force structure by approximately 100 aircraft if we were willing to accept higher risk. This resulted in the current fighter inventory of approximately 1,000 primary mission aircraft and slightly more than 1,950 total aircraft. This inventory complies with FY16 NDAA language on the limitation on retirement of Air Force Fighter Aircraft; however, with today's sustained operational demand for rotational fighter presence, our current 55 combat-coded fighter squadrons do not allow for enough time at home station to train pilots and maintain aircraft to achieve the full spectrum readiness necessary to meet the requirements set forth in the Defense Planning Guidance.

We need to regrow our current fighter force to a minimum of 60 combat fighter squadrons and 2,100 fighter aircraft across our Active, Guard, and Reserve components. This

balance will evolve as we procure more F-35 aircraft and develop Penetrating Counterair (PCA) from a $4^{th}/5^{th}$ generation mix to a $5^{th}/6^{th}$ generation mix.

The Air Force's major modernization focus today is the F-35A, which is the centerpiece of our future fighter precision attack capability. Its missions will include Air Interdiction, Offensive and Defensive Counter Air, Close Air Support, Strategic Attack, Suppression of Enemy Air Defenses, Armed Reconnaissance and Combat Search and Rescue, as well as serving as a dual capable aircraft for the U.S. and partner nations. To fill capability and capacity shortfalls, the Air Force needs to increase F-35A procurement to a minimum of 60 aircraft per year as quickly as possible. This must be carefully balanced with the required follow-on modernization effort for the F-35A.

The F-35's follow-on modernization effort centers on the Block 4 upgrade, which is geared toward meeting the estimated threat in the 2025 timeframe and beyond. We cannot emphasize enough how important it is that we fully fund Block 4 to prevent delaying required capabilities for American and Coalition warfighters, including integration of additional weapons and upgrades to the electronic warfare system, data link systems, and radar. Once Block 4 upgrade is complete and ready to be fielded we will examine acceleration of the F-35A program to the maximum affordable procurement rate to meet projected 5^{th} Generation requirements.

The F-22, currently the only U.S. fighter capable of operating in highly contested environments is also an integral piece of the Air Force's force structure modernization plan. Its stealth, super cruise, integrated avionics and sensors combine to deliver the Raptor's unique capability. We plan to retain the F-22 until the 2060 timeframe, meaning a sustained effort is required to counter advancing threats that specifically target its capabilities.

As our adversary capabilities advance, PCA will play a significant role in targeting and engaging future threats and is critical as a node in the larger network, providing data from its sensors to enable employment using either stand-off or stand-in weapons. This capability will provide the survivability, lethality and maintainability to meet emerging worldwide threats across the spectrum of conflict and will be the cornerstone of the Air Force shift from $4^{th}/5^{th}$ generation to a $5^{th}/6^{th}$ generation fleet.

In addition to pursuing new capabilities and modernizing fifth generation fighters, the Air Force also seeks to extend the service life and modernize critical capabilities of key fourth generation aircraft. Doing so will help maintain Service capacity and readiness to meet the needs of today's counterterrorism fight while ramping up the F-35 production line and developing PCA.

The legacy service life extension program (SLEP) will extend the F-16 airframe structural service life from the current 8,000 hours to 12,000+ hours, adding fifteen to twenty years of service for selected F-16s. To ensure the F-16's lethality and prominence in low-end conflicts, we are pursuing an active electronically scanned array (AESA) radar upgrade that offers advanced capabilities and improved reliability and maintainability. We are also upgrading the mission computer, display generator, electronic warfare components, and the ALQ-131 self-protection jamming pod, known as the Pod Upgrade Program (PUP) that enables advanced technology jamming techniques.

Along with the F-16, the Air Force expects the F-15E to be an integral part through at least 2040 and we are pursuing a new electronic warfare self-protection suite, the Eagle Passive/Active Warning Survivability System (EPAWSS) for the Strike Eagle fleet.

The Air Force will not be able to rely solely on our current programs and capabilities to ensure readiness to fight the most advanced threats in the future. To that end, we are aggressively pursuing a path toward strategic agility in our capability development. We have reinvigorated development planning (DP) at the enterprise level to build-in agility and formulate truly innovative strategic choices for capability development. Core Development Planning functions include: formulating and evaluating viable future concepts, defining operational trade space, identifying technology shortfalls and Science and Technology needs, and assisting the operations community in refining requirements.

To oversee and direct capability development of the highest priority operational challenges and opportunities, the Air Force established the 3-star Capability Development Council (CDC), chaired by the Vice Chief of Staff of the Air Force, as well as stood up the Strategic Development Planning and Experimentation (SDPE) office to plan, manage, and execute warfighting experimentation campaigns. Experimentation provides the ability to rapidly explore a wide range of innovative materiel and non-materiel solution options. To further these efforts, the Air Force programmed resources starting in Fiscal Year 2017 to conduct concept-driven experimentation campaigns, including funds for prototyping, live and virtual simulations; developing a cadre of expertise, along with the tools to conduct experimentation campaigns.

The Light Attack Experimentation Campaign informs planning and strategic choices in this critical area. The Air Force is experimenting with potential off-the-shelf aircraft to determine industry's capability, capacity, and interest to provide cost-effective innovative solutions with low procurement, operating and sustainment costs. Since the deployment demand is not expected to decrease, the Air Force must meet capability demands in permissive environments while building and maintaining readiness to meet emerging threats in more contested environments.

Aligning capability, capacity and cost with conflict is key to meeting Air Force commitments to combatant commanders and effectively using taxpayer resources. Assessing the viability of low operating cost, light attack platforms has the potential to reduce operating costs while still meeting combatant commander needs.

The Air Force recently released an Invitation to Participate to industry for a live-fly experiment with off-the-shelf aircraft that may meet an Air Force need for a low-cost capability that is supportable and sustainable. Planned for later this year, this live-fly experiment will assess the capabilities of these off-the-shelf light attack aircraft, which will be flown by Air Force personnel in scenarios designed to highlight aspects of various combat missions, such as close air support, armed reconnaissance, combat search & rescue and strike control and reconnaissance. The experiment will also include the employment of weapons commonly used by other fighter/attack aircraft to demonstrate the capabilities of light attack aircraft for traditional counter-land missions. Results from this experimentation campaign will be used to inform future experimental companies, requirements and possibly investment decisions. The evaluation of off-the-shelf candidates is not yet a program and there is no plan for what happens after the experiment.

MUNITIONS There is an ever growing demand for the effects airpower brings to the joint force. Within our fiscal boundaries, we have sought to balance the requirement for current munitions with the need to advance capabilities in the same manner we have with our aircraft force structure. However, sustained combat operations, BCA limitations, and support for our coalition partners have negatively impacted these efforts. Absent sustained and increased funding, munition stockpiles will continue to decrease as well as negatively impact readiness and our ability to meet national security objectives in the future.

Sustained combat operations and support for our coalition partners are reducing munitions inventories faster than our ability to procure. Historically, munitions funding has been reduced to pay other critical service bills. To resolve this issue, we need increased and sustained funding to send a more consistent demand signal to our industrial base. With the dispensation provided to us by the Congressional Defense Committees, we were able to ulitize the Overseas Contingency Operations funding to replenish the munitions with high combat expenditures to date. Additionally, Overseas Contingency Operations funding while important, is only a means of replenishing what is used in contingencies and generally results in replenishment 2-4 years after the munitions are expended.

We are currently using legacy munitions on our 5th generation fleet which negates the full advantage these platforms can provide. Investments into programs such as the Small Advanced Capabilities Missile (SACM) and the Stand in Attack Weapon (SiAW) are crucial to realizing the full potential of our next generation of aircraft. The SACM is a smaller, affordable air to air weapon that is required to increase magazine depth and maximize utility of a PCA capability. SiAW is an air-to-surface weapon designed to hold at risk the surface elements that make up the A2AD environment and will be integrated on F-35, B-21 and other future platforms like PCA. With your continued help the USAF must continue to invest in and develop advanced munition capabilities such as these to ensure future air superiority for the Joint Force.

BOMBERS As with the fighter force, the total bomber inventory has also been significantly reduced. To provide perspective, in 1991 we had 290 aircraft available within the bomber fleet versus 156 B-1s, B-52s, and B-2s today. The current number is insufficient to meet Defense Planning Guidance and nuclear guidance while sustaining current operational demands and maintaining sufficient training and readiness capacity.

A key modernization effort that will provide warfighters the capability to operate in tomorrow's high-end threat environment is the development of the B-21 Raider. The B-21 will provide the President with the ability to hold targets at risk around the globe while denying sanctuary to our adversaries. In addition to its conventional capabilities, the B-21 will support the nuclear triad providing an advanced and flexible deterrent capability with the ability to penetrate modern air defenses. Agile acquisition processes have been built into the B-21 development and procurement efforts, ensuring we deliver system capabilities for the best value, while integrating open architecture standards for ease of upgrade to future technology requirements.

The Air Force remains committed to B-21 affordability, with the average procurement cost of $564 million in base year 2016 dollars. We require a fleet size that will ensure sustained dominance well into this century and intend to procure a minimum of 100 B-21s. Procuring at least 100 B-21s will also reduce lifecycle ownership costs. Further, we are continuing to study the right size of the total future bomber force. Deterrence and demonstrated combat capability remain vital instruments of power, especially as our enemies are committed to denying our attacks from the air. Only 12% of our current bomber fleet is survivable in such an environment. Therefore, the B-21 remains an absolute national defense priority and we are grateful for your continued support of this critical program going forward.

Equally important to developing advanced capabilities is the Air Force's commitment to modernize the legacy bomber fleet. The 19 remaining B-2 aircraft, currently the only low-observable, Anti-Access/Area Denial asset capable of penetrating advanced enemy defensive systems, are approaching 30 years of service and require engine, avionic, communications and defensive systems upgrades to maintain viability in the face of advancing enemy capabilities.

Similarly, the 62 remaining B-1s have been in service for nearly 35 years and are receiving upgrades to their avionics and flight systems. These upgrades will ensure the B-1's viability into the mid-to-late 2030s. Lastly, the B-52H is programmed to at least 2050, putting the remaining fleet of 76 at nearly 100 years of service. To sustain this venerable capability there are a number of modernization efforts currently in work: replacement radar, new engines, improved/integrated avionics, defensive and weapons management, and communication upgrades.

In conjunction with the upgrades to the bomber fleet, the Air Force is looking to update the Air Launched Cruise Missile (ALCM) inventory with the Long Range Stand Off (LRSO) program.

SPACE We view our national security as inextricably dependent upon space-enabled capabilities. Meanwhile, potential adversaries are investing heavily in technologies designed to exploit this dependency in order to diminish the national security advantages which stem from space capabilities. We must expect that an adversary associated with any military conflict will likely seek to attack space systems, to include offensive action in and through space; perhaps even before kinetic activities take place on land, sea, or in air.

Additional investment is required to build robust and resilient architectures while implementing the Space Enterprise Vision (SEV), which looks to invest smartly in the highest payoff capabilities that enhance space domain mission assurance. The Air Force will continue development of GPS III satellites that will provide enhanced, higher-power, and jam-resistant position, navigation, and timing for joint warfighters. This GPS warfighting advantage will be reliant upon a Next Generation Operational Control System (OCX) to provide enhanced cybersecurity, precision, reliability and integrity.

Similarly, the Air Force provides robust worldwide satellite communications (SATCOM) to joint warfighters and must continue efforts to enhance current protected SATCOM systems such as the Advanced Extremely High Frequency (AEHF) satellites while addressing current and future threats by providing resiliency and advanced defensive capabilities in architectures like the addition of Protected Anti-Jam Tactical SATCOM. Our future Space Based Infrared System (SBIRS) satellites must also modernize into systems capable of responding quickly to threats while maintaining our edge in strategic missile warning and launch detection to our fielded forces and the homeland.

Investment in space-based assets is crucial to our ability to maintain space-enabled capabilities, but investment in space assets alone is insufficient. The nation must also invest in advanced Space Situational Awareness (SSA) and C2 capabilities, which will allow for rapid understanding of threats and decision-making to defend assets. As an example, the Air Force is investing in the Space Fence program to provide surveillance of small objects and satellites, allowing early detection of threats. Investment in additional ground-based sensors like the Space Surveillance Telescope and radars, as well as space-based sensors, will provide the necessary indications and warning of adversary actions on-orbit. Bottom line, we must gain the ability to acquire much more precise and robust data regarding activities on-orbit, which also drives a C2 requirement to synthesize data and make decisions.

The Air Force has made an initial investment in building the Joint Interagency Combined Space Operations Center (JICSpOC) which is designed to ensure the national security space enterprise meets and outpaces advances in space threats. To act on information provided by SSA architecture, JICSpOC will provide resilient, responsive, and interoperable C2 capabilities to provide the ability to respond once a threat is known.

Additionally, the Air Force is investing in C2 tools such as Joint Space Operations Center (JSpOC) Mission System (JMS), which will provide modernized hardware and software solutions to better synthesize the increased volume of SSA data. Improved SSA data coupled with a mission-ready JICSpOC ensures future implementation of SEV principles to their greatest degree of survivability in a war that extends into space, ultimately supporting joint warfighters across land, air and sea to maintain the operational advantage.

Historically, the Air Force has funded space programs in order to simply maintain an operational advantage, with no concern for resiliency and survivability because the threat of combat extending into space was not mature. The threat environment is now changed. Therefore, considerable increase in investment of SEV-enabling architectures, SSA and Space C2 are necessary if our joint warfighters are expected to operate with the traditional advantages our space systems provide.

CYBER The Air Force continues to build its contribution to joint cyber mission forces by developing the next generation cyber warrior, adding manpower for offensive and defensive cyber operations, and equipping them with the right capabilities to ensure effective operations. The Air Force plans to shift from a 20th century network-centric infrastructure to a 21st century data-centric infrastructure. This transition will enable power projection through information integration and reallocate critical Information Technology manpower towards emerging cyber warfighting missions.

The ability to effectively operate in cyberspace is vital to deliver airpower and conduct the Air Force's core missions. We must field and sustain cyber resilient capabilities that provide mission assurance against savvy and constantly evolving adversaries. In response to Congressional direction and our internal vision of the need, the Air Force has initiated a multi-pronged approach

to provide assurance, resilience, affordability, and empowerment to enable the Air Force's assured cyber advantage to ensure our ability to fly, flight, and win in air, space, and cyberspace.

Signed in November 2015, our Air Force Cyber Campaign Plan (CCP) has two goals: 1) to "bake in" cyber resiliency in new weapon systems and 2) mitigate critical vulnerabilities in fielded weapon systems. It consists of seven Lines Of Action (LOAs) which are designed to be the "engine" behind increasing the cyber resiliency of all Air Force new and legacy weapon systems. The CCP addresses the first goal by integrating cyber resiliency into the system engineering processes to 'bake in' resiliency before systems are fielded. It also institutionalizes adaptable subsystem architectures for enterprise technology baselines and business processes, when designing and building new weapon systems. Concurrently, the plan addresses the second goal by pursuing top down and bottom up methodologies to finding and mitigating mission 'critical' cyber vulnerabilities. Other LOAs address other important CCP support activities, including cyber workforce development, creation of a cross-cutting common security environment, and the development of counter cyber intelligence capability. We are committed to building out the Air Force's contributions to USCYBERCOM's Cyber Mission Forces (CMF) to support the Nation and the Department of Defense's Joint Information Environment (JIE) framework.

MULTI-DOMAIN COMMAND AND CONTROL (MDC2) An MDC2 capability generates effects that present the adversary with multiple dilemmas at an operational tempo that cannot be matched. The Air Force is focused on creating feasible investment options throughout its BMC2 portfolio that drive towards the attainment of an advanced MDC2 capability for the joint force. For example, multiple AWACS modernization activities are underway with the most notable being the upgrade to the Block 40/45 mission system which is the foundation for all future AWACS capability improvements. Additionally, the Air Force is in the midst of

accomplishing activities for a follow-on airborne battle management command and control capability, the Airborne Battle Management and Surveillance (ABMS), which is currently provided by the E-3/AWACS fleet. The ABMS system is envisioned to be an evolutionary leap in capability intended to achieve IOC prior to the end of AWACS projected service life in 2035.

The E-8C Joint Surveillance Target Attack Radar System (JSTARS) executes Battle Management and Surveillance of air-to-ground operations, an integral piece to today's fight. Our JSTARS recapitalization strategy integrates mature sensor, communications and battle management technologies on a business class aircraft; the results should reduce life cycle cost while increasing operational availability and mission system capability. We seek to balance mission capability, risk and cost, and will look for opportunities to accelerate the recapitalization as the program progresses.

SUMMARY

The demand for air, space, and cyber power is growing and our Chief is committed to ensuring that America's Airmen are resourced and trained to fight alongside the Army, Navy, Marines and Coast Guard to meet national security obligations. The Air Force seeks to balance risk across capacity, capability, and readiness to maintain an advantage, however persistently unstable budgets and fiscal constraints have driven us to postpone several key modernization efforts. These delays created a rapid approaching modernization bow wave that includes programs critical to meet our capacity and capability requirements across all mission areas.

The delays have also opened an opportunity to our competitors to close gaps and negate our traditional advantages. Although we are grateful for the recent fiscal relief, we still face uncertainty. Sustainable funding across multiple fiscal year defense plans is critical to ensure we

can meet today's demand for capability and capacity without sacrificing modernization for tomorrow's high-end fight against a full array of potential adversaries.

As critical members of the joint team, the USAF operates in a vast array of domains and prevails in every level of conflict. However, we must remain focused on delivering **Global Vigilance**, **Global Reach** and **Global Power**, through our core missions of Air Superiority, Space Superiority, Global Strike, Rapid Global Mobility, ISR, and C2 to continue to provide our nation with security it enjoys. We look forward to working closely with the committee to ensure the ability to deliver combat air power for America when and where we are needed.