



USAF POSTURE STATEMENT FISCAL YEAR 2020



BIOGRAPHY



UNITED STATES AIR FORCE

DR. HEATHER WILSON

Dr. Heather Wilson is the 24th Secretary of the Air Force and is responsible for the affairs of the Department of the Air Force, including the organizing, training and equipping and providing for the welfare of 660,000 active-duty, Guard, Reserve, and civilian forces as well as their families. She oversees the Air Force's annual budget of more than \$132 billion and directs strategy and policy development, risk management, weapons acquisition, technology investments and human resource management across a global enterprise.



Dr. Wilson has more than 35 years of professional experience in a range of leadership and management roles in the military, higher education, government and private industry. Before assuming her current position, Dr. Wilson was president of the South Dakota School of Mines & Technology, an engineering and science research university.

From 1998 to 2009, Dr. Wilson was a member of the U.S. House of Representatives, where she served on the House Armed Services Committee, the House Permanent Select Committee on Intelligence and the House Energy and Commerce Committee.

Before being elected to Congress, Dr. Wilson was a cabinet secretary in New Mexico's state government responsible for foster care, adoption, juvenile delinquency, children's mental health and early childhood education.

From 1989 to 1991, Dr. Wilson served on the National Security Council staff as director for defense policy and arms control for President George H.W. Bush during the fall of the Berlin Wall and the collapse of the Warsaw Pact.

From 1991 to 1995, and again from 2009 to 2013, Dr. Wilson was in the private sector. In 1991 she founded Keystone International, Inc., a company that did business development and program planning work for defense and scientific industry. She served as a senior advisor to several national laboratories on matters related to nuclear weapons, non-proliferation, arms control verification, intelligence and the defense industrial base. Dr. Wilson also served on the boards of two publicly traded corporations as well as numerous advisory and non-profit boards.

Air Force Posture

Dr. Wilson was an Air Force officer from 1982 to 1989. She graduated from the U.S. Air Force Academy in the third class to include women, and earned her master's and doctorate degrees as a Rhodes Scholar at Oxford University in England.

Dr. Wilson was a collegiate rower at Oxford and is an instrument-rated private pilot.

EDUCATION

1982 Bachelor of Science, United States Air Force Academy, Colorado Springs, Colo.

1984 Master of Philosophy, International Relations, Oxford University, England

1985 Doctorate of Philosophy, International Relations, Oxford University, England

CAREER CHRONOLOGY

1985 - 1987, Plans and Negotiations, Headquarters, 3rd Air Force, RAF Mildenhall, England

1987 - 1989, Office of Defense Plans, U.S. Mission to NATO, Brussels, Belgium

1989 - 1991, Director, Defense Policy and Arms Control, NSC Staff, Washington, D.C.

1991 - 1995, President, Keystone International, Inc., Albuquerque, N.M.

1995 - 1998, Secretary, New Mexico Children, Youth and Families Department, Santa Fe, N.M.

1998 - 2009, Member of Congress, First District, New Mexico, Washington, D.C.

2009 - 2013, President, Heather Wilson & Company, LLC, Albuquerque, N.M.

2011 - 2012, Candidate, U.S. Senate, N.M.

2013 - 2017, President, South Dakota School of Mines & Technology, Rapid City, S.D.

2017 - present, Secretary of the Air Force, Washington, D.C.

(Current as of May 2017)



BIOGRAPHY



UNITED STATES AIR FORCE

GENERAL DAVID L. GOLDFEIN

Gen. David L. Goldfein is Chief of Staff of the U.S. Air Force, Washington, D.C. As Chief, he serves as the senior uniformed Air Force officer responsible for the organization, training and equipping of 660,000 active-duty, Guard, Reserve and civilian forces serving in the United States and overseas. As a member of the Joint Chiefs of Staff, the general and other service chiefs function as military advisers to the Secretary of Defense, National Security Council and the President.

Prior to assuming his current position, General Goldfein was the Vice Chief of Staff of the U.S. Air Force, where he presided over the Air Staff and served as a member of the Joint Chiefs of Staff Requirements Oversight Council and Deputy Advisory Working Group. Before serving as the Vice Chief, General Goldfein was the Director, Joint Staff, the Pentagon, Washington, D.C.



General Goldfein received his commission from the U.S. Air Force Academy in 1983. He is a graduate of the U.S. Air Force Weapons School and is a command pilot with more than 4,200 flying hours in the T-37, T-38, F-16C/D, F-117A, MQ-9 and MC-12W. He has flown combat missions in operations Desert Shield, Desert Storm, Allied Force and Enduring Freedom.

EDUCATION

1983 Bachelor of Science degree in philosophy, U.S. Air Force Academy, Colorado Springs, Colo.

1986 Squadron Officer School, by correspondence

1987 Master's degree in business administration, Oklahoma City University, Okla.

1992 Fighter Weapons Instructor Course, Nellis AFB, Nev.

1995 Air Command and Staff College, Maxwell AFB, Ala.

1998 Air War College, by correspondence

2001 National Defense Fellowship, State Department Senior Seminar, Arlington, Va.

ASSIGNMENTS

1. October 1983 - October 1984, student, undergraduate pilot training, Sheppard AFB, Texas
 2. October 1984 - February 1988, T-38 instructor pilot, 90th Flying Training Sq, Sheppard AFB, Texas
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Air Force Posture

3. February 1988 - January 1992, F-16 instructor pilot and flight commander, 17th Tactical Fighter Squadron, Shaw AFB, S.C.
4. January 1992 - June 1992, student, USAF Fighter Weapons Instructor Course, Nellis AFB, Nev.
5. June 1992 - July 1994, squadron weapons officer and Chief, Wing Weapons and Tactics, 366th Composite Wing, Mountain Home AFB, Idaho
6. July 1994 - June 1995, student, Air Command and Staff College, Maxwell AFB, Ala.
7. June 1995 - May 1996, special assistant to the Commander, Allied Air Forces Southern Europe and 16th Air Force, Naples, Italy
8. May 1996 - August 1997, executive officer to the Commander, U.S. Air Forces in Europe, Ramstein Air Base, Germany
9. August 1997 - June 1998, operations officer, 555th Fighter Squadron, Aviano AB, Italy
10. June 1998 - July 2000, Commander, 555th Fighter Squadron, Aviano AB, Italy
11. July 2000 - June 2001, student, National Defense Fellow, State Department Senior Seminar, Arlington, Va.
12. July 2001 - July 2002, Deputy Division Chief, Combat Forces, Headquarters U.S. Air Force, Washington, D.C.
13. August 2002 - July 2004, Commander, 366th Operations Group, Mountain Home AFB, Idaho
14. July 2004 - June 2006, Commander, 52nd Fighter Wing, Spangdahlem AB, Germany
15. June 2006 - January 2008, Commander, 49th Fighter Wing, Holloman AFB, N.M.
16. January 2008 - August 2009, Deputy Director of Programs, Office of the Deputy Chief of Staff for Strategic Plans and Programs, Headquarters U.S. Air Force, Washington D.C.
17. August 2009 - August 2011, Director of Operations, Air Combat Command, Joint Base Langley-Eustis, Va.
18. August 2011 - July 2013, Commander, U.S. Air Forces Central Command, Southwest Asia
19. August 2013 - August 2015, Director, Joint Staff, the Pentagon, Washington, D.C.
20. August 2015 - July 2016, Vice Chief of Staff of the U.S. Air Force, Washington, D.C.
21. July 2016 - present, Chief of Staff of the U.S. Air Force, Washington, D.C.

SUMMARY OF JOINT ASSIGNMENTS

1. June 1995 - May 1996, special assistant to the Commander, Allied Air Forces Southern Europe and 16th Air Force, Naples, Italy, as a major
2. May 1996 - August 1997, executive officer to the Commander, Allied Air Forces Europe, Ramstein Air Base, Germany, as a major
3. August 2013 - August 2015, Director, Joint Staff, the Pentagon, Washington, D.C., as a lieutenant general

FLIGHT INFORMATION

Rating: command pilot

Flight hours: more than 4,200

Aircraft flown: T-37, T-38, F-16C/D, F-117A, MQ-9, and MC-12W

Air Force Posture

MAJOR AWARDS AND DECORATIONS

Defense Distinguished Service Medal with oak leaf cluster
Legion of Merit with two oak leaf clusters
Distinguished Flying Cross with Valor device and oak leaf cluster
Meritorious Service Medal with two oak leaf clusters
Air Medal with silver and bronze oak leaf clusters
Aerial Achievement Medal with oak leaf cluster
Joint Service Commendation Medal
Air Force Commendation Medal with oak leaf cluster
Air Force Achievement Medal

PUBLICATIONS

"Sharing Success, Owning Failure: Preparing to Command in the Twenty-First Century Air Force," Air University Press, October 2001

EFFECTIVE DATES OF PROMOTION

Second Lieutenant June 1, 1983
First Lieutenant June 1, 1985
Captain June 1, 1987
Major Nov. 1, 1994
Lieutenant Colonel Jan. 1, 1998
Colonel April 1, 2001
Brigadier General Oct. 1, 2007
Major General July 3, 2010
Lieutenant General Aug. 3, 2011
General Aug. 17, 2015

(Current as of July 2016)

**USAF POSTURE STATEMENT
FISCAL YEAR 2020**

**DEPARTMENT OF THE AIR FORCE
PRESENTATION TO THE COMMITTEES
AND SUBCOMMITTEES OF THE
UNITED STATES SENATE
AND THE HOUSE OF REPRESENTATIVES
1ST SESSION, 116TH CONGRESS**



**STATEMENT OF:
THE HONORABLE DR. HEATHER WILSON
SECRETARY OF THE AIR FORCE**

**GENERAL DAVID L. GOLDFEIN
CHIEF OF STAFF, UNITED STATES AIR FORCE**

**NOT FOR PUBLICATION UNTIL RELEASED
BY THE U.S. SENATE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON DEFENSE**

AIR FORCE POSTURE STATEMENT

FISCAL YEAR 2020 PRESIDENT’S BUDGET REQUEST

STATEMENT OF:
THE HONORABLE DR. HEATHER WILSON
SECRETARY OF THE AIR FORCE

GENERAL DAVID L. GOLDFEIN
CHIEF OF STAFF, UNITED STATES AIR FORCE

STRATEGIC ENVIRONMENT

Great power competition remains the central challenge to U.S. prosperity and security. A rapidly growing China and resurgent Russia aim to coerce their regional neighbors, undermine long-standing alliances, and displace American influence from critical regions around the globe. These great power competitors are challenging U.S. dominance in all warfighting domains: air, land, sea, space, and cyberspace. Additionally, they are confronting us with threats below the level of open conflict, through information warfare, ambiguous or denied proxy operations, and subversion.

To face these challenges, the United States Air Force must compete, deter, and win across the five priority missions of the National Defense Strategy:

- Defend the homeland,
- Provide a safe, secure, and effective nuclear deterrent,
- Defeat a powerful conventional enemy, while we
- Deter opportunistic aggression, and
- Disrupt violent extremists in a cost-effective manner.

In Fiscal Year 2020, we will continue to build a more lethal and ready Air Force, while fielding tomorrow’s Air Force faster and smarter.

AN AIR FORCE IN DEMAND

Last year, Congress appointed an independent and bipartisan National Defense Strategy Commission to study the global security environment and forces necessary to prevail in an era of great power competition. Their conclusion unequivocally stated: “regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the forefront.”

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“Regardless of where the next conflict occurs or which adversary it features, the Air Force will be at the forefront.”

–National Defense Strategy Commission

As the joint force prepares for peer conflict, the Air Force continues to be in very high demand. Our Airmen perform strategic and vital missions in all domains, across the spectrum of conflict, and from 65 feet below ground to our highest geosynchronous orbits.

More than 21,000 Airmen are deployed around the globe, employing unrivaled air, space, and cyber power from over 179 locations. Last year, our Airmen conducted more than 50,000 sorties and 3,400 precision airstrikes alongside joint and partner forces in the campaign to defeat ISIS. In Afghanistan, the Air Force executed 44,400 sorties in support of our Afghan partners, and targeted Taliban and extremist networks with more weapons than any time in at least 5 years. Our mobility forces transported over 1.25 million personnel, 1 billion pounds of warfighting equipment and supplies, and evacuated more than 5,400 patients for critical medical care. To bolster allies and partners, we increased NATO interoperability and readiness through the European Deterrence Initiative, and Air Force bombers flew over 60 sorties through our Continuous Bomber Presence in the Indo-Pacific. Airmen also delivered 152,000 short tons of relief supplies across Southwest Asia, supporting those who are displaced and suffering, and demonstrating U.S. commitment to building a stable and peaceful region.

The Air Force also performs global, strategic, and critical missions from our homeland. We maintain our nuclear force at the highest state of readiness: last year our Airmen conducted 16,425 intercontinental ballistic missile alert tours and 350 missile convoys across three missile wings and five states. In space, we operate 80 satellites that provide communications, command and control, missile warning, nuclear detonation detection, weather, and the Global Positioning System (GPS) for the world. Our Airmen also support a global intelligence, surveillance, and reconnaissance (ISR) network, and last year completed nearly 57,000 missions, collected over 437,000 hours of full motion video, and produced over 1 million intelligence products for our warfighters and policymakers. Every day, our Airmen stand ready on a moment's notice to intercept airborne threats to our homeland, and they defend Air Force and Department of Defense networks from our adversaries' persistent cyber-attacks.

We can only meet these demands with predictable budgets driven by the National Defense Strategy. In Fiscal Year 2019, the Department of Defense received its first on-time appropriation in over a decade. That agreement required substantial effort by the Congress, and we are grateful for your support and confidence.

However, continued budgetary uncertainty threatens to disrupt the progress we are making. Substantial budget cuts would erase the gains we made over the last three years and inflict substantial damage to our national defense. In 2013, in the wake of sequestration, we were forced to stand down one-third of our combat flying squadrons. We cancelled large-scale exercises and lost over one million work-hours of depot maintenance.

Despite nearly 30 continuous years of combat, no enemy in the field has done as much to harm the readiness of the Air Force than the combined impact of artificial spending restrictions, worsened by operating for 10 of the last 11 years under continuing resolutions of varied and unpredictable duration.

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Let's be clear. We cannot fully implement the National Defense Strategy to protect America's vital national interests with unpredictable and constrained budgets. We must come together to find a way forward.

THE AIR FORCE WE NEED HAS 386 OPERATIONAL SQUADRONS

The National Defense Strategy calls on us to compete, deter, and win against near-peer competitors and across a wide spectrum of priority missions.

Last year, in Congressional testimony, you asked us what we needed to implement the National Defense Strategy – not “What is the Air Force we can afford?” but “What is the Air Force We Need?” We didn't know, and we should know. You put that question in the 2018 National Defense Authorization Act, when Congress directed us to study the forces and capabilities we require to implement this strategy.

Using our current operational plans and future defense planning scenarios projected into the 2025-2030 timeframe, we conducted thousands of simulations and wargames to answer this question. Our analysis produced an unmistakable conclusion: the Air Force is too small for what our nation needs. We currently have 312 operational squadrons – the clenched fist of American air and space power. To implement the National Defense Strategy and prevail over our highest priority competitors, our Air Force needs 386 operational squadrons.

To put this in context, at the height of the Cold War, in 1987, the Air Force had 401 operational squadrons. Four years later it would combat the Iraqi military in Operation Desert Storm, and decisively defeat Saddam's forces in just 43 days. Despite a shrinking budget and force size, the Air Force continued flying combat missions in the region, and added significant new demands and missions in the wake of 9-11.

The independent and bipartisan National Defense Strategy Commission also asserts the need for greater capacity in an era of great power competition. We cannot credibly face our future with the Air Force of today, evolved over two decades for counterinsurgency and counterterrorism operations. We must grow and meet our adversaries from a position of strength.

Our study also shows more of the same isn't the best answer. The Air Force we need must evolve to incorporate advanced technology and wield cutting-edge capabilities in new and innovative ways. Together with our joint partners, we are developing Multi-Domain Operations as our new warfighting framework.

While our land, sea, air, space, and cyber forces have become more joint and coordinated, they are not sufficiently integrated for the future fight. Multi-Domain Operations will integrate U.S. and allied forces across all warfighting domains. This concept will rely on a joint and interconnected network of sensors, weapons, and platforms. Forces will rapidly share information and present our warfighting commanders unprecedented levels of knowledge. With information superiority, we will simultaneously converge warfighting effects from all domains and produce intractable dilemmas for our adversaries.

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Ultimately, Multi-Domain Operations will be executed by our operational squadrons, the combat power of the Air Force. Not all squadrons are the same size, and not all squadrons fly airplanes. The National Military Strategy directs a balanced “boxer’s stance” of military readiness, and our operational squadrons form the clenched fist of American resolve. But a fist is nothing without the power of the body – our supporting squadrons – behind it. These squadrons repair our aircraft, manage and secure our infrastructure, keep our logistics and supplies flowing, and support our Airmen and their families. Our operational and supporting squadrons will fight together, so they must grow and modernize together.

AMERICA IS BUILDING A MORE LETHAL AND READY AIR FORCE

Our National Defense Strategy directs a more lethal and ready force, prepared to defeat our adversaries in high-end combat. This past year, we focused the additional resources provided by Congress on our pacing squadrons, the 204 operational squadrons required in the opening days of a peer fight. With these resources, we are more ready for major combat operations today than we were two years ago. More than 90% of our pacing squadrons are ready to “fight tonight” with their lead force packages – the first Airmen to deploy at the beginning of a conflict. When we include their follow-on forces, these pacing squadrons are on track to reach 80% readiness before the end of Fiscal Year 2020, 6 years faster than originally projected. As our front-line squadrons meet their readiness goals, we will also ensure the remainder of our operational squadrons reach the 80% readiness mark by 2022, as we continue to build toward the 386 operational squadrons we require.

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PEOPLE AND TRAINING. Readiness recovery is first and foremost about people. Recently authorized increases in end strength helped eliminate a shortage of 4,000 Active Duty maintainers. In two years we closed this gap and are working to build expertise in these young Airmen. While Air National Guard and Air Force Reserve maintainers still face manning challenges, our FY20 budget continues this end strength growth by adding 4,400 Airmen and 5,143 civilians to the Total Force.

To address our aircrew shortage, we are implementing initiatives to increase the number of pilots we train, season them in operational units, and retain experienced aircrews.

Last year we produced 1,211 pilots, 146 more than originally expected. This budget builds on our progress and will produce 1,480 pilots in 2020. We are also exploring how to use new technologies in our “Pilot Training Next” program, where we are using virtual reality and more simulators to train pilots better and faster. As we season these young Airmen, some of our new Active Duty pilots will begin their flying careers with a Guard or Reserve squadron and benefit from the deep experience we have there. We are also pursuing quality of life and quality of service reforms to retain our aircrew. Our new Talent Marketplace gives Airmen greater transparency on their assignment process, and we are reducing the number of year-long deployments to improve stability and reduce the burden on families.

Our Airmen are shifting their focus to great power competition, and we must train and equip them for the high-end fight. This budget proposal includes funds to modernize our live and virtual ranges and infrastructure to provide relevant and realistic training capabilities against our most advanced threats. The Nevada Test and Training Range, the Joint Pacific Alaska Range Complex, the Utah Test and Training Range, the Space Test and Training Range, and several smaller range complexes will receive targeted funding to better replicate the capabilities of our peer adversaries. We are exploring ways to expand contract adversary air – aircrews who are trained to fly as “bad guys” – from a single test case to up to three locations, freeing our Airmen to practice their own skills rather than spend time simulating the skills of our adversaries. This budget includes 1.1 million peacetime flying hours, the maximum amount of sustainable training, to prepare our Airmen to fight alongside allies and partners as vital members of our joint force.

COST-EFFECTIVE MAINTENANCE AND LOGISTICS. We are focusing on innovative ways to maintain and supply our aging fleets. Last year, a team of Airmen conducted a detailed sustainment review and produced 45 recommendations to ensure our aircraft and equipment are ready to meet

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 Commander timelines.*”

Combatant Commander timelines. We are fielding innovative technologies to streamline supply chains, drive engineering improvements, and manage our fleets. We are using data to make our maintenance personnel more efficient and effective, and we are testing analytic tools and monitoring sensors to match industry best-practices, known as “conditions based maintenance.” By being able to better predict when a part will fail, we can improve readiness while saving time and money – initial tests on several E-3 and C-5 components show the potential to reduce up to 30% of unscheduled maintenance. And we’re making reforms cost-effectively. Our Oklahoma Depot is now completing major repairs on our KC-135 fleet 40% faster and at half the cost of recent industry contract proposals.

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 A ready force needs a modernized logistics system to power it. Last year, we established the Rapid Sustainment Office to improve readiness and drive down the cost of repairs by using advanced manufacturing technologies. Through partnerships with universities and industry, this office is identifying emerging technologies that can reduce the cost of maintaining our weapons systems.

We will scale these reforms across the Air Force. This budget includes \$16.4 billion in weapon system sustainment to support our home station and deployed fleets. We are striving to achieve 80% Mission Capable Rates in our F-16, F-22, and F-35 fleets by the end of this fiscal year. We will continue to focus on supply inventory, increasing our maintenance capacity, enhancing our training and proficiency, and moderating our operational tempo to help our maintainers meet this goal.

AVIATION SAFETY. We will not compromise safety as we prepare our Airmen and align resources for great power competition. Last year, the Air Force experienced an uncharacteristic increase in in-flight mishaps and fatalities for manned aircraft. The safety of our Airmen remains a top priority, so we initiated several actions to bolster our mishap prevention programs, including additional safety

training and operational pauses to discuss risk. Our mishap rates are decreasing toward historic averages, and we will continue to improve these programs over the next fiscal year. We are thankful for Congress' support and interest in this important issue. We look forward to working closely with our joint teammates and the newly created National Commission on Military Aviation Safety, established by Congress in the 2019 National Defense Authorization Act.

A SAFE, SECURE, AND EFFECTIVE NUCLEAR DETERRENT. The Air Force provides two-thirds of our nuclear triad and 75% of our nuclear command, control, and communications capability. We demand the highest standard of readiness from the Airmen who manage and safeguard our nuclear enterprise. The triad remains the ultimate guarantor of American, allied, and partner security, and underpins America's military power and diplomacy worldwide. As our adversaries continue to modernize and expand their nuclear weapons and delivery systems, the National Defense Strategy, Nuclear Posture Review, and National Defense Strategy Commission all reaffirm America's need for a modernized triad of air, sea, and land-based nuclear weapons, tied together by a resilient command and control architecture. These forces deter nuclear and non-nuclear strategic attack, assure our allies and partners, achieve our objectives if deterrence fails, and hedge against an uncertain future. Today, we perform these missions with the smallest and oldest nuclear enterprise in our history. It is imperative that we sustain our existing triad and replace these aging systems. Our budget proposal fully funds our major nuclear modernization programs.

Our Ground Based Strategic Deterrent will replace the aging Minuteman III intercontinental ballistic missile, first deployed in 1970. These ground-based missiles are the most responsive leg of the triad, given their long range and constant state of readiness.

Our Long Range Standoff Weapon will replace the Air Launched Cruise Missile and improve bomber lethality and survivability through 2060. Our modernized B-52, B-2, and upcoming B-21 bombers are the most visible and flexible leg of the triad. They can be deployed to signal resolve, and their sustained flight times and ability to be recalled increase stability and Presidential decision-making time.

Finally, we are modernizing our nuclear command and control system to ensure the President has uninterrupted access to his leadership team and command of nuclear forces, under all conditions, without fail.

Since the end of the Second World War over 70 years ago, every President and every Congress has supported the nuclear triad as a vital element of our national defense. We must continue to do so.

MODERNIZATION. America's potential adversaries are rapidly fielding capabilities that approach our own. We must retain our technological edge and equip our Airmen with highly advanced and lethal tools to prevail in high-end combat.

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As we design our future Air Force, we are examining different operating concepts to frustrate our opponents and defeat them in combat. We will need systems that can penetrate contested environments or remain outside these zones and employ long-range weapons and effects. We are investing \$1.5 billion to test and prototype game-changing technologies to cement our warfighting advantage, including hypersonic weapons, directed energy, and adaptive jet propulsion. Our next-generation penetrating bomber, the B-21 Raider, is proceeding on schedule and building on three years of successful development. It will be able to deliver both gravity bombs and the Long Range Standoff Weapon to hold adversary targets at risk around the world. High-end conflicts will require the long-range capability of an advanced bomber fleet, and the B-21 is central to the expanded bomber capacity and capability we need.

Our aerial refueling capability underwrites the global nature of Air Force power and enables the rapid deployment of aircraft. We recently welcomed our first KC-46 tankers and are proposing to buy 12 more KC-46 tankers in Fiscal Year 2020.

The future fight will require a robust network architecture and battle management system. This budget funds our continued transition to the Advanced Battle Management System, a family of systems that will fuse data from multiple platforms across all warfighting domains. Nearly every system on the battlefield will contribute data to this network, and through advanced analytics, commanders will understand the battlespace and be able to direct forces faster than our adversaries. To develop the capability for successful Multi-Domain Operations, we are upgrading legacy command and control nodes and have established an architecture to ensure the many programs that must connect and share information will work together. We are also upgrading and modernizing our electronic warfare systems, organizations, and analysis capability to dominate the electronic spectrum.



We remain committed to the F-35 and its game-changing capabilities, and will continue purchasing 48 aircraft each year.



We remain committed to the dual-capable F-35 and its game-changing capabilities, including its ability to deliver nuclear weapons, and will continue purchasing 48 aircraft each year. No other weapons system is designed to fuse information and make split-second decisions inside defended enemy airspace. As the quarterback in the air fight, this aircraft combines the capabilities of our joint, allied, and partner teammates to deter or defeat our adversaries.



While budget increases are making a significant difference and restoring the readiness of the force, our analysis indicates that we must purchase additional aircraft in the future to fully implement the National Defense Strategy. Our current fighter force of 55 squadrons is too small.

At the same time, our F-15C fleet is aging, with two-thirds of the fleet past its certified service life. This fleet is expensive to maintain, and F-15C capability against advanced threats is diminishing over time. Our budget proposes to replace the F-15C with a modernized successor by purchasing the F-15EX. We propose to buy 80 aircraft over the next 5 years. This decision allows us to benefit from foreign partner investments in the F-15 line to begin cost-effectively replacing our F-15C fleet.

CYBER DOMINANCE. Every day, Airmen encounter sophisticated and persistent adversaries in cyberspace, some of whom are now peer competitors in this domain. To meet this challenge, we are producing innovative cyber capabilities to repel these threats, defend our networks, and support Combatant Commanders around the globe. These capabilities also strengthen domestic cybersecurity efforts, and helped counter adversary attempts to interfere in last year’s election.

Our FY 20 budget submission advances how we train and equip cyber forces for Multi-Domain Operations. We are investing in new capabilities to identify network threats and vulnerabilities, and are designing countermeasures to mitigate risks to our weapon systems. Last May, our Cyber Mission Forces achieved operational capability four months faster than predicted. We will continue leading joint efforts to supply these Airmen with a new, integrated cyberspace operations suite, the Unified Platform. To fully harness this capability, the Joint Cyber Command and Control system will provide Combatant Commanders cyber situational awareness and battle management of these forces. We face an increasingly contested cyber domain, and these investments will provide the tools we need to prevail in both competition and conflict.

ACCELERATING DEFENDABLE SPACE. Our adversaries have recognized the advantages we gain from operating in space, and are developing capabilities to deny us the use of space in crisis or war. They are developing weapons that can blind or jam satellites with directed energy and electronic warfare, target ground sites and infrastructure through cyber-attacks, or physically destroy or damage our satellites with missiles or dual-use, on-orbit spacecraft. While we all would prefer that space remain free of conflict, we will deter and defeat these threats in order to secure the satellite constellations that power our military forces and civil societies.

In January of 2018, we transitioned the National Space Defense Center from an experimentation and planning office with weekday business hours to an around the clock operations center to protect and defend our assets and interests in the space domain. In July, we transitioned the Joint Space Operations Center to a Combined Space Operations Center, integrating the efforts of allies, partners, and commercial industry.

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Our FY20 budget builds on our advances and further accelerates efforts to protect and defend our ability to operate in space. We propose a \$14 billion investment in our space portfolio in FY20, a 17% increase over our FY19 budget.

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In the 2019 budget, we proposed a significant change to our space plans. With the support of Congress, we added nearly \$1 billion to the FY19 Air Force space program. Our FY20 budget builds on our advances and further accelerates efforts to protect and defend our ability to operate in space. We propose a \$14 billion investment in our space portfolio in FY20, a 17% increase over our FY19 budget. It frames our warfighting approach and changes how we prototype and field innovative space technologies to stay ahead of our competitors. This budget includes \$55 million for the demonstration of technology for a proliferated satellite constellation. In partnership with the Defense Advanced Research Projects Agency, we will assess the future of small, low-cost platforms.

The Department of Defense recently submitted legislation to establish the Space Force as a new armed service within the Department of the Air Force. This legislation would consolidate missions from across the Department into a single Space Force. It would establish a civilian Under Secretary of the Air Force for Space and a Chief of Staff of the Space Force who would be a member of the Joint Chiefs of Staff. This proposal capitalizes on the Air Force being the best in the world at space, and given the new era of strategic competition, is the right move to posture us for the future.

Finally, we are devoting greater time and resources to train and develop our space operators as true warfighters. They will be the cornerstone of U.S. Space Command, our newest Combatant Command.

WE ARE FIELDING TOMORROW’S AIR FORCE FASTER AND SMARTER

An era of great power competition demands we rethink the way we buy things. China is innovating faster than we are, and fielding game-changing forces. We cannot win this contest with an acquisition system from the Cold War. We must move fast to stay competitive, and we are fundamentally transforming what we buy, how we buy it, and from whom we buy it.

The 2016 and 2017 National Defense Authorization Acts restored responsibility for acquisition to the Services, and granted us new authorities to accelerate prototyping and fielding. With these authorities, we are changing the way we buy things to get capability from the lab bench to the warfighter faster.

Our experience shows that delegating authority works. Last summer we set a goal to strip 100 years of unnecessary schedule from our program plans. So far, we have saved over 78 years and are closing in on our milestone.

Three contributing factors are making us faster. The first is prototyping. For example, in hypersonics, we are leveraging available technology from across the Department of Defense to build, fly, and buy our nation’s first operational boost-glide weapon five years earlier than anticipated. For our Next-Generation Overhead Persistent Infrared Missile Warning satellites, we are competitively prototyping a new sensor, retiring this key risk nearly a year earlier, while also strengthening the industrial base for future programs.

The second contributing factor to increase speed is the use of tailored acquisition strategies. We have empowered our workforce to structure decisions around the specific needs of their programs, as opposed to the generic milestones of the traditional acquisition process. Recently, our F-15 Eagle Passive/Active Warning Survivability Systems split its Milestone C decision into two tailored reviews, accelerating fielding by 18 months at no additional cost.

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We cannot win this contest with an acquisition system from the Cold War. We must move fast to stay competitive, and we are fundamentally transforming what we buy, how we buy it, and from whom we buy it.

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The third major effort to increase speed to the warfighter is agile software development. The decades-old “waterfall” process for developing software is too slow, very expensive, and often doesn’t work at all. We are making a wholesale shift to agile development, putting acquirers and operators together to make rapid incremental software improvements. We proved the concept with a new tool to plan air refueling at the Combined Air Operations Center at Al Udeid Air Base, where we command the air war against ISIS, Al Qaeda, and the Taliban. Our agile software tool saved the Air Force millions of dollars in fuel each month, reduced the requirement by two tankers and ten aircrews, and delivered a modern software planning tool to operators in months, not years.

We established the Kessel Run Experimentation Laboratory to continue applying agile development for the warfighter and stood up a Program Executive Office Digital to develop and proliferate best practices across the Air Force. So far, major programs like F-22, the Unified Platform for cyber

warfare, and the Protected Tactical Enterprise System are reaping the benefits of shifting to agile development, accelerating delivery of tools to the warfighter.

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Using authorities given to us by Congress is not just faster, it’s giving us better results. We are able to find design flaws earlier in the development period, fix them faster, and ultimately save money with better products.
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Using authorities given to us by Congress is not just faster, it’s giving us better results. We are able to find design flaws earlier in the development period, fix them faster, and ultimately save money with better products. Our B-52 Commercial Engine Replacement Program will use digital models of new engines to compare their performance, with greater levels of confidence in the results. Not only will we save more than three years from normal development timelines, we expect to achieve up to 30% greater fuel efficiency by prototyping these models.

Our recent Light Attack Experiment was conducted under these authorities and taught us important lessons we would not have learned through a traditional acquisition process. This experiment sought to test whether an existing commercial aircraft could perform as a combat capable and cost-effective platform to support the global campaign to counter violent extremism. Key to the experiment was the development of an intelligence gathering and information sharing network that will improve interoperability with allies and partners. Based on available aircraft that met experimental criteria, we focused last year on only one aircraft type and intend to expand the experiment in this budget to include additional aircraft types (rotary, unmanned, turbojet) and improved technologies. Additionally, we intend to continue our close partnership with industry and allies to further this technology as we determine the best strategy going forward. We remain committed to developing a cost-effective and increasingly networked counter-violent extremist capability to deepen these partnerships and directly support the National Defense Strategy.

We are also committed to competition. The Air Force saved over \$15 billion dollars through robust competition with the National Security Space Launch, Global Positioning Satellite IIRF, the UH-1N helicopter replacement, and the T-X jet trainer.

AN AIR FORCE TO COMPETE, DETER, AND WIN

The United States faces an increasingly complex global security environment, characterized by overt challenges to the free and open international order and the re-emergence of long-term, strategic competition between nations. To meet these challenges, the Air Force is evolving to project unmatched power through the air, space, and cyber domains. We are prioritizing our readiness to fight tonight and are on track to meet our readiness goals. The new authorities Congress has given us are allowing us to field tomorrow's Air Force faster and smarter. We must rebuild the capacity we lost and field a force that will compete, deter, and win for the American people.





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