

**DEPARTMENT OF THE AIR FORCE  
PRESENTATION TO THE SUBCOMMITTEE  
ON  
READINESS AND MANAGEMENT SUPPORT  
UNITED STATES SENATE**

**SUBJECT: CURRENT READINESS OF THE U.S. AIR FORCE**

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## **Introduction**

Chairman Sullivan, Ranking Member Kaine, distinguished members of this committee; I appreciate the opportunity to testify on Air Force readiness. I am joined by our Vice Chief of Staff, General Wilson.

This is my second year as Secretary of the Air Force. On behalf of the 670,000 Total Force Airmen, I want to thank you and your colleagues in authorizations and appropriations. For the first time in a decade, we are starting a new fiscal year with a signed defense budget. It's hard to understate the important difference this makes for our Airmen. Your leadership and bipartisan collaboration has returned us to fiscal order. It enables our Airmen to continue building a more lethal and ready force, as directed by the 2018 National Defense Strategy.

We are committed to using these funds responsibly to restore the readiness and lethality of the Air Force.

## **Threat environment**

One month ago, Russia began the largest exercise on Russian soil in four decades with more than 300,000 troops and 1,000 aircraft. On the other side of the world, China's first aircraft carrier was declared combat ready this year, and it promptly sailed into the Pacific to conduct flight operations.

China has militarized disputed features in the South China Sea, and now all of Southeast Asia is within reach of its long-range bombers. President Xi's plan is for China to be a top-ranked military by 2050, and President Xi is no longer bound by term limits on his Presidency.

The National Defense Strategy recognizes that we are in a more competitive and dangerous international security environment than we have seen in generations. It tells us how to prioritize for this environment and where to take risk. It tells us that we need to be able to defend the homeland, provide a credible nuclear deterrent, win against a major power while countering a rogue nation, all while managing violent extremists with a lower level of effort.

Each of these missions requires a combination of U.S. Services, and the Air Force is integral to every one of them. To implement the new National Defense Strategy, the Air Force must build a more ready and lethal force, while building and strengthening alliances and partnerships.

## **Readiness Declined Over Decades**

At the height of the Cold War, in 1987, we had about 1.1 million [1,134,507] Total Force Airmen and 401 operational squadrons. Four years later the Air Force deployed for Operation Desert Storm with squadrons that had spent 20 years training for a high-end fight. The initial battle would last just 43 days, and the Air Force was tasked to continue flying combat sorties.

One year after Operation Desert Storm, budget cuts forced the Air Force into its largest reorganization in its history. Squadrons were deactivated, bases were closed, and major

commands were consolidated. Hundreds of aircraft were retired. By 1996, Total Force end strength was reduced to about 846,000 [845,681], but Air Force combat missions continued.

While the size of the Air Force decreased, the service also adapted to new missions. On 9/11 the Air Force had eight remotely piloted aircraft — eight total. After 9/11, the demand for remotely piloted aircraft and persistent intelligence, surveillance and reconnaissance grew dramatically. This year, 12,500 Airmen helped fly 279 remotely piloted aircraft on round-the-clock missions to meet warfighter needs.

A shrinking, combat-active Air Force taking on new missions with an aging manned aircraft fleet was stretched thin when the sequestration of 2013 hit. The impact was devastating. One-third of Air Force combat flying squadrons stood down for 3 months, large-scale exercises were cancelled, and the service lost over one million work-hours of depot maintenance.

Then, in 2014, when reeling from the impact of sequester, ISIS, the Islamic State of Iraq and Syria, declared its caliphate, and the Air Force surged to the fight. By 2017, the Air Force was the smallest it had ever been, conducting combat operations with the oldest equipment it had ever used, and successfully employed nearly 30,000 weapons in Syria and Iraq.

### **Readiness Recovery**

It is clear to all of us that restoration of the readiness of the force has to be a top priority. The 2018 National Defense Strategy makes building a more ready and lethal force job one.

Last spring we gathered together fifty Airmen from around the service. They spent over six weeks together analyzing Air Force readiness. They looked at how we measure and report readiness. They identified the barriers to our readiness recovery. Armed with this information, they developed and presented a recovery plan to Air Force leaders.

A plan is nothing without the resources, end strength and budget certainty to implement it. Actions by the Congress over the past two years have been tremendously helpful.

To begin with, we decided to focus the additional resources you have provided on our 204 operational squadrons that are most relevant to a high-end fight so that we can recover readiness in these units fastest. Our plan accelerates readiness recovery in these units by aligning resources and manpower. Our goal is for 80% of these units to have the right number of properly trained and equipped Airmen by the end of 2020 — 6 years faster than we projected before we developed our recovery plan.

While we will drive the readiness recovery of these operational squadrons first, the remainder of our 312 operational squadrons will be close behind so that by 2023 we will meet the 80% mark for all of our operational squadrons.

### **People**

Readiness recovery is first and foremost about people.

As an important example, the end strength increases you have authorized and funded in FY18 allowed us to address the serious shortage of maintainers. We were 4,000 maintainers short in

September of 2016. By December of this year, we will have closed that gap to zero. Now, we must season these new Airmen to get them the experience needed to become craftsmen at their work.

### **Aircrew**

There is a national shortage of pilots and aircrew. A good economy and strong hiring by airlines makes aircrew retention a priority and directly affects our readiness.

We are addressing the aircrew shortage first by addressing the quality of service and quality of life issues that may cause aircrew to choose to leave the Air Force. We are trying to reduce the operating tempo, to revitalize squadrons, and to restore support positions so that aircrew can focus on their primary job. Funding flying hours is part of this effort. While incentive pay and bonuses are part of the solution, greater input on assignments and testing a “fly only” technical track for aviators who just want to fly are part of the retention effort.

But retention efforts alone will not solve the aircrew shortage. We have a national pilot shortage. We are increasing the number of students we are training to fly from 1,160 a year in FY17 to 1,311 in FY19, building to 1,500 by FY22 and steady state, thereafter.

### **Training**

The second piece of readiness, after people, is relevant and realistic training to maintain a qualitative advantage over increasingly capable adversaries. The Air Force is meeting some of this need by investing in operational training infrastructure — our ranges and airspace — and simulation. We are improving secure infrastructure, simulators, threat emulators, and training ranges to enhance realism and enable our Airmen to train locally for a high-end, multi-domain fight.

Our Airmen need ranges with enough airspace to train realistically. The Joint Pacific Alaska Range Complex is one of the Air Force’s premier training ranges. The U.S. Army owns the land, and the U.S. Air Force manages the operations. The range has 66,000 square miles of land and air maneuver space and 58,000 square miles of overwater airspace. That is slightly larger than the size of New Mexico.

At the Joint Pacific Alaska Range Complex, our Airmen can train against more than 40 surface-to-air threats, including foreign systems, which is valuable for realistic training exercises like Red Flag-Alaska and NORTHERN EDGE. Currently, the Joint Pacific Alaska Range Complex can only emulate a fraction of the existing and emerging threats to a level suitable for advanced sensors and cannot provide a fully contested or degraded environment with the assets available.

The Air Force is planning to base 5<sup>th</sup> Generation fighters in Alaska, and our pilots will need access to an adequate training environment. Our intention is to have two ranges that would represent what our crews would face against a peer adversary: the Joint Pacific Alaska Range Complex and the Nevada Test and Training Range. These ranges will provide the complex, dense combat environment crews will likely encounter during operations.

The Air Force plans include requirements for threats, targets, adversary air, multi-domain integration, airspace, and manpower. We have identified other range improvements nationwide to improve the quality of Air Force training and readiness.

### **Cost-effective Maintenance and Logistics**

The third element of restoring the readiness of the force is weapons system sustainment – the parts, supply, and equipment – to make sure our aircraft are ready to go when needed.

Maintaining an old fleet with a high operating tempo and inexperienced maintainers in a global enterprise is probably the hardest part of restoring the readiness of the force. It will take the most intense focus and will require that we look at new methods to achieve the results we need.

A team of Airmen conducted a detailed sustainment review earlier this year. They identified 45 recommendations to reach 80% readiness levels, beginning with our 204 pacing units by 2020, followed by our remaining operational units in 2022, and then carrying over to all remaining units by 2024. Focus areas to achieve those results include supply chain improvements, changes to the way we manage engineering improvements, force structure and fleet management changes, service life extensions, and technology such as sensors that improve data collection to make our maintenance personnel more productive.

The sustainment review further highlighted the increased lethality derived from conditions based maintenance. Increasingly used in commercial industry, conditions based maintenance uses analytical tools and monitoring sensors to predict parts failures. Those tests are showing a reduction of approximately 30% of unscheduled maintenance. We have tested these tools with our C-5 and E-3 aircraft. We intend to move to conditions based maintenance for all aircraft as rapidly as possible.

We have also found efficiencies in our depots. Today, we accomplish KC-135 major repair and overhaul at our Oklahoma Depot in 155 days at a cost of \$9.9M per aircraft. That is 40% faster and more than 50% less expensive than contract proposals we received to do the same work in 2018 from industry. More impressively, we have increased depot production by 20%, now completing 75 aircraft per year.

These measures do not replace the benefits of a modern and rested fleet. In 2014, the Oklahoma Depot saw an average of three major repairs per aircraft (usually corrosion or fatigue based) and a total of 162 major structural repairs for all aircraft. Today, despite the aforementioned advances in affordability and efficiency, there are 6.6 major repairs per aircraft, and we are on pace for nearly 500 major structural repairs.

### **Rapid Sustainment**

We need to significantly improve the logistics and sustainment enterprise.

In July we established the Rapid Sustainment Office and committed to fund it for 2 years. Its two primary objectives are to reduce cost and improve readiness by using advanced manufacturing technologies.

The Rapid Sustainment Office is establishing criteria to track and measure its impact. It will operate in a “hub and spoke” model by building partnerships with universities and industry.

If the Rapid Sustainment Office is successful, it will pay for itself by reducing the cost of maintaining our weapons systems, and we will continue to support it.

### **Fielding Tomorrow’s Air Force Faster and Smarter**

The acquisition system we inherited from the Cold War era is too slow for the digital age. We are changing the way we buy things to field tomorrow’s Air Force faster and smarter.

In the 2016 and 2017 National Defense Authorization Acts, Congress restored primary responsibility for acquisition to the Services, granting us new authorities to accelerate prototyping and fielding.

We set an aggressive goal of stripping 100 years of unnecessary schedule from our program plans. In six months, we have saved 56 years.

Three contributing factors are making us faster. The first is prototyping. For example, in hypersonics, we are leveraging Navy technology to build, fly, and buy our nation’s first operational boost-glide weapon five years earlier than anticipated. In Next-Generation Missile Warning, we are competitively prototyping the 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, vice 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.

The third major effort to increase speed to the warfighter is agile software development. The decades-old “waterfall” process for developing software one step at a time is too slow, 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 air refueling at the Combined Air Operations Center, saving the Air Force \$13 million in fuel per month, and reducing the requirement by two tankers and ten aircrews.

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

Using new authorities given to us by Congress is not just faster, it’s giving us better results.

We are committed to competition. Within the last month, we made major announcements on three major programs: the Global Positioning Satellite IIIIF, the UH-1N helicopter replacement,

and the T-X jet trainer. Each of these programs gets the most out of competition through stable requirements, a mature technology base, and transparency with industry. In just these three programs alone, the Air Force saved the taxpayer over \$13 billion from the independent cost estimates we used to plan the programs.

Digital engineering may revolutionize how we buy systems, and our B-52 Commercial Engine Replace Program is leading a pathfinder on digital twins. By conducting a “digital twin fly-off” early in the program, we ensure we get maximum fuel efficiency, which saves taxpayer dollars and extends the B-52’s range for the warfighter. It accelerates fielding by three and half years.

We are also seeking to become a leader in federal government procurement with small businesses and start-ups by pairing a government credit card swipe with a one-page Other Transactions Agreement. Pairing these two mechanisms gives the Air Force a small-dollar contracting mechanism that can “pay in a day”. To prove it out, we are conducting a small business and start up day at the end of this month to find innovative solutions to some of our vexing problems. We will attempt to award 50 contracts in 50 hours at the end of this month.

If successful, we will hold our first Air Force Start-up Days early next year using these “pay-in-a-day” contracts. With so much innovation happening in small businesses and start-ups, we need creative ways to connect with them that can be mutually beneficial.

The authorities you have given the Air Force are making a difference. These authorities do not sidestep key decisions, reporting, or oversight. They streamline to those that matter. We will not sacrifice quality or accountability for speed. Early prototyping and development informs the Department of Defense and Congress about a program’s performance feasibility prior to making costly decisions to procure, field, and sustain it.

We are mindful of the trust placed in us, and we are committed to transparency on these programs. We will submit tri-yearly reports to Congress, similar to the Selected Acquisition Reports, and be good stewards of your trust and of taxpayer dollars.

### **Impact**

With the help of Congressional funding and acquisition authorities, the Air Force is more ready for major combat operations today than we were 2 years ago. More than 75% of our pacing force is combat ready today with their lead force packages.

That said, we have a long way to go to restore the readiness of the force to win any fight, any time. We remain focused on that objective.