Aircraft Owners and Pilots Association

Statement for the Record

United States Senate Subcommittee on Aviation and Space

Hearing on: "Improving Air Traffic Control for the American People"

Submitted by:

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Chairman Cruz, Ranking Member Sinema, Members of the Subcommittee, thank you for the opportunity to provide the Aircraft Owners and Pilots Association's (AOPA) perspectives on the United States National Air Traffic Control system. AOPA represents more than 300,000 of America's pilots and aviation enthusiasts, including more than 26,000 in Texas and 10,000 in Arizona.

AOPA is currently celebrating its 80th Anniversary and I am proud and humbled to be only the 5th President serving the Association since its inception in 1939. We have stayed true to our mission over these several decades by protecting and defending our freedom to fly, ensuring that safety remains our north star, and helping guide this uniquely American experience so we can pass it along, better than we received it, to the next generation of aviators.

From the simple ATC system that emerged in the 1930s to today's NextGen Modernization Program which facilitates over 44,000 aircraft operations every day throughout the NAS, the United States has always been the global leader in maintaining the safest, most efficient air traffic system in the world.

This is not to say that we can rest on our successes or declare "mission accomplished". Maintaining this safe and efficient system requires constant vigilance, continued evolution, and meaningful collaboration between government and industry.

We are all stewards of America's airspace and we must remain committed to ensuring that we have the safest, most efficient ATC system possible today and into the future.

As Senators are aware, last year's proposal from then House Transportation and Infrastructure Committee Chairman Bill Shuster called for the privatization of our nation's air traffic control system. This proposal, like many in the past, did not achieve consensus and ultimately took away the ability to fully focus on the evolution of our air traffic system.

While some believe there are government functions that could benefit from privatization, we strongly believe there are two important exceptions; National Security and National Air Traffic Control – both of which are the envy of the world.

We believe finding consensus to create efficiencies in the deployment of new technologies, under the current FAA construct, are achievable and we are open to collaborating on this important issue.

According to the Department of Transportation Bureau of Transportation Statistics the U.S. commercial air carrier system operates over 7,000 aircraft into 509 of the more than 5,000 public-use airports in the nation. General Aviation operates a fleet of over 200,000 aircraft into the more than 5,000 public-use airports, providing vital transportation to communities that do not have commercial service.

General aviation generates over $219 billion in total economic output, supports 1.1 million jobs, and includes a network of thousands of airports that connect communities across the nation.

According to FAA data, there are over 633,317 active private pilots, flying 25 million fight hours in over 200,000 aircraft every year in the United States. Our members report excellent service from ATC and find the system to be very efficient in supporting their flying activities.

CURRENT STATUS OF THE SYSTEM

The United States operates the safest ATC system in the world. In 2018, the FAA announced that during the past 20 years, commercial aviation fatalities in the United States have decreased by 95 percent as measured by fatalities per 100 million passengers.

General Aviation has also seen significant progress on improving safety. According to the NTSB, the number of GA fatalities had declined by over 40 percent since the early 1990s. In 2015, the most recent data available, the overall GA fatal accident rate fell by an additional 4 percent, while the number of flight hours increased by almost 4 percent.

The FAA works collaboratively with industry on a comprehensive, risk-based safety oversight process. Safety is embedded in our culture and our highly respected Aviation Safety Institute works every day to educate and improve safety where we can.

The FAA also operates the most efficient air traffic system in the world. According to the FAA's Fact Book, produced by the Office of Performance Analysis, Air Traffic Organization (ATO), in 2018 flight delays at the core 30 (largest) airports fell by 9 percent from the previous year, cancellations declined by almost 4 percent and runway incursions/surface incidents fell by 23 percent.

Data also demonstrates that weather and airline-controlled delays are contributing factors in causing delays. According to the DOT's Bureau of Transportation Statistics, 30 percent of all delays and cancellations are due to airline maintenance or crew issues, aircraft cleaning, baggage loading, fueling, etc.) Additionally, airline scheduling also contributes to a category of delays called national aviation system delays. In 2018, national aviation system delays accounted for 24 percent of delays and included causes related to heavy traffic volume, ATC, and non-extreme weather. These high-volume periods create 'peak' demand for limited time on any given day and the end result is an influx of flights that can often lead to congestion and delays, especially during weather events.

The FAA's NextGen program cannot be fully leveraged if airports do not have the capacity to accommodate aircraft during these peak times – very similar to rush hour on our highway system.

Airport infrastructure must also be a part of the equation in order to support the efficiency gains that NextGen produces. To do so, we need to take a more holistic approach by expanding the NextGen program to include significant investment in airport infrastructure.

With NextGen, the FAA can generate optimum operational efficiency and increase the number of arrivals and departures significantly. With limited gate, ramp space, and runways this means that the tarmac will likely become the new bottleneck in the system.

As the Subcommittee is aware, NextGen is not a single technology or system, it is a portfolio of interconnected systems that change and improve how NAS users see, navigate, and communicate.

It is a comprehensive system that integrates technology platforms to move us from a radar and ground-based air traffic system to a satellite navigation and advanced digital communications system. The benefits of NextGen include more efficient and direct routes to get aircraft to their destinations, fuel burn efficiencies, and fewer aircraft emissions.

I would like to outline, as confirmed by the FAA, the deployment status of key NextGen Platforms. I also would like to mention the important work that government-industry collaboration under the umbrella of the NextGen Advisory Committee (NAC) has produced over the last several years in setting NextGen priorities and moving this complex transition forward.

Key NextGen Platforms

Automatic Dependent Surveillance -Broadcast (ADS-B) was fully deployed in 2014. The NextGen successor to radar surveillance, the ADS-B network of 634 ground stations has been providing nationwide coverage since 2014. ADS-B is also implemented in all air traffic facilities and used for separation in all large radar facilities.

As of September 1st of this year, 75,889 GA aircraft have equipped with ADS-B Out according to the FAA.

The fleet equipage rate by GA aircraft type include:

- Turbojet & Turboprop - 15,400 equipped (total of 37,700 need to equip)
- Rotorcraft – 3,000 equipped (total of 6,044 need to equip)
- Piston – 53,586 equipped (total of 74,100 need to equip)

At year end, estimates suggest that a total of 71,896 GA aircraft will be equipped with ADS-B out. This means that an additional 31,000 GA aircraft will not be equipped by 2020 to fully take advantage of NextGen. These figures do not include U.S. government aircraft and international aircraft that operate in rule airspace.

In April of this year, FAA published a “Statement of Policy for Authorizations to Operators of Aircraft that are Not Equipped with ADS-B Out Equipment”. This policy becomes effective on January 1, 2020. The policy requires that an unequipped aircraft request an authorization at least one hour prior to the flight via a website. Both issuance and denial of airspace authorization requests will be tracked, and the FAA will enforce the equipment mandate. Denials of non-equipped aircraft will become stricter over time with authorization of equipped aircraft always taking priority over non-equipped.

Performance Based Navigation (PBN) implementation - The FAA has published over 7,100 GPS procedures, which allow aircraft to land and takeoff in poor weather. Over 80 percent of the GA fleet is equipped to fly these procedures. The FAA has a roadmap to fully deploy PBN by 2030.

Terminal Flight Data Management (TFDM) deployment is on track for implementation at 34 facilities by 2023. TFDM will improve the exchange of electronic flight data and replace manual paper strips with automated electronic strips to increase controller efficiencies and reduce human error. Integrating TFDM data with other FAA systems such as Time-Based Flight Management (TBFM) and Traffic Flow Management System (TFMS), allows aircraft, controllers, and airports to more efficiently manage the flow of aircraft to and from the gate. The FAA is currently using automated electronic strips at Phoenix Sky Harbor Airport and a contract has been awarded to implement electronic strips at 89 airports across the United States.

System Wide Information Management (SWIM) was fully deployed in 2015. SWIM is the backbone of NextGen digital data delivery. It's a data sharing program that allows aircraft, air traffic managers, air traffic controllers, Federal Air Marshals, military, airports, and other stakeholders to share information in real-time. SWIM provides real-time, relevant aeronautical, flight, and weather information so users can respond faster and more accurately to changing conditions.

Datacomm is partially deployed and will be fully deployed by 2023. Datacomm allows for digital text-based information as opposed to current voice communication between controllers and airline aircraft. According to the FAA, tower services are operational and yielding benefits at airports across the country. Initial en-route services are scheduled to be in place across the country by 2020 and full en-route services are scheduled to be completed in 2023.

NextGen Weather deployment is underway and on track to be fully deployed by 2020. NextGen weather is an integrated platform for providing a common weather picture. This common picture helps address delays by providing a more accurate weather picture which allows for pre-departure planning and schedule changes to account for adverse weather. NextGen weather products and support tools are available to controllers, managers, and airspace users.

Since its formation in 2010, the NextGen Advisory Committee (NAC) has been instrumental in prioritizing ATC NextGen modernization initiatives. Led by industry and government stakeholders, the NAC collaboratively sets priorities for moving NextGen forward and implementing capabilities. It works very well.

In fact, the FAA tasked the NAC with the Northeast Corridor (NEC) initiative in 2017. The plan focuses on leveraging existing NextGen capabilities to better deconflict arrivals into the New York area, improve arrival and departure throughput, ease congestion points, and address community noise.

A 2017 DOT Inspector General report found that with the NAC, the FAA has been making progress on NextGen implementation, focusing on the progress made on the four NAC priorities: multiple runway operations, performance-based navigation, surface operations, and Datacomm.

FAA ADS-B Out Rebate Program

Congress provided DOT with the authority to establish an incentive program for equipping GA aircraft under Section 221 of the FAA Modernization and Reform Act of 2012 (Public Law 112-95).

The initial $10 million-dollar FAA GA Rebate Program helped 20,000 pilots equip their aircraft. The rebates were in the amount of $500 per aircraft. The program was so successful that rebates were being reserved at a rate of 60 to 100 aircraft a day until the FAA ran out of available rebates in May of 2019, a full four months before the program was set to expire.

Equipping with ADS-B Out is a significant expense for many general aviation aircraft owners. The cost of the FAA's ADS-B Out mandate ranges from $2,000 to more than $10,000 per aircraft.

The average GA aircraft is 40 years old with hull values of less than $40,000 and the ADS-B Out mandate represents a significant cost for many owners.

AOPA continues to encourage pilots that have not done so to equip. To incentivize equipage, we request the support of this Subcommittee to encourage the FAA to undertake another round of ADS-B rebate funding, much less than the original amount, to spur further the GA equipage rate to meet the FAA mandate.

Other Actions to Modernize

Most of the six major components of NextGen are either fully deployed or near being fully deployed. The primary NextGen issues that remain are the need for GA to equip their fleets with ADS-B technology, controller training on new systems and procedures, and continued flight path routing procedure development (commonly referred to as Performance Based Navigation).

The FAA also needs to draw down the legacy navigation systems to a minimum network. The cost of maintaining the full legacy VOR and ILS systems long term is not sustainable. According to the FAA, the annual maintenance cost on a single ILS can exceed $100,000 and replacement cost is $1.4 million (there are 1,600 ILS installations nationwide). A single VOR costs $110,000 annually to maintain (there are 957 VORs nationwide).

By comparison, a satellite based PBN procedure costs $10,000 to implement and $2,500 in annual maintenance cost. However, the legacy system cannot just be turned off in 2020, to do so would impact safety and create gaps in service. Working with industry, the FAA could make progress in streamlining the current system and developing a longer-term plan for a minimum network.

The FAA should also implement remote air traffic control towers as a cost-effective solution for medium sized GA airports that require ATC services. A remote ATC tower is 1/3 the cost of a brick and mortar tower and FAA, working with SAAB, has successfully demonstrated the remote tower concept is safe for continuous operation at Leesburg airport in Virginia.

AOPA is committed to continual collaboration and to supporting reforms that create predictable and stable funding for the FAA including biennial budgeting, consolidating unneeded and outdated facilities, procurement and certification reforms, and putting to use some of the balance from the Airways and Airport Trust Fund to expedite technology deployment.

We are ready and willing to work with all industry stakeholders and Congress to advance the consensus needed to improve our current system.

Pilot and Aviation Technician Workforce Grant Programs

Getting the next generation of Americans interested in aviation and aerospace is a key component of the aviation industry's future. In July 2018, Boeing released its Pilot and Technician Outlook wherein they estimated a need for more than 800,000 new pilots worldwide of which more than 200,000 are needed in the United States over the next 20 years. The report also mentioned that 750,000 new aviation technicians will be needed around the world. This will be a formidable challenge and one we must confront together – industry and government.

Congress, and this Committee specifically, recognized the need to support aviation workforce development programs by authorizing two new grant programs to recruit and train the next generation of pilots and aerospace workers as part of the Federal Aviation Administration Reauthorization Act of 2018 (PL115-254).

The pilot education grant program would support the creation and delivery of curriculum designed to provide high school students with meaningful science, technology, engineering, math and aviation education and encouraging our nation's youth to become the next generation of commercial, general aviation, drone or military pilots. The aviation technical workforce grant program includes scholarships, apprenticeships, establishing new training programs, purchasing equipment for schools and supporting career transition for members of the armed forces.

We remain hopeful that these grant programs will be funded at their full authorized levels over the next five years.

While the FAA Reauthorization Act of 2018 provides a five-year authorization, each sector of aviation, civil, commercial, and military will still face significant challenges in preparing for the future. There are hundreds of programs and projects being undertaken today to address these challenges whether they be workforce, technology, environmental, commercial space, air redesign, unmanned aircraft, and several others. More coordination and knowledge sharing are seriously warranted in these areas. Private and governmental organizations working together to address the development and sustainability of the aviation workforce, conducting and coordinating research activities and developing new aviation materials, training programs, and procedures, and leveraging the knowledge of organizations and federal agencies are all vital to protect and grow the aviation industry.

National Center for the Advancement of Aviation

As the Committee is aware, in order to meet bold challenges, we need bold initiatives. Recognizing this, I am hopeful the Committee will work with Senator Jim Inhofe of Oklahoma and others to establish a National Center for the Advancement of Aviation. We strongly believe standing up such a center will facilitate cooperation, collaboration, and coordination across all sectors of aviation; civil, commercial, and military -- and which is so desperately needed.

A national aviation center would bring the industry together by fostering such things as programs that create a diverse and skilled aviation workforce, ensuring the deployment of STEM aviation educational opportunities for high school students, leveraging the sharing of new and emerging flight training methods, and conducting safety and economic data trend analysis. A national aviation center would do more to grow, develop, and promote aviation and bring the needed and long overdue collaboration of our collective industry that is so vital to our nation's economy. We certainly welcome the opportunity to work with the Committee on the development of this proposal.

I would like to again thank the Subcommittee for this important hearing today and look forward to answering any questions.