Senate Commerce Committee Nominee Questionnaire, 118th Congress
Instructions for the nominees: The Senate Committee on Commerce, Science, and Transportation (the "Committee") asks you to provide typed answers to each of the following questions. It is requested that the nominee type the question in full before each response. Do not leave any questions blank. Type "None" or "Not Applicable" if a question does not apply to the nominee. Begin each section (i.e., "A", "B", etc.) on a new sheet of paper. Electronically submit your completed questionnaire to the Committee in PDF format and ensure that sections A through E of the completed questionnaire are in a text searchable and that any hyperlinks can be clicked. Section F may be scanned for electronic submission and need not be searchable.

A. BIOGRAPHICAL INFORMATION AND QUALIFICATIONS

1. Name (Include any former names or nicknames used):

   Michael Gordon Whitaker, ("Mike")

2. Position to which nominated:

   Administrator, Federal Aviation Administration

3. Date of Nomination: July 10, 2023

4. Address (List current place of residence and office addresses):

   Primary Residence: [redacted]

   DC residence: [redacted]

   DC Office: 1101 16th Street, NW
   Washington, DC 20036

5. Date and Place of Birth:

   June 21, 1961
   San Antonio, TX

6. Provide the name, position, and place of employment for your spouse (if married) and the names and ages of your children (including stepchildren and children by a previous marriage).

Mary Elizabeth Stevens, wife, Nurse Practitioner, retired
Joseph Anthony Sansone, 26, stepson
Jordan Elizabeth Sansone, 24, stepdaughter

7. List all college and graduate schools attended, whether or not you were granted a degree by the institution. Provide the name of the institution, the dates attended, the degree received, and the date of the degree.

Georgetown University Law Center
1984-1987
Juris Doctorate
1987

University of Louisville
1979-82, 1983-84
Batchelor of Arts
1984

Universite de Montpellier (France)
1982-83
Certificate of Attendance (Junior Year Abroad)
1983

8. List all post-undergraduate employment, including the job title, name of employer, and inclusive dates of employment, and highlight all management-level jobs held and any non-managerial jobs that relate to the position for which you are nominated.

Note: Explanations of experience that may be relevant to the position for which I am nominated are provided *in italics* after the relevant job listings below.

1985-86 Law Clerk, The Donohoe Companies (DC)

1986-87 Law Clerk, Grossberg, Yochelson, Fox and Beyda (DC)

1987-90 Associate, Stites and Harbison (KY)

1989-91 Adjunct Professor, University of Louisville (KY)

1990-91 Attorney, Self-employed, Louisville, KY

1991-94 Several Positions, Trans World Airlines (NY, DC)

Initially served as a litigation attorney; then was promoted to managing attorney for regulatory affairs, providing comments on pending regulations and DOT international route proceedings; then promoted to director of international affairs, where I was responsible for securing and safeguarding international route rights; then promoted to assistant general counsel, combining my previous two roles.

1994-2009 Several Positions, United Airlines (DC, IL)

I served as senior counsel, then managing director, then vice president of international affairs, where my duties included working with the DOT in international negotiations to acquire new flying rights abroad, as well as working with DOT and DOJ to secure antitrust immunity for commercial airline alliances. Then added commercial alliances to the existing portfolio and was promoted to senior vice president. Responsibilities included testifying before Congress and international governmental bodies on international aviation issues. Key accomplishments included:

- *Worked with U.S. Departments of Transportation and State to secure a significant expansion of international route rights for the company, including expansion in the UK, Europe, China, Japan, India and Latin America*
- *Recruited international airline alliance partners to Star Alliance, securing valuable traffic feed for United's international flights.*
- *Secured anti-trust immunity with U.S. and foreign regulators to allow closer airline cooperation toward more seamless international alliance travel.*

2007-2008 Adjunct Professor, DePaul University School of Law (IL)

2009-2012 Group CEO, InterGlobe Enterprises (India)

Served as Group CEO over four businesses owned and operated by InterGlobe, an Indian travel conglomerate and owner of India's largest airline, IndiGo (a low-cost carriers). The four businesses were;

- *Air Transport (a general sales agent operation)*
- *ITQ (the Indian franchise of the airline global distribution company TravelPort)*
- *InterGlobe Technologies (a software development and travel services provider)*
- *The Established (a sales organization representing general aviation manufacturers).*

Combined, these companies employed thousands of employees in over a dozen countries, and generated revenues of over $100 million annually. During my tenure, I led a rebranding of the parent company, aligned business practices among the companies, and upgraded accounting practices to prepare the companies for public offering. In 2011, I transitioned from group CEO to board member.

2013-2016 Deputy Administrator, Federal Aviation Administration (DC)

Position also included the role of chief NextGen officer, responsible for the transition from radar-based to satellite-based surveillance of air traffic, plus adjacent technologies. Key focus was on ensuring industry equipage of ADS-B (Out) transponders in aircraft fleets by 2020, working in collaboration with key industry and military sectors. Other key initiatives included overseeing the negotiation of a labor contract with the controllers' union (NATCA), standardizing access to agency data by external users, and standing up an internal organization to facilitate entry of new users into the National Air Space, including UAS operators and electric aircraft.

2016-2020 Principal, Whitaker Air Space (NH, VT)

Aviation consultancy. Advised companies and government on strategic matters relating to aviation, aerospace, air traffic management, certification, strategic planning and government relations.

2020-present Chief Operating Officer, Supernal (a Hyundai company) (DC)

This start-up company founded by the Hyundai group is designing and will manufacture electric, vertical takeoff and landing (eVTOL) vehicles for the emerging advanced air mobility (AAM) market. As COO I am responsible for

commercial operations as well as core business operations, such as human resources and information technology. Previous roles include chief commercial officer and chief policy officer.

9. Attach a copy of your resume.

Attached as Addendum 1.

10. List any advisory, consultative, honorary, or other part-time service or positions with Federal, State, or local governments, other than those listed above after 18 years of age.

Board Member, Chicago Sister Cities (1996 – 2009)

11. List all positions held as an officer, director, trustee, partner, proprietor, agent, representative, or consultant of any corporation, company, firm, partnership, or other business, enterprise, educational, or other institution.

Co-founder, The Parisian Pantry (1983 – 88)

Vice President, United Airlines (1998 – 2006)
Senior Vice President, United Airlines (2006 – 2009)

Board Member, Chicago Sister Cities (1996 – 2009)

Board Member, San Francisco Opera (2007 – 2009)

Group CEO, InterGlobe Enterprises (2009 – 2011)

Board Member, InterGlobe Enterprises (2011 – 2012)

Advisory Board Member, Passur Aerospace (2017 – 2020)

Advisory Board Member, Aerion corporation (2017 – 2019)

Advisory Board Member, Insitu (2017 – 2018)

Consultant, United Airlines (2017 – 2020) (through Whitaker Air Space)

Editorial Board Member, Air and Space Law Journal (2017 – 2022)

Board Member, Matternet (2018 – present)

Board Member, ANRA Technologies (2018 – present)

Consultant, Ascension Global (2019 – 2020)

Officer, Supernal (2020 – present)

12. Please list each membership you have had after 18 years of age or currently hold with any civic, social, charitable, educational, political, professional, fraternal, benevolent or religiously affiliated organization, private club, or other membership organization. (For this question, you do not have to list your religious affiliation or membership in a religious house of worship or institution.). Include dates of membership and any positions you have held with any organization. Please note whether any such club or organization restricts membership on the basis of sex, race, color, religion, national origin, age, or disability.

Board Member, Chicago Sister Cities (1996 – 2009)

Board Member, San Francisco Opera (2007 – 2009)

American Bar Association (1987 – 1990)

Kentucky Bar Association (1987 – 2010)

Louisville Bar Association (1987-1991)

Upper Valley Flying Club, KLEB (2017 – 2020)

None of these organizations restricts membership on the basis of sex, race, color, religion, national origin, age, or disability

13. Have you ever been a candidate for and/or held a public office (elected, non-elected, or appointed)? If so, indicate whether any campaign has any outstanding debt, the amount, and whether you are personally liable for that debt.

No.

14. List all memberships and offices held with and services rendered to, whether compensated or not, any political party or election committee within the past ten years. If you have held a paid position or served in a formal or official advisory position (whether compensated or not) in a political campaign within the past ten years, identify the particulars of the campaign, including the candidate, year of the campaign, and your title and responsibilities.

None.

15. Itemize all political contributions to any individual, campaign organization, political party, political action committee, or similar entity of $200 or more for the past ten years.

None.

16. List all scholarships, fellowships, honorary degrees, honorary society memberships, military medals, and any other special recognition for outstanding service or achievements.

University: Received a one-year study abroad scholarship (tuition, housing and food) through a Sister Cities program between Louisville, KY, and Montpellier, France; Received various departmental awards from the Political Science Department of the University of Louisville; was on the Dean's List multiple semesters; Graduated with high honors and was named a member of the honor society.

Law School: graduated *cum laude* from Georgetown University Law Center

Louisville Bar Association: Award for Outstanding *pro bono* service arising from my representation of a death row inmate (approximately 1989).

17. List each book, article, column, letter to the editor, Internet blog posting, or other publication you have authored, individually or with others. Include a link to each publication when possible. If a link is not available, provide a digital copy of the publication when available.

None.

18. List all speeches, panel discussions, and presentations (e.g., PowerPoint) that you have given on topics relevant to the position for which you have been nominated. Include a link to each publication when possible. If a link is not available, provide a digital copy of the speech or presentation when available.

I have delivered numerous speeches and presentations, and participated in many panel discussions during the course of my career. Please see Addendum 2 for the most up-to-date list I have been able to compile. If additional speeches or remarks are identified following the submission of this Questionnaire, I will promptly let the Committee know and provide appropriate details.

See Addendum 2 (attached).

19. List all public statements you have made during the past ten years, including statements in news articles and radio and television appearances, which are on topics relevant to the position for which you have been nominated, including dates. Include a link to each statement when possible. If a link is not available, provide a digital copy of the statement when available.

I have made numerous media statements during the course of my career. Please see Addendum 3 for the most up-to-date list I have been able to compile. If additional statements are identified following the submission of this Questionnaire, I will promptly let the Committee know and provide appropriate details.

See Addendum 3 (attached).

20. List all digital platforms (including social media and other digital content sites) on which you currently or have formerly operated an account, regardless of whether or not the account was held in your name or an alias. Include the full name of an "alias" or "handle", including the complete URL and username with hyperlinks, you have used on each of the named platforms. Indicate whether the account is active, deleted, or dormant. Include a link to each account if possible.

LinkedIn: https://www.linkedin.com/in/michael-whitaker-14329828/ (active)
Facebook: (terminated account several years ago – approximately 2017)
Twitter: @mgwhitaker (active account but rarely if ever used)

21. Please identify each instance in which you have testified orally or in writing before Congress in a governmental or non-governmental capacity and specify the date and subject matter of each testimony.

See Addendum 4 (attached).

22. Given the current mission, major programs, and major operational objectives of the department/agency to which you have been nominated, what in your background or employment experience do you believe affirmatively qualifies you for appointment to the position for which you have been nominated, and why do you wish to serve in that position?

I have spent the last 32 years in aviation, beginning as an attorney for Trans World Airlines, then rising through the ranks of United Airlines from senior counsel in the regulatory group to senior vice president of alliances, international and regulatory affairs. I have also worked with emerging aviation technologies, such as small unmanned systems as well as electric propulsion.

But the key experience I believe qualifies me for this position is my three-year tenure as deputy administrator of the FAA and its chief NextGen officer. This experience allowed me to significantly deepen my technical knowledge of the air traffic system, as well as the technologies that the FAA and industry have applied to achieve the highest standards of safety in the world, including safety management systems, just culture principles, and the use of data to identify emerging safety risks. Working in close partnership with Administrator Huerta, I co-managed the 47,000 employee work force and helped drive the transition from radar-based surveillance to satellite- and ground-based ADS-B. I also earned my private pilot certificate during that period, which further enabled me to understand the workings of the national air space ("NAS") and the role of technology in increasing the levels of safety.

23. What do you believe are your responsibilities, if confirmed, to ensure that the department/agency has proper management and accounting controls, and what experience do you have in managing a large organization?

If confirmed, I will bring my previous experience of leading the 47,000 dedicated employees at the FAA to ensure the FAA stays focused on safety and properly prioritizes modernization efforts of the national airspace. I will rely on my three-plus decades of executive experience in aviation and aerospace organizations to provide leadership with appropriate management

and financial controls over the budgets, operations and program management of the agency.

My experience encompasses a range of diverse organizations that have prepared me to lead large organizations. Those include start-ups such as Supernal where, as chief operating officer, I was responsible for overseeing the nascent operations as well as developing safety programs and policies and procedures to meet the need of a fast-growing electric aircraft manufacturer. At InterGlobe, India's largest travel conglomerate, I oversaw the restructuring of accounting and compliance policies and procedures in four companies to ensure they met international standards that would enable them to access public financial markets. And as Deputy Administrator of the FAA, I lead the successful implementation of key NextGen programs, ensuring that key milestones and budget targets were met during my tenure, enabling the scheduled cutover from radar to ADS-B surveillance in 2020.

24. What do you believe to be the top three challenges facing the department/agency, and why?

1. Maintaining the U.S. Aviation System as the Global Standard for Safety. Maintaining the highest standards of safety that the traveling public expects is the top priority and challenge for the agency. This involves providing adequate staffing in key functions, ensuring operators are compliant with current standards, and constant diligence in analyzing safety data to identify emerging threats and working with system users to mitigate those threats.

2. Rebuilding the FAA Workforce for the Future. Use all available means to increase qualified staffing of controllers, inspectors, and other safety and operational professionals to ensure our mission of safety and efficiency are met while creating a great place to work.

3. Maintain Global Leadership through Excellence. Build an organization that can meet the challenges of incorporating new users and technologies – small unmanned systems, advanced air mobility, distributed electric propulsion, commercial space – into the busiest and safest air space system in the world. Building a culture of continuous improvement will allow us to achieve a level of operational excellence as a regulator and an air traffic systems operator that ensures the FAA and U.S. companies maintain their

long-established global leadership in aviation and aerospace.

B. POTENTIAL CONFLICTS OF INTEREST

1. Describe all financial arrangements, deferred compensation agreements, and other continuing dealings with business associates, clients, or customers. Please include information related to retirement accounts, such as a 401(k) or pension plan.

My arrangements are fully described in Part 3 of my Public Financial Disclosure Report.

2. Do you have any commitments or agreements, formal or informal, to maintain employment, affiliation, or practice with any business, association, or other organization during your appointment? If so, please explain.

No.

3. Indicate any investments, obligations, liabilities, or other relationships which could involve potential conflicts of interest in the position to which you have been nominated. Explain how you will resolve each potential conflict of interest.

In connection with the nomination process, I have consulted with the Office of Government Ethics and the Department of Transportation's Designated Agency Ethics Official to identify any potential conflicts of interest. Any potential conflicts of interest will continue to be resolved in accordance with the terms of an ethics agreement that I have entered into with the Department's Designated Agency Ethics Official and that has been provided to this Committee. I am not aware of any potential conflicts of interest.

4. Describe any business relationship, dealing, or financial transaction which you have had during the last ten years, whether for yourself, on behalf of a client, or acting as an agent, that could in any way constitute or result in a possible conflict of interest in the position to which you have been nominated. Explain how you will resolve each potential conflict of interest.

In connection with the nomination process, I have consulted with the Office of Government Ethics and the Department of Transportation's Designated Agency Ethics Official to identify any potential conflicts of interest. Any

potential conflicts of interest will continue to be resolved in accordance with the terms of an ethics agreement that I have entered into with the Department's Designated Agency Ethics Official and that has been provided to this Committee. I am not aware of any potential conflicts of interest.

5. Identify any other potential conflicts of interest and explain how you will resolve each potential conflict of interest.

In connection with the nomination process, I have consulted with the Office of Government Ethics and the Department of Transportation's Designated Agency Ethics Official to identify any potential conflicts of interest. Any potential conflicts of interest will continue to be resolved in accordance with the terms of an ethics agreement that I have entered into with the Department's Designated Agency Ethics Official and that has been provided to this Committee. I am not aware of any potential conflicts of interest.

6. Describe any activity during the past ten years, including the names of clients represented, in which you have been engaged for the purpose of directly or indirectly influencing the passage, defeat, or modification of any legislation or affecting the administration and execution of law or public policy.

None, except as pertains to the executions of my duties as Deputy Administrator of the FAA from 2013 to 2016.

C. LEGAL MATTERS

1. Have you ever been disciplined or cited for a breach of ethics, professional misconduct, or retaliation by, or been the subject of a complaint to, any court, administrative agency, the Office of Special Counsel, an Inspector General, professional association, disciplinary committee, or other professional group?

No.

If yes:

a. Provide the name of court, agency, association, committee, or group;
b. Provide the date the citation, disciplinary action, complaint, or personnel action was issued or initiated;

c. Describe the citation, disciplinary action, complaint, or personnel action;
d. Provide the results of the citation, disciplinary action, complaint, or personnel action.

2. Have you ever been investigated, arrested, charged, or held by any Federal, State, or other law enforcement authority of any Federal, State, county, or municipal entity, other than for a minor traffic offense? If so, please explain.

In June or July 1979 I was stopped in Louisville, KY, for "doing doughnuts" in a parking lot. I pled guilty to a charge and paid a $10 fine.

3. Have you or any business or nonprofit of which you are or were an officer ever been involved as a party in an administrative agency proceeding, criminal proceeding, or civil litigation? If so, please explain.

No.

4. Have you ever been convicted (including pleas of guilty or *nolo contendere*) of any criminal violation other than a minor traffic offense? If so, please explain.

Please see C: Legal Matters: Question 2.

5. Have you ever been accused, formally or informally, of sexual harassment or discrimination on the basis of sex, race, religion, or any other basis? If so, please explain.

No.

6. Please advise the Committee of any additional information, favorable or unfavorable, which you feel should be disclosed in connection with your nomination.

None.

D. RELATIONSHIP WITH COMMITTEE

1. Will you ensure that your department/agency complies with deadlines for information set by congressional committees, and that your department/agency endeavors to timely comply with requests for information from individual Members of Congress, including requests from members in the minority?

Yes.

2. Will you ensure that your department/agency does whatever it can to protect congressional witnesses and whistleblowers from reprisal for their testimony and disclosures?

Yes.

3. Will you cooperate in providing the Committee with requested witnesses, including technical experts and career employees, with firsthand knowledge of matters of interest to the Committee?

Yes.

4. Are you willing to appear and testify before any duly constituted committee of the Congress on such occasions as you may be reasonably requested to do so?

Yes.

(Nominee is to include this signed affidavit along with answers to the above questions.)

F. AFFIDAVIT

Michael G. Whitaker **being duly sworn, hereby states that he/she has read and signed the foregoing Statement on Biographical and Financial Information and that the information provided therein is, to the best of his/her knowledge, current, accurate, and complete.**

Signature of Nominee

Subscribed and sworn before me this 11th **day of** 9, **2023.**

Notary Public

JONY ALVARENGA NOTARY PUBLIC MY COMMISSION EXPIRES 08/14/2028 DISTRICT OF COLUMBIA

District of Columbia
Signed and sworn to (or affirmed) before me
on 9/11/23 by Michael G. Whitaker
Date Name(s) of individual(s) making Statement

Signature of Notarial Officer

Notary Public
Title of Office

My commission expires: 08/14/2028

Addendum 1
Response Question A.18
Michael G. Whitaker

[redacted]

Career Highlights

FAA Deputy Administrator - Travel Company CEO - AAM Start Up COO
Airline Senior Executive - Public Speaker and University Lecturer - Private Pilot

Summary

Michael Whitaker has a unique blend of executive, government and international experience that allows him to recognize trends in time to influence outcomes. He is currently Chief Operating Officer of Supernal, a Hyundai company building an electric Advanced Air Mobility vehicle. Whitaker previously served as second-in-command at the Federal Aviation Administration during the Obama Administration, where he brought industry and government together to drive the successful transition of the nation's air traffic control system from radar to a space-based surveillance technology (ABS-B). Whitaker's success at FAA was enabled by his deep experience in aviation. In his 30s, Whitaker was promoted to vice president and then senior vice president at United Airlines, where his broad portfolio included commercial alliances and joint ventures, international and regulatory affairs, and strategic adviser to the chairman and CEO on international matters. He left United in 2009 to take the reins as Group CEO at InterGlobe Enterprises, India's largest travel conglomerate and operator of its largest and most successful airline, IndiGo. Whitaker, an honors law graduate of Georgetown University, is a prolific public speaker, has testified numerous times before Congress and various foreign governmental bodies, and has appeared on many major U.S. and foreign news outlets discussing aviation and aerospace policy.

Professional Experience

Supernal, a Hyundai company	Washington
Chief Operating Officer	*2023 - present*
Chief Commercial Officer	2022 – 2023
Chief Policy Officer	2020 – 2021

- Early key employee of start-up subsidiary of Korean conglomerate tasked with designing, certifying and manufacturing Advanced Air Mobility Vehicles: electric-propulsion, automated, vertical takeoff and landing passenger and cargo vehicles.
- Initially responsible for strategy to ensure the timely certification of the vehicle and vehicle production in the U.S. and key global markets.
- Promoted to Chief Commercial Officer with responsibility for commercial strategy and implementation, manufacturing and supply chain, safety, brand and communications.
- Responsible for ensuring the appropriate infrastructure is developed to allow commercial operations in key markets, including the development of vertiports, Unmanned Air Traffic Systems, and public acceptance of autonomous air vehicles.
- Promoted to Chief Operating Officer to lead all U.S. commercial and care operations.

Independent Board Member 2016–present

- Board Member, Flight Safety Foundation, an independent, nonprofit, international organization concerning research, education, advocacy, and communications in the field of aviation safety.
- Board Member, Matternet, a drone delivery company that connects healthcare facilities to medical labs and pharmacies to patients.
- Board Member, ANRA Technologies, an air traffic management start up focused on Unmanned Air Systems and work-flow management for drones.
- Editorial Board Member, Air and Space Law Journal, a Wolters-Kluwer Publication.

Independent Adviser 2016–2020

- Advised companies and government on strategic matters relating to aviation, aerospace, air traffic management, strategic planning and government relations.

FEDERAL AVIATION ADMINISTRATION Washington
Deputy Administrator, Chief NextGen Officer 2013–2016

- Presidential appointee responsible to Congress for implementation of NextGen, the 20-year, $20B modernization of the U.S. air traffic control system.
- Partnered with the Administrator to manage $15B annual budget and 47,000 employees throughout the United States and abroad.
- Reset the NextGen modernization program, the largest and most complex public infrastructure project in the U.S., through better technical engagement with stakeholders and more focused project management and reporting.
- Successfully directed the preparation, strategy and negotiation of new six-year labor contract with National Air Traffic Controllers Association.
- Established and Chaired the internal FAA board that sets strategy and oversees execution of policies to integrate unmanned aircraft into U.S. airspace.
- Drove a streamlined regulatory approach to rulemaking and product certification, leading to reduced time-to-market for general aviation safety avionics and a more flexible regulatory regime for unmanned aircraft.
- Drove comprehensive agency-wide approach to management and mitigation of cyber security threats.
- Served as Chair of the Business Council, comprised of heads of business and staff offices; responsible for the business and budgetary decisions of the agency.
- Initiated an industry Call to Action with more than 100 participants to examine issues, barriers, and progress toward meeting forthcoming federal aircraft equipage requirement. Resulting initiative eliminated all substantial barriers to ADS-B equipage for U.S. commercial, general aviation and military fleets.
- Oversaw world-class research facilities in Atlantic City and Oklahoma City.
- Chaired interagency committee with NASA, DOD, NOAA and DHS that coordinated research and implementation of operational, safety and security enhancements to the air space.
- Launched a data initiative, working with industry to make agency data available in a timely manner and standard format to enable development of private sector aviation products and services.

INTERGLOBE ENTERPRISES (India's largest travel conglomerate) New Delhi
Board Member, Business Development Consultant 2011–2012
Group CEO 2009–2011

- Prepared four companies within the group to meet public offering requirements.
- Implemented best practices in accounting, governance, and branding while maintaining double-digit revenue and earnings growth during three years of service.
- Led and provided direction to four CEOs within India's largest travel conglomerate, including InterGlobe Air Transport, ITQ, InterGlobe Technologies, and The Established.
- Directed parent company's marketing organization, successful rebranding the 50-year old company based on an extensive brand strategy review.
- Restructured one company within the conglomerate, selling the service division and expanding the product line allowing the business to leverage existing customers for sales of additional premium goods.

UNITED AIRLINES Chicago and Washington
Sr. Vice President, Alliances, International & Regulatory Affairs 2006–2009
Vice President, Alliances, International & Regulatory Affairs 2004–2005
Vice President, International & Regulatory Affairs 1998–2004
Managing Director, International & Regulatory Affairs 1995–1998
Senior Counsel, International & Regulatory Affairs 1994–1995

- Managed the recruitment of international partners for Star Alliance while also building existing relationships; resulting alliances created as much as $100M in revenue for each partner and enhanced customer service by expanding the route network. Served on the Star Alliance Management Board.
- Acquired valuable route rights that facilitated the company's international network expansion. New routes enabled significant route expansion in Asia, including around-the-world service, making United Airlines the first global network among U.S. airlines.
- Assumed public-facing role to lead multimillion-dollar, comprehensive campaign in Washington, DC, resulting in award of sought-after airline route to China valued at over $100M, securing airline's position as leading carrier between the U.S. and Asia.
- Successfully recruited Continental Airlines to change alliances; served to significantly increase revenue and prepare organization for eventual merger.
- Served as member of the Industry Affairs Committee of the International Air Transport Association, focused on international aviation policy and standardization of regulation.
- Obtained antitrust immunity on behalf of the company, allowing United Airlines and its European partner, Lufthansa, to operate and price as a single airline, resulting in operational efficiencies and increased revenue.
- Successfully advocated and supported government efforts to liberalize several international air service agreements, which opened several dozen new markets around the world.
- Member of team that renegotiated the collective bargaining agreement with the airline's pilots to secure union permission to expand cooperative airline agreements.
- Key contributor in restructuring efforts and Chapter 11 reorganization after the hijacking and destruction of two United Airline jets on September 11, 2001.
- Led negotiations to monetize key company assets, including leasing of landing slots at foreign airports and monetizing portions of the airline's international route network.

TRANS WORLD AIRLINES Washington and New York
Assistant General Counsel, International Affairs 1994
Director, International Affairs 1993
Managing Attorney, Regulatory Affairs 1992
Senior Attorney, Litigation 1991

- Safeguarded valuable international rights, allowing the company to remain viable and enabling a strategic position for acquisition negotiations with largest competitor.
- Successfully negotiated with Egyptian and Saudi Arabian governments to allow TWA service between Cairo and Riyadh, which rapidly became TWA's most profitable international route.
- Managed all company filings with the U.S. Department of Transportation and the FAA.

Education

- J.D., *cum laude*, Georgetown University Law Center, Washington, DC
- B.A. with High Honors, Political Science and French, University of Louisville, KY

Select Presentations

- U.S. House and Senate Testimonies: Air Traffic Modernization (NextGen); Unmanned Aircraft; Lifting Restrictions on Foreign Ownership of Airlines
- European Commission: Defending the United-Lufthansa Immunized Alliance
- UK House of Commons: US-UK Aviation Negotiations
- Multiple television and radio appearances, including CNBC, BBC, CNN, Australia Broadcasting Corporation, Al Jazeera and CCTV media appearances.

Additional Information

- Private pilot
- Languages: English (fluent), French (basic).
- Co-Founder, International Aviation Law Institute, DePaul College (2004)
- Adjunct Professor of International Trade Law, DePaul College of Law (2003-05)
- Adjunct Professor of Political Science, University of Louisville (1989-91)

Addendum 2
Response Question A.18

List all speeches, panel discussions, and presentations (e.g., PowerPoint) that you have given on topics relevant to the position for which you have been nominated. Include a link to each publication when possible. If a link is not available, provide a digital copy of the speech or presentation when available.

I have delivered numerous speeches and presentations, and participated in many panel discussions during the course of my career. If additional speeches or remarks are identified following the submission of this Questionnaire, I will promptly let the Committee know and provide appropriate details.

There are three time periods where I would have made public statements responsive to this request: my work as an officer at United Airlines, where I was a public advocate for policy positions of the company (1994 – 2009); my time as Deputy Administrator of the FAA (2013 – 2016); and my time since leaving FAA (2016 through present). These are outlined below with as much specificity as possible:

United Airlines (1994 – 2009)

March 2003, Presentation to ICAO Worldwide Air Transport Conference: "Aviation in Transition: Challenges and Opportunities of Liberalization."
https://www.icao.int/Meetings/ATConf5/Documents/Whitaker.pdf#search=whitaker

August 14, 2003, Competitive Enterprise Institute: State of Airline Competition https://www.c-span.org/video/?177797-1/state-airline-competition

FAA (2013 – 2016)

Please reference Attachment 1: FAA Speeches

Post-FAA (2016 – present)

October 12, 2017, CAPA Centre for Aviation (London): Renegotiating the North Atlantic multilateral post-Brexit. No recording available

November 26, 2018, CAPA Centre for Aviation (Berlin): The Outlook for UK-Europe, the Transatlantic and Open Skies – How Are Airlines Preparing for the Post-Brexit World?
https://centreforaviation.com/analysis/video/the-outlook-for-uk-europe-the-trans-atlantic-and-open-skies-how-are-airlines-preparing-for-the-post-brexit-world-912

February 2021 CAPA Centre for Aviation (Virtual conference): USDOT – which aviation policies will (and should) Secretary Buttigieg pursue? https://centreforaviation.com/analysis/video/usdot-which-aviation-policies-will-and-should-secretary-buttigieg-pursue-1357

April 21, 2021, ICAO Drone Enable (Virtual), Panel on Regulatory and technical challenges of Advanced Air Mobility – No recording available

July 19, 2022, Farnborough Air Show, Panel on Advanced Air Mobility. No recording available

September 2022, NBAA Webinar on Advanced Air Mobility. https://nbaa.org/aircraft-operations/emerging-technologies/uas/nbaa-webinar-its-a-bird-a-plane-building-public-trust-in-all-new-flying-vehicles/

Addendum 3
Response Question A.19

List all public statements you have made during the past ten years, including statements in news articles and radio and television appearances, which are on topics relevant to the position for which you have been nominated, including dates. Include a link to each statement when possible. If a link is not available, provide a digital copy of the statement when available.

United Airlines (1994 – 2009)

December 23, 2001, O'Hare may feel pain of Detroit Metro's gains.
https://www.chicagotribune.com/news/ct-xpm-2001-12-23-0112230375-story.html

September 25, 2007, United awarded daily nonstop flight to Guangzhou, China.
https://www.sfgate.com/business/article/United-awarded-daily-nonstop-flights-to-2538607.php

April 8, 2008, Aer Lingus Partnership With United Airlines.
https://www.globenewswire.com/en/news-release/2008/04/08/1394104/0/en/Aer-Lingus-Partnership-With-United-Airlines.html

May 14, 2008, United Airlines Offers Inter-Island Hawaii Flights with New Hawaiian Airlines Codeshare Agreement.
https://newsroom.hawaiianairlines.com/releases/united-airlines-offers-inter-island-hawaii-flights-with-new-hawaiian-airlines-codeshare-agreement

FAA (2013 – 2016)

Please reference Attachment 2: FAA Public Statements

Post-FAA (2016 – 2023)

July 24, 2019, Aviation News Talk podcast (ep.115): NextGen and General Aviation
https://aviationnewstalk.com/podcast/115-former-faa-deputy-administrator-on-nextgen-and-general-aviation-interview-mike-whitaker/

September 5, 2020, NBAA Webinar: It's a Bird? A Plane? Building Public Trust in All-New Flying Vehicles.
https://nbaa.org/aircraft-operations/emerging-technologies/uas/nbaa-webinar-its-a-bird-a-plane-building-public-trust-in-all-new-flying-vehicles/

October 27,2021, Airlines Confidential Podcast https://podcasts.apple.com/gb/podcast/107-mike-whitaker-chief-policy-officer-hyundai-air/id1488637686?i=1000539841583

December 4, 2021, Vertical Space Podcast
https://theverticalspace.buzzsprout.com/1875560/9661801-3-mike-whitaker-from-supernal-a-hyundai-company

October 20, 2022, CEO and CCO of Hyundai's Supernal Talk eVTOL Development.
CEO and CCO of Hyundai's Supernal Talk eVTOL Development - Avionics International (aviationtoday.com)

January 12, 2023, NPR: Discussion of NOTAM system failure.
https://www.npr.org/2023/01/12/1148633630/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation

January 12, 2023, Supernal to Utilize Microsoft Azure for eVTOL Development.
Supernal to Utilize Microsoft Azure for eVTOL Development - Avionics International (aviationtoday.com)

Addendum 4
Response Question A.21

Please identify each instance in which you have testified orally or in writing before Congress in a governmental or non-governmental capacity and specify the date and subject matter of each testimony.

November 19, 2013, House Aviation Subcommittee: NextGen Listening Session.
https://www.congress.gov/congressional-report/113th-congress/house-report/718/1

March 11, 2014, House Committee on Transportation and Infrastructure: Modernizing the Aviation System – Leveraging the Assets of the FAA's William J. Hughes Technical Center
https://transportation.house.gov/calendar/eventsingle.aspx?EventID=369763

June 25, 2014, Senate Commerce, Science, and Transportation Committee Subcommittee on Aviation Operations, Safety, and Security: Nextgen: A Review of Progress, Challenges, and Opportunities for Improving Aviation Safety and Efficiency.
https://www.govinfo.gov/content/pkg/CHRG-113shrg95362/pdf/CHRG-113shrg95362.pdf

June 17, 2015, House Oversight and Government Reform Committee: Commercial Drone Regulation https://www.c-span.org/video/?326612-1/commercial-drone-regulation

October 7, 2015, House Aviation Subcommittee of the Transportation and Infrastructure Committee: Drone Safety https://www.c-span.org/video/?328622-1/drone-safety

Thanks, Paul.

Intro comments

I had the privilege of speaking a few weeks ago at the Women in Aviation International conference in Orlando. That conference was attended by a lot of young people – high school and college students looking at aviation as a career. I was asked to talk about why aviation is such a great career.

This is a tricky topic for someone of my generation, because by any measure the last 25-30 years in the aviation business have been anything but smooth! If you are a pilot – and I know we have a lot of pilots at this conference – you likely would have endured one or more layoffs over the past 25, 30 years, because of bankruptcies, mergers, recessions, fuel spikes, 9/11. If you were an airline employee of any kind, you probably lost your pension….and you learned what PBGC stands for….

At that Orlando conference, I made the observation that I had joined the airline business at the worst possible moment in history, which was 1991, just after Eastern shut down, just as PanAm was shutting down, and I had the foresight to join TWA…..right before its first bankruptcy.

But as I prepared for this conference it occurred to me maybe 1991 wasn't the low point. Maybe it was 1981. I was a college student at the time hitch-hiking around Europe – until I got stuck at Heathrow for a week after the President of the United States fired the air traffic controllers.

But of course actually the worst year was 2001 – 9/11 . . . which was then followed by the financial collapse in 2008.

Then followed by 2013 – with the sequestration, the budget battles and the government shutdown!

- Bottom line: it has been a very rocky ride. There are no guarantees in this business.
- And like most of you here, I wouldn't trade a career in aviation for anything!

But this leads me to two observations.

One – and maybe all of us in the aviation business are optimist by nature – but the worst may be behind us. Maybe 2013 is the last of the bad years. There are several factors that suggest the next 25 years will be much better than the last 25 years.

And two, in a very real sense, we are at a pivotal moment in the industry that feels very much like a generational handoff. As Administrator Huerta has said, the decisions we make today – those of us in this room: FAA, NATCA, other stakeholders – will shape aviation for the decades to come.

Some of those pivotal decisions were discussed with the panel David Grizzle and Trish moderated – should the ATC system be privatized? So I would like to talk briefly about these two things: why I think the next 25 years will be so interesting – interesting in a good way! – and why this is such a pivotal moment.

THE NEXT 25 YEARS

What will the next 25 years look like? Well, it looks like it will be a good time to be a pilot. Our annual forecast shows the nation's aviation system will continue to grow over the next two decades with a greater number of people expected to fly more miles each year. The rounds of mergers and bankruptcies that began after deregulation seem to have reached a stable state. It's unlikely we'll see many more mergers – except at the margins. The demand for experienced pilots is clearly growing.

And it's a good time to be a controller, or to work for the FAA generally. This generational handoff shows up in the age of our

workforce. Because many controllers were hired in the '80s, there is a wave of retirements coming up. We plan to bring on approximately 6000 controllers over the next five years **[verify]**. Agency-wide, in fact, there will be a lot of retirements: a third of our workforce will retire in the next several years.

The next 25 years also promise to be interesting because of new technologies and users being introduced into the system. Unmanned aircraft – UAS – will have many commercial uses: agriculture, pipeline inspections, construction, media. Each of these vehicles will have an operator – a pilot – and there will be many jobs created in the design, manufacture, sale and maintenance of these aircraft.

For us, the challenge will be to ensure these operations are conducted safely, and to equitably balance their needs with the needs of current airspace users. We're currently working to develop the regulations to accommodate these users … and we're

researching and developing a collision avoidance system called ACAS-Xu – similar to TCAS – to accommodate them technologically.

Another exciting opportunity – and challenge for us – is the integration of commercial space operations into the system. Commercial operators are launching payload into space on almost a weekly basis **[accurate?]**. And the last technological challenges are being conquered to allow commercial passenger flights into space. We are also working on how to integrate these vertical operators into our horizontal system.

PIVOT POINT

So the next 25 years offers a lot of promise, but it also presents us with a lot of challenges. As we just heard in the industry leadership panel before lunch, there is some debate about what the air traffic system will look like in the future. Does it stay governmentally run, or should it be privatized, or semi-

autonomous? But we shouldn't get too focused on the form it takes. Whatever it looks like, we still need to work closely together. We need to build the air traffic system of the future, regardless of how it is structured. The work we have to do doesn't change.

Here I think there are three key areas where we can takes steps now to deliver a better air traffic system to the next generation. Those are: delivering on NextGen, right-sizing the NAS, and continuing to drive down safety risk. The FAA and NATCA have a unique opportunity to really shape the future . . . by continuing the collaboration that has been so successful the last few years.

NextGen

On NextGen, we are making substantial progress.

- We're on schedule to complete NextGen's foundational programs by 2015. Last week, we completed installation of our ADS-B radios throughout the U.S. We will continue to add additional stations in Alaska and the Gulf of Mexico.

- We will complete the deployment of ERAM at 20 of our en route facilities and TAMR at key terminal sites by March of next year. Sixteen of these 20 en route centers are already operating ERAM continuously to control air traffic.

- TAMR is now in full production mode. This effort involves implementing the STARS platform at over 150 TRACONs throughout the country.

But to keep the momentum going we need to continue to deliver benefits to users. We've been working with the NextGen Advisory Committee, which is made up of members from a cross-section of the industry, on accelerating these benefits. We are focusing on four areas: Performance Based Navigation … the sharing of surface operations data with industry … implementing multiple runway operations … and Data Communications. These four areas

offer the greatest opportunity to deliver benefits in the short term without requiring additional cockpit equipage.

Right-sizing

But as we build these new capabilities, we need to also work to better match our assets and services with the demands of the system – in other words, we need to right-size the NAS. We need to pull out redundant systems, downsize airports that were overbuilt, consolidate facilities, and run the system more efficiently. And we need to do this whether we are corporatized or remain a government agency.

Safety

Finally, we must continue to drive down safety risk. Our goal is to make use of the wealth of safety data now available – from voluntary safety reports by controllers, technicians, pilots and other aviation industry employees … automated collection of air traffic

operations data … and also through the exchange of safety data with industry.

We envision evolving the way we conduct safety oversight to take into account safety practices within the industry. We'll work with operators that have strong Safety Management Systems of their own. Through Safety Management Systems, we'll discover risks and monitor the steps they take to mitigate or manage the risk. This way, we can achieve compliance more efficiently. And we will be able to apply more of our oversight resources to areas of greater risk.

On the air traffic side, we'll continue to build on our proactive safety culture. NATCA and our workforce have contributed in so many ways to our success in driving down safety risk. Through your ATSAP reports, we've already made more than 260 safety enhancements. The *Professional Standards* program is also a great

peer-to-peer effort for controllers to maintain the highest levels of professionalism.

The *Turn Off, Tune* In campaign – launched last year at this conference – has been a big success. Together, the FAA and NATCA have made great progress in raising awareness about the risk of distractions, including electronic distractions – which continues to be on the NTSB Transportation Most Wanted list for the second year in a row. Paul Rinaldi said it pretty well – "No text … no call … no update is worth your career or the safety of the flying public." The campaign is getting some international buzz too. Our counterparts in Hong Kong, Kenya and the Bahamas want to model our efforts. And now we have airlines asking us to use the campaign.

Several facilities have been very creative in promoting *Turn Off, Tune In*. At Charlotte Tower and TRACON, for example, they've created stations outside the control room where employees

can charge their cell phones. It's a subtle reminder that there's no room for distractions in the operational area.

Speaking of charging up, the *Fully Charged* campaign – being launched here this week – will also make a big difference. *Fully Charged* is a collaborative effort among PASS, NATCA and the FAA to reduce the risk posed by fatigue. By using de-identified data gathered from ATSAP, operational event data and other sources, we're gaining a more scientific understanding of the factors that increase fatigue hazards. *Fully Charged* will help us take steps to reduce the risk, both as individuals and as an agency.

In closing, I think the aviation industry is moving into a new period with lots of change and great opportunities. The FAA and NATCA have to stay on top of these changes. Let's continue to work together in the areas of safety … modernization … and integrating new vehicles. As we do that, we'll shape the future of aviation for decades to come. And we'll make sure the FAA remains the gold standard in aviation, here and around the world.

SMU Air Law Symposium
Dallas, TX
Mike Whitaker
April 3, 2014

Thanks, Charles (Tarpley – chair of the SMU Law Review board of advisors).

It's great to be here at SMU . . . and back in the company of aviation law professionals. I feel right at home.

I entered the airline industry through the legal door . . . but moved to the business side about 20 years ago. But I have maintained strong ties with the aviation bar, and it is always a pleasure for me to speak at events like this.

I spent my entire career in the private sector – first with a law firm, then with airlines – until I joined the FAA last June. I feel very privileged to hold my current position. I took the position in order to devote my efforts to moving NextGen forward – and I will talk a bit about NextGen in my remarks. But I also took the appointment because I thought it sounded exceptionally interesting and I thought I would also learn allow – seeing government from the inside.

And it certainly has been interesting!

- Watching the rulemaking process
- Participating in a variety of Hearings
- The government shutdown
- Watching the budget process

I have gained a lot of insight seeing government from the inside – none of which I will share with you today! That speech will have to wait until I am long out of government!

But I would like to share some insights into the airline business – where it has been and where I think it is going – as I approach 25 years in the business.

Last month, I had the privilege of speaking at the Women in Aviation International conference in Orlando.

- That conference was attended by a lot of young people – high school and college students looking at aviation as a career.
- I was asked to talk about why aviation is such a great career.

This is a tricky topic for someone of my generation, because by any measure the last 25-30 years in the aviation business have been anything but smooth!

- I think I may have joined the airline business at the worst possible moment in history.
- It was 1991, just after Eastern shut down, just as PanAm was shutting down, and I had the foresight to join TWA – right before its first bankruptcy.

- I joined the Legal Department as a litigator . . . right before TWA filed its first Chapter 11
- I used that opportunity to move out of the Legal Dept. and join the business side of the airline – which was better than getting laid off.

The tumultuous last 25 years can be directly traced to the deregulation of the airline industry in 1978.

- Within the first few years, it was obvious to most observers that a round of mergers and bankruptcies was inevitable . . . but no one imagined it would take over 30 years to complete the process
- During that time every major airline went through bankruptcy – some went through twice; TWA holds the record with three
- Employees were furloughed and many lost their pensions
- And that was BEFORE 9-11 happened
- Which was followed by the financial collapse, which was followed by sequestration
- You get the picture

So as I was addressing the students and those in the early part of their careers at the Orlando conference, I was tasked with telling them why aviation is such a great career!

- And of course it is!
- I wouldn't trade it for anything!

But as I thought about it, I think there are several factors that suggest the next 25 years will be much better than the last 25 years.

- Our annual forecast shows the nation's aviation system will continue to grow over the next two decades with a greater number of people expected to fly more miles each year.
- The rounds of mergers and bankruptcies that began after deregulation seem to have reached a stable state.
- It's unlikely we'll see many more mergers – except at the margins.

The next 25 years also promise to be interesting because of new technologies and users being introduced into the system.

- I want to talk about three of these technologies that I think are game changers . . . and will give us a more prosperous next 25 years.
- In other words, aviation law will no longer be a sub-category of bankruptcy law.

UAS

- Unmanned aircraft – UAS – will have many commercial uses: agriculture, pipeline inspections, construction, media.
- You may have heard in the news that some want to use unmanned aircraft to deliver beer to ice fishers.
- We expect there will be many jobs created in the design, manufacture, sale and maintenance of these aircraft.

- For us, the challenge will be to ensure these operations are conducted safely, and to equitably balance their needs with the needs of current airspace users.
- We're currently working to develop the regulations to integrate these users … and we're working with industry to develop a system to detect and avoid other aircraft using on board computers and sensors. This is the key technology needed for unmanned aircraft to integrate into our airspace.

COMMERCIAL SPACE

- Commercial operators are launching payload into space at an unprecedented rate. The second week of January had as many launches as all of 2012.
- And the last technological challenges are being conquered to allow commercial passenger flights into space.
- Some launches take off down a runway…most are traditional rocket launches.
- As we look to enable more operations – we have to think about how to accommodate a vertical operation into a horizontal airspace system.

NEXTGEN

The third technology that impacts the future in a positive way is NextGen

- NextGen is a comprehensive upgrade of our air traffic control system – and I believe it is the most important infrastructure project in the U.S. today.
- It is a 20-year, $40 billion project that enables us to move from a radar-based air traffic system to a satellite-based system.

The first phase of this endeavor has been to upgrade the basic infrastructure of the system – the hardware and software in our 20 high altitude centers and in our regional approach towers.

- Much of this technology was from the 1980s – or early – and needed to be replaced – all while continuing to operate the system.
- That work is being completed over the next 24 months.

We also needed to install ground radio transceivers for the satellite system

- The FAA just achieved a major milestone this past month. We completed the baseline installation of our ___ ADS-B transceivers throughout the United States.

As this foundational infrastructure is complete, it will enable us to build additional capabilities into the system, including data communications, time-based metering, closer spacing, additional runway operations, better weather information, and more operational flexibility and direct routings.

We have already begun to see benefits in various cities across the country . . . and I'll just give you a few examples:

At Dallas/Fort Worth International Airport, we put in place a NextGen procedure we call *RNAV Off the Ground*.

- Flights can now take off with 1 nautical mile distance between each aircraft, compared to the standard 3 nautical miles.
- This procedure enables a 15-20 percent increase in departures per hour.
- In fact, American Airlines is saving $10 to $12 million dollars in annual fuel costs at Dallas/Fort Worth[1].

North Texas is also one of the areas in our Metroplex Initiative.

- Metroplex is a targeted application of NextGen procedures to decrease congestion in busy metropolitan areas.
- These efforts will make North Texas airspace more efficient and improve access to airports like Dallas-Fort Worth, Dallas Love, and other regional airports.
- We have similar efforts under way in other metro areas including: Houston, northern and southern California, Atlanta, Charlotte, Phoenix, Cleveland and Detroit, South and Central Florida, and Washington, D.C.

We're also seeing NextGen's benefits in places like Memphis and Louisville.

- In the fall of 2012, we revised wake turbulence separation standards at **Memphis Airport**.
- This means that aircraft can safely land and depart – one behind another – slightly closer than before.
- This has resulted in an increase in airport capacity by more than 20 percent.
- Of course, less time waiting to take off or land, means less fuel burned.
- FedEx is reporting a fuel savings of $1.8 million dollars per month.
- Building on that, we implemented new wake standards at **Louisville International Airport** this past September. Here, UPS is seeing 52,000 pounds of fuel savings per night on arrivals[2].

In the Denver area, we now have 51 satellite-based NextGen procedures in place.

- The FAA estimates these procedures will annually save operators $4 million dollars on arrivals and departures, from using more than 1.3 million gallons less fuel[3].
- And United Airlines estimates a savings of 100-200 pounds of fuel on each arrival into Denver International Airport[4].
- We plan to deliver more benefits like these throughout the entire country.

NextGen certainly offers many benefits for General Aviation as well.

- For instance, NextGen ensures greater access to many airports when visibility to the runway is reduced because of fog, clouds, heavy rain or other conditions like these.
- We have what we call LPV approaches – the full term is "Localizer Performance with Vertical Guidance approaches."

---

[1] NextGen Performance snapshots -- http://www.faa.gov/nextgen/snapshots/stories/?slide=28
[2] Jeff Tittsworth, FAA Terminal Services, Wake Turbulence Research Program Manager, Feb. 20, 2014.
[3] Seth Wenchel, MITRE. MITRE Denver Post-Implementation Analysis briefing to AJV-1. Feb. 21, 2014
[4] NextGen Performance Snapshots -- http://www.faa.gov/nextgen/snapshots/slides/?slide=24

- LPV's provides pilots with a precise landing path that they can see on their cockpit instrument panel.
- It's beneficial for smaller aircraft including business aircraft, helicopters, and rescue aircraft that need access to smaller and medium-sized airports that can't afford expensive ground-based landing equipment.
- Nationwide, we've already published more than 3,300 LPV procedures, in place at more than 1,660 airports[5].

In closing, I think the aviation industry is moving into a new period with lots of change and great opportunities.

- Through NextGen, we're making aviation safer, greener, more cost effective, and more efficient.
- The FAA is committed to expanding these benefits throughout the country.
- And we're working to safely and efficiently expand the use of unmanned aircraft and commercial spacecraft.
- As we do that, we'll shape the future of aviation for decades to come.

[5]http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/approaches/

FINAL **6/17/2014 5:10 PM**

Mike Whitaker
ASO Town Hall Meeting
ASO Regional Office, Atlanta, GA
June 19, 2014

Thanks Doug [*Murphy*]. I'm glad to be here.

- I've been at the FAA for a year now … and I'm proud to work alongside people who are so skilled and dedicated.
- As Doug said, I serve as the agency's Chief NextGen Officer.
- NextGen is one of the largest infrastructure projects in the country.
- Before I take your questions, I'd like to talk about a few topics today – NextGen … the budget … and our efforts to right size the national airspace system.

NextGen

This past year, we've made great progress with NextGen and its foundational programs.

- This includes automation upgrades at our en route and key terminal facilities.
- By next spring, all 20 en route centers will be using ERAM continuously.
- Through the TAMR program, we're upgrading and standardizing the computer systems at more than 150 terminal facilities throughout the country.
- All of this leads to a greater capacity for air traffic controllers to more effectively handle their aircraft in their sectors. It leads to improved efficiency for the entire airspace system.
- I'm proud to say that in March, the FAA completed the baseline installation of the Automatic Dependent Surveillance Broadcast, or ADS-B ground infrastructure.
- We now have ADS-B coverage nearly everywhere there is radar coverage. And in some places where there isn't radar coverage, such as the Gulf of Mexico, mountainous regions of Colorado and low altitude airspace in Alaska.
- Last month, we flipped the switch on the Houston metroplex. Airspace users can now benefit from 61 new satellite-based procedures in the Houston area.
- Our data communications trials in Memphis and Newark are coming along very well. We're on schedule for deployment at 56 airports starting in 2016, including at Hartsfield-Jackson.
- With these milestones accomplished, we're in a position to really unleash the benefits of NextGen.

Going forward, the FAA's NextGen Advisory Committee has recommended that we prioritize our efforts toward four areas:

- Increasing the use of Performance Based Navigation … making multiple runway operations more efficient … improving surface operations … and implementing Data Communications.
- We believe, and industry agrees, that progress in these areas can benefit the aviation community right away, without requiring additional cockpit equipage.

While we're making excellent progress, our challenge has been to convey all that NextGen does.

- We have been talking about programs, but we have to talk about what it means in terms of benefits for the user and the public.
- This is important because we want to encourage the user community to equip with NextGen avionics in a timely manner.
- And we want the public to understand why NextGen benefits them as taxpayers.

So we're turning to YOU – our employees. We have an Idea Hub NextGen challenge underway.

- We're looking for you to send us a 90-second elevator speech. From your perspective, tell us how NextGen is making the system better, safer or more efficient.
- How does NextGen make your job better?
- How does your work help us deliver NextGen?
- The challenge runs until July 6 … and we look forward to hearing from all of you.
- You can send a video, or a photo of old equipment and new equipment. You can write a letter or a haiku. We'll read it.

Before I turn to budget issues – let me also mention that we recently launched a general aviation weather safety campaign called *Got Weather.*

- I'm happy to report that at the end of May, we were 18 percent below our not-to-exceed metric for fatal GA accidents this year.
- We still have work to do. Nearly 75 percent of weather-related GA accidents are fatal, according to our partners at AOPA.
- GA safety depends on the active involvement of the GA community.
- With that in mind, we launched a joint weather safety campaign with many GA organizations last month in Alaska.
- We already have more than a dozen partners, including AOPA, EAA and NBAA as well as NTSB.
- NOAA features *Got Weather* on its website, which gets 13 million hits daily.
- *Got Weather* features a new topic each month. This month, we're looking at summer flying, which means thunderstorms.
- I ask you to reach out to the pilots you know and ask them to connect with us on Facebook and Twitter. And take a look at the *Got Weather* campaign website at www.faa.gov/go/gotweather.

Budget

The good news here is that Congress passed a two-year budget in December, which provides some fiscal certainty.

- It temporarily avoids the cuts we would have had to make under the sequester.
- But unless there's another fix, the sequester will be with us again in 2016.

And even with the budget we have, it's still going to be a huge challenge.

- In 2011, we expected to have about $3.6 billion in the Facilities and Equipment budget by now.
- But instead, we're at $2.6 billion.
- The F&E budget is what pays for NextGen and the maintenance of our current airspace infrastructure.
- So if we cut back on NextGen investments, we'll have to spend more on sustaining our current infrastructure. Cutback will delay the implementation of much needed technical upgrades to make the system more efficient.
- And we're already facing a backlog of deferred maintenance of our facilities and equipment.

Rightsizing the NAS / MAC work

This tight fiscal climate, along with last year's sequester and shutdown has prompted a discussion about the need for greater budget certainty for the FAA.

- Some are saying the FAA's structure should be changed – that the Air Traffic Organization should be privatized or made semi-autonomous (e.g. a not-for-profit government corporation).
- We think these conversations are premature.
- We first need to determine what problem we're trying to solve. Is it funding? Do we need to rescope the services the FAA provides?
- Once that has been determined, a change in structure, if one is necessary, will emerge.

We believe there is a fundamental disconnect between the services we provide and how we are funded.

- In addition to air traffic control, we've traditionally provided a variety of services to airspace users including flight plans, weather briefings, updated navigation charts, aircraft certification and pilot certificates.
- We are increasingly being asked to do more with less.
- In this budget atmosphere, we have to prioritize our efforts – knowing that we cannot continue to provide all of the services we have in the past.
- We're looking at what services we might be able to stop doing, or do differently, through innovative business methods and technologies.

On the question of what changes to make, if any, to our services, funding, and governance structure, we're working to build a consensus within the aviation community.

- We've asked the FAA's Management Advisory Council (MAC) – which include members from industry and labor throughout the aviation community – to help us with this process.
- Over the past three months, the MAC has spent a lot of time gathering the input of our external stakeholders as well as the agency's top leadership.
- The MAC will build on this work to provide us with some recommendations as we prepare for reauthorization next year.

Innovative Savings Initiative - *Pay for Success*

- As we think about being more cost effective at the agency level, we know that there are cost savings to be realized at the local level.
- You know your facilities and offices best … and you know where you can find cost savings.
- As part of this initiative, we're giving facilities and offices a chance to identify local ways to save money … and there's an incentive – you can reinvest a portion of these savings at the local level.
- We're going to begin this initiative with a limited number of facilities, offices and services as part of the test program developed as a response to our "Right-Sizing the NAS" initiative.
- The Air Traffic Organization is leading the way with a pilot program in Indianapolis … Salt Lake … Orlando … and at flight inspection and service centers, including Eastern Service Center here in Atlanta[1].
- Let's take this opportunity to be creative. How can we be more innovative and efficient in how we do our jobs?
- In support of these goals, the aviation safety office held an Idea Hub challenge earlier this year. They asked their employees how they could streamline efforts without affecting safety.
- AVS employees responded with 70 ideas that are now being reviewed.
- We know we'll see that kind of response with this initiative throughout the FAA.

In closing, let me just recap.

- We're making great progress with NextGen.
- We have to start communicating more effectively about tangible benefits, and we look to you to help us do it.

[1] Facilities include Indianapolis Center and Indianapolis Tower/TRACON; Salt Lake Center and Salt Lake TRACON; Orlando geographic area – Central Florida TRACON, Orlando ATCT, Sanford, Orlando Executive; All three ATO Service Centers, and Flight Inspection Services.

- Our budget situation continues to be a big challenge … and we're in the process of reevaluating the services we provide and how we should be funded, as we prepare for the agency's reauthorization next year.

Now, what's on your mind?

#

Q&A

UAS Test Sites

- As part of the current reauthorization, Congress mandated that the FAA would work to integrate unmanned aircraft systems into our nation's airspace. We are meeting this mandate.
- Last week, we announced that the State of Nevada's unmanned aircraft systems test site is ready to conduct research. That's the third of six congressionally mandated test sites to become operational.
- This site will use a ScanEagle, a fixed-wing unmanned aircraft system. Nevada will focus on how air traffic control procedures will evolve with the introduction of UAS into the civil environment. They'll also monitor how these aircraft will integrate with NextGen.
- Earlier this spring, unmanned aircraft were cleared to fly at test sites in North Dakota and Alaska.
- In North Dakota, the unmanned Draganflyer will check soil quality and the status of crops. And during the summer it will collect data to help develop an automated count of North Dakota's deer, elk, and bison populations.
- The University of Alaska will conduct flights of the unmanned Aeryon Scout – a 2.5 pound helicopter with cameras. It will test the ability to locate, recognize and count populations of wild caribou, reindeer, and musk ox.
- These test sites will help us identify operational goals as well as safety issues that we must consider when planning to expand the use of unmanned aircraft into our airspace.
- Even while we're in the testing phase, there are businesses that already want to use unmanned vehicles for commercial purposes. Section 333 of the FAA reauthorization provides a bridge before the small UAS rule is finalized to be able to authorize certain UAS operations on a case-by-case basis.
- On June 2, seven film companies, in conjunction with the Motion Picture Association of America, petitioned for exemptions under Section 333 to let them operate before the small UAS rulemaking is finalized.
- Since then, we have also received petitions for precision agriculture and flare stack inspections.

- We might be able to expand these and other commercial operations in tightly controlled, low-risk situations. The point here is that this industry is really growing, and we are working hard to make sure that it does so safely.
- And earlier this month, we had the second commercial operation by an unmanned aircraft system over the Arctic and the first flight over land. This supports our congressional mandate to expand Arctic small UAS operations. This industry is evolving before our eyes.

VERA/VSIP Announcement[2] – why wasn't it more widely offered?

- This year, a total of 1781 positions in various occupational series have been identified as eligible for VERA and VSIP pools.
- The primary rationale for selecting candidates into the pool include restructuring to consolidate or realign functions, reducing the supervisor to employee ratio, and changing the mix of employee skill sets.
- Last year, there were more offers because of the significant budget pressures we were facing. Some lines of business had a strong need to offer these early outs and buy outs, and those needs were met.
- Compared to last year, this year's need is not as great, and thus, there were fewer positions identified as eligible.

The FAA's New Performance Management Program is called *Valuing Performance (VP)*.

- The FAA is committed to attracting, retaining, and motivating a high performing workforce necessary to successfully achieve the FAA's mission.
- Valuing Performance (VP) is a new performance management program that was developed in response to feedback received on our current Performance Management System (PMS) from commentary on IdeaHub and in Town Hall meetings.
- The new program includes changes for the FAA's non-bargaining unit employees.
- It will go into effect on October 1, 2014.
- VP streamlines the performance management process by consolidating the Performance Management System (PMS) and the Superior Contribution Increase (SCI) processes into one program to reduce administrative workload.
- We'll replace the current pass/fail system with a four-tier rating system[3].
- We'll provide a consistent criteria and definitions for each of our ratings.
- This will enable managers to assign ratings based on employee performance which is tied to well-defined standards.
- You can learn more about this new program on the *Valuing Performance* website at my.faa.gov/go/vp

[2] An announcement should go out on 6/17 announcing this round of VSIP/VERA pools, pending briefing to NATCA

[3] Four tiers are: *Does not meet*, *meets*, *exceeds*, or *significantly exceeds* minimum required goals and job requirements.

Air Traffic Controller Hiring.

- As you know, the agency plans to hire more than 6,000 new controllers over the next five years to keep pace with expected attrition and air traffic growth.
- In the last year, we have spent some time examining our hiring process and determined that we need to make improvements to the way we select, train, and assign air traffic controllers. Our goal is to recruit a better qualified candidate and reduce costs associated with testing and training. This is important, because it's a big investment.
- We've taken steps to increase the objectivity in the assessment of candidates. In February, we issued the agency's first nationwide vacancy announcement since 2009. In the course of two weeks, we received more than 28,000 applications for 1,700 positions.
- We also developed a new pre-employment tool, called the bio-data assessment, designed in cooperation with the FAA Civil Aerospace Medical Institute, or CAMI. The test was validated by outside experts and it helped us narrow the pool of candidates to those likely to have the greatest success as air traffic controllers. It offers a more cost effective approach, reducing the number of AT-SAT tests we administer.
- An advantage to this process is that we'll no longer keep a waiting list of candidates who made it through the AT-SAT test but were not hired. We will not keep people in limbo for years. In fact, we are moving toward an annual hiring process that allows people to reapply if they weren't successful in a previous screening.
- It's good news that we're hiring again and that the academy is up and running after last year's closure. We are also hiring aviation safety inspectors and others.

#

Michael Huerta and Mike Whitaker
Employee Town Hall
FAA Auditorium
October 9, 2014

Michael Huerta: Good afternoon, everyone. I'd like to welcome everyone to our Town Hall meeting today. And I'd like to say hello to those who are watching on-line. I think these meetings help us to communicate with one another and stay connected and to have a clear sense of what's going on around the agency. So I appreciated your taking the time to spend with us this afternoon. These meetings help us all stay on the same page. In an organization that's as big as the FAA, with a mission this critical as it is to the nation, it's important that we're all pulling in the same direction.

Today, I'd like to discuss our strategic vision and initiatives. I'd like to reiterate *what* we're doing … *why* we're doing it … and the *progress* that we're making. I know we've discussed this with you in the past. But there are still a lot of questions about it. I want to continue this

conversation with all of you now, and with our senior leaders as well.

But before I go there, let me talk a bit about the fire at Chicago Center and our response to it. The fire at Chicago Center on September 26 was absolutely devastating. But it also was a reminder to me why the FAA is such an incredible organization. First and foremost, everyone was able to evacuate the building safely. Second, our team throughout the Midwest and throughout the nation made sure that operations remained safe.

Because of the fire, resulting smoke, and water from the sprinkler system, there was extensive damage to a key part of our air traffic equipment, including the communication system. When FAA's Telecommunications Infrastructure – the FTI system – goes down, the facility can't provide air traffic services.

Chicago Center activated their contingency plans, transferring control of en route traffic to neighboring control centers in Minneapolis, Kansas City, Cleveland and

Indianapolis, as well as a very large number of terminal facilities in the region. These facilities stepped in right away.

The Centers are working flights longer than they normally would. And the terminals are working flights they normally wouldn't even see. In fact, several TRACONs have doubled their traffic count over the last week. To support this effort, more than 140 Chicago Center controllers have deployed to these locations and are providing their expertise of Chicago Center's airspace.

Within a few days, we were able to build back Chicago airspace operations to near normal levels. I want to thank all of our employees who continue to make this contingency effort a success. People are working very, very hard. They're doing a fantastic job in managing under very difficult circumstances.

I also want to thank the many employees and the many contractors who are helping to bring Chicago Center back up on its feet. The FAA has 97 federal employees and 92

contractors from multiple technical specialties and vendors working around the clock to clean and restore the equipment and systems. In addition to the onsite activities, there are more than 60 employees and 60 contractors providing support services from different sites around the nation including our Tech Center, the Command Center, the Aeronautical Center, and many other locations throughout the system.

They're making great progress in a very short amount of time. Remember this only happened on September 26th. We've set up 25 racks of equipment. We've replaced about 10 miles of cable … and we're restoring 835 distinct circuits. And we're in the process of configuring and testing all of that equipment. Our target is to have service restored to Chicago Center by this Monday, October 13th, and we're on track to meet that.

In light of this incident, we're reviewing the agency's contingency plans, our resiliency plans, and our security protocols, to make sure we do everything possible to mitigate the risk of a future incident like this one.

Teri Bristol, ATO leadership and I remain very focused on Chicago's contingency operations and the Center's restoration efforts.

Last week, several of us traveled to the Midwest. I visit Cleveland Center, Midway Tower, Chicago TRACON, Kansas City Center and Chicago Center to thank all of the people that are rebuilding the infrastructure and are keeping our system running safely.

At each facility I think all of us encountered the same thing. I couldn't tell who was management … who was labor … who was a controller … or who was a technician—all I saw was a team. One Team – One Goal.

And while visiting these facilities, we all heard the same stories about adjacent facilities like South Bend, Indiana, or Cedar Rapids, Iowa, who have managed historic levels of traffic over the last week and a half.

Mike visited our colleagues in Minneapolis and in Indianapolis, Chicago Center and O'Hare Tower … and Mike, I know you have some stories to tell as well.

Mike Whitaker: Thank you, Michael and good afternoon. I would just echo what the Administrator said. Teri and I visited I think four days after the event, to Chicago Center, to the tower at O'Hare, Minneapolis and Indianapolis. The term we heard most often was esprit de corps, and the really coming together of groups that don't often get along too well, and don't necessarily always work well together, and someone put it, there were some employees that left their attitudes at home throughout this whole thing. As tragic as the event was, it was really nice to see that teamwork and pulling together. I'll just mention one more thing to validate that. We just had a luncheon this afternoon and the head of A4A spoke. He opened his remarks by complimenting the FAA on how they have handled the crisis, the sabotage in Chicago, and how quickly they got traffic levels back up, and how quickly

they're rebuilding, so I think that's quite a testament to everybody's work.

Michael Huerta: Thank you, Mike.

I was looking at some numbers just before coming to this. Teri, I'm wondering how we're doing it, because O'Hare is apparently running, as of midday, traffic loads that are about 104 percent of a normal Thursday. But it really is a testament to the work that everyone is doing.

We all know that we're very effective when we are focused on the mission, finding solutions to the challenges we face. We get incredibly creative, and we find very innovative solutions to very complex problems. It's who we are, and that's why we all came to the FAA years ago when we all joined. We may hold different positions. We may work in different facilities. We have different job tasks, but it's what we all share in common. How do we keep this system safe and how do we keep it efficient?

That is the spirit of the FAA.

A spirit behind a mission that's profound and simple at the same time. And it's in keeping with that mission, we have to focus not just on today. Not just on how we recover from the events of Chicago Center. We also have to focus on the long-term, and that's where our strategic initiatives come in. Let me turn to those now.

Our air traffic system is built on an infrastructure that we all know is 50 years old and it's located in areas that made sense 50 years ago. It doesn't necessarily match with our stakeholder's changing needs. Technological advances enable us to reconsider how and where we can most effectively provide the services that we provide.

We see emerging segments of the industry – like unmanned aircraft and like commercial space operations – that are looking for access to airspace they may not have had before.

We see the growing influence of other nations with rapidly developing aviation systems.

We see our own workforce changing and in the midst of a retirement wave.

And we have to deal with all of these changes, and all of these trends, and at the same time do all of our work, in an increasingly tight budget environment that forces us to make choices and to prioritize.

Just think, it was a year ago that we were in a shutdown. And since then we have been able to keep things on track and maintain a very safe and a very efficient system. This isn't a time to stand pat and congratulate ourselves on how well we are doing. We are in fact the gold standard in aviation. But it's a time to ask the question "what do we need to do to keep it that way for future generations and in the years ahead?"

Either we stay on top, or we fall behind. Just as the aviation industry has changed … the technology has changed … we need to continue to change in terms of HOW we do what we do.

And that's where our four strategic initiatives come in, and that's what they are designed to do.

Let me recap what they are:

We're going to make aviation safer and smarter by consistently applying a risk-based approach to making decisions.

We're going to deliver greater benefits through technology, through infrastructure, and through more efficient and more streamlined services.

We'll enhance global leadership by prioritizing our international efforts.

And we'll recruit and develop a highly-skilled workforce that enables us to meet the demands of the future.

The common thread that is running through all four of these is that we will better target and prioritize our activities and our resources, that we will rely on data in

order to base our decisions. This will include doing a better job of matching resources to needs and changing how we provide a lot of the services that we provide. But it also includes something else. It includes stopping some of the activities we've traditionally done and adjusting them to fit the new environment. As we all know that is a very, very hard thing for us to do.

Now at first glance, and I've heard it from many of you, it's tempting to think that these four priorities are a lot like the agency's previous strategic plans. Isn't this like the *Flight Plan* ten years ago? Or isn't this like *Destination 2025* five years ago? But that's true only if you look at the headlines.

Make no mistake. This is NOT a "flavor of the month." This is a fundamental shift in HOW we do our jobs. And that is what is different.

Let me explain. If we're really going to make safety decisions based on a level of risk, then that means we have to shift resources away from lower risk areas toward higher

risk areas. That means that we're not treating everyone exactly the same, and we're not treating every problem in exactly the same way. That's a big change in how we go about a lot of our work. Our task is to figure out where we need to focus. What are the areas of highest risk? What does the industry need? And how do we direct resources toward that.

If we are going to build NextGen, and we are … if we're going to devote resources to new user entrants, and we are … and if we're going to better match our services to the needs of our stakeholders, then we have to STOP providing certain services that are no longer vital to our mission, or conduct them differently through innovative technologies.

Figuring out what we're going to STOP doing is a big challenge for us. We've all lived it, particularly as we've looked at the last couple years. But after all, we certainly didn't become the best in the world by doing things that were of no value.

One of our colleagues recently described the FAA as a lot like an all-you-can-eat buffet. We keep adding things to our plate, but nothing ever gets taken away.

Well that may be the status quo, but we know that that is unsustainable. Doing things, simply because "that's the way we've always done it," is not something that we can afford to do anymore.

In our agency's history, if we look back, we have successfully made these kinds of changes.

Certainly, when radar came along, we stopped lighting bonfires … shining beacons … and using shrimp boat markers for air traffic control. When I was in Kansas City last week, a local manager gave me one of the original shrimp boats, which apparently are quite rare, but that's how we used to control air traffic not that long ago.

When we started using email, we did actually start buying fewer stamps.

It's especially important now to prioritize our activities and our services given the budget environment that we're in. The fact that we're starting off the fiscal year with a Continuing Resolution that keeps us at our 2014 funding levels through December 11th is a challenge for us. And with the budget agreement passed by Congress last December, we were only able to temporarily suspend a lot of the cuts we faced under the sequester. Unless there's another fix, the sequester will be with us again in 2016.

Since we announced our strategic initiatives, we've been working hard to lay a foundation that will enable us to realize the vision.

For instance, as part of our risk-based decision making initiative, we're in the process of taking the great relationship with industry and developing an even closer relationship where we will identify safety hazards and mitigate the risk together. In doing so, we'll be able to achieve safety compliance much more efficiently. This is part of our effort to evolve our safety oversight model to prioritize safety inspection efforts based on risk. We will

determine the areas of highest risk and we need to focus our resources on those items rather than on everything.

Mike is going to discuss some our efforts and progress with the NAS initiative in a moment.

I'd like to briefly talk about the other two.

To support our global leadership initiative, we've set up an agency-wide governing structure so that we can make decisions about international efforts in a data-informed and collaborative manner. And we've drafted an international strategic plan that states our international priorities and identifies the resources we need to execute it.

To support our workforce initiative, we've set up two agency-wide steering committees, a senior level committee and one that includes labor and management. These committees will help drive our collaborative decision making on issues important to our current and our future workforce. We've also started efforts to implement a more effective, a more engaging and a more consistent on-

boarding process, so that new employees know right off the bat what it is they need to know, and what's expected of them once they get here. And we stood up the FAA's Leadership and Learning Institute, replacing what many of us knew as CMEL, for manager and executive training.

These are just a few examples of how we've been laying the groundwork over the past few months. Our task now, starting in the new fiscal year, is to institutionalize these processes so they become part of a new culture.

We need to bring a much greater sense of urgency around these initiatives, and I'm looking forward to discussing this more fully with our leadership team at our executive off-site meeting scheduled in December. Our task is to realize as much of this strategic vision as possible by 2018. We need to start by thinking from the end state, and then walking back to identify all the things that we need to do between now and then.

We need to be ambitious here, but many of you have heard me say this, we cannot let the perfect be the enemy of

good. Ultimately, we're putting in place a new culture that will prevail beyond 2018 and continue for many decades to come.

Before I turn it over to Mike, let me say that the need for change in the aviation industry, in government, and in the FAA is clear. But we also have to be willing to make those changes. I know we can do it, because it's in our DNA. And we've seen it on display for the last week and a half in Chicago. And we do it each and every day as we manage the safest, and the most efficient aerospace system in the world. That's why we continue to be the gold standard in aviation.

We have an opportunity to make changes today that will have a lasting impact on the industry and our nation in the years ahead.

As we commit to these strategic initiatives, I have every confidence that we're going to be successful in getting there.

Thank you, and let me ask Mike to talk about the NAS initiative.

Mike Whitaker: Thank you, Michael. As you all know, the NAS Initiative is a very large initiative. It includes a number of elements including the rightsizing initiative that Michael has mentioned. It includes integrating new users into the NAS. And it includes NextGen, and what I want to do is focus on NextGen because there have been several very significant events taking place in October so I want to run through those three particularly significant events.

The first is that yesterday, MITRE corporation released a report which is an independent assessment of how we're doing in NextGen. This was initiated at the request of Ed Bolton, our Assistant Administrator for NextGen. And was designed to give us a check in as we get to the point where we are four or five years into rolling out NextGen to see how we're doing.

The headline is that it really validated what you've heard us talk about recently in that we are to the point where we are completing the foundational part of NextGen … and in essence we are on track with where we need to be with this phase of NextGen. We have completed, as you know, the ADS-B infrastructure this year. We are completing ERAM in the spring. And the TAMR program in the TRACON's is also on track. You've often heard us talk about this as building the iPad. This is the basic foundation for NextGen that will allow other capabilities to be run in the system. It's a necessary part, and a very expensive and long process but we're coming to the conclusion of that section of NextGen. The MITRE report acknowledges that and acknowledges that we're now to the point that we need to focus on rolling out capabilities for users.

That brings us to the second significant event also yesterday. We had a meeting of the NAC, which is the NextGen Advisory Committee. This is our primary interface with industry. We meet three times a year. At the

NAC yesterday, we completed basically what has been a year's worth of work where we reached out to the NAC right during the pre-government shutdown time and said tell us what you think the industry's top priorities are. Since that time, we've worked very intensively with the NAC and with industry, with over a hundred companies participating in a whole series of working groups to develop very concrete plans to roll out benefits in four particular areas: performance-based navigation, multiple runway operations, surface data sharing, and Data Comm.

This has resulted in identifying locations, milestones, and very definitive work plans for the FAA and for industry to complete work over the next 24 to 36 months. That work was also rolled out yesterday. It was presented at the NAC. We have agreed with industry on all of these. It wasn't always obvious that we were going to be able to get to that point – huge amount of work by all parties involved but an important milestone. Some of the things that are captured in that work include the Metroplex programs. You heard Houston Metroplex rolled out earlier this year

with great success – over sixty new procedures in Houston. And then at the end of September, the North Texas Metroplex rolled out again to great success. So we've got really good work underway in this next phase of NextGen delivering benefits. We will take that work with the NAC and we will present it to Congress at this point next week, and the real work will continue over the next couple of years.

The third thing I'll mention on NextGen for this month is that as we complete the foundational portion, as we focus on benefits to users, we also have to keep out eye on the future. We're very focused on the 2020 equipage mandate for ADS-B Out. This is a major milestone in the rollout of NextGen. Our main focus right now is to make it very clear that we have no intention of letting that date shift. The 2020 mandate is vital to keep NextGen on track.

Later this month, we're going to have an industry call to action that we will host here at FAA. We are bringing all of the stakeholders together to discuss the roll out of ADS-B, what are the barriers, what are the issues. As we

individually engage with stakeholders we get a lot of finger pointing the other way so we want to get everyone in the same room and talk about it. I can say that if you every worried about having a party where no one shows up, this is not one of those parties. We have a very long list of people trying to get in, and we're managing what's going to be certainly a very lively, but I think productive event. AVS has taken the laboring ore on this and has already done a huge amount of work in understanding what the technical issues are … what sort of issues we can anticipate, but I think on October 28th we'll probably learn some new things as well.

So three really big events, and I think showing really good progress on keeping NextGen on track.

Thanks.

[Michael take the podium]

Michael Huerta: Thanks a lot, Mike.

One thing I would like to talk about before we open it up for questions is you've been reading a lot in the newspaper about the agency's role with respect to Ebola, and what's been happening as part of our larger government-wide effort. I would like to talk a little bit about that since I know that many of you have questions about it.

First point is that this is a very big challenge, not just for the United States but for the world. It's an international effort, and here in the United States, it's very much an interagency effort. This is a significant public health issue, and given its focus as a public health issue, that necessitates that our colleagues at the Centers for Disease Control and Prevention play a leading role in making the determination of what the entire government's response is going to be. We are working very, very closely with our colleagues at CDC.

The FAA's interests and the FAA's role in that is secondary to these broader public issues and concerns, but nonetheless, we do play an important role, and it's essentially in a couple of different areas. You heard from

the President that the nation is going to increase, and we've already started to increase, screening of inbound passengers coming into the United States. It's not the FAA that is conducting that screening. It's being conducted by our colleagues at CDC and the Customs and Border Protection. There is a plan that is in place for extending these activities to other gateway airports around the country. But as the principal proponent and regulator of the airport community, we play an important information-sharing role with our colleagues that operate airports all around the country, and are facilitating communication between them and the public health authorities as well as the other federal agencies that we're dealing with in that regard.

Second point is, we're doing a lot of communication with our stakeholders – the airlines, the pilots and flight attendants that serve as their crews, and ensuring that they have the information that they need that's provided to them by our public health colleagues. Again, it's not up to us to establish how best to combat an epidemic or an issue such as this but it's ensuring that we serve as a vehicle for

communication and making sure that they have what they need. This is something that is a very tightly integrated effort. It's something that is evolving very, very fast, and it's something that has the highest attention of the Administration. While we play a role in it, ours is not the primary role. Our role is to support the great work that's taking place by our colleagues at HHS, Centers for Disease Control and Prevention, Customs and Border Protection, as part of a larger administration strategy on how we deal with an important public health issue.

So with that, we'd like to open it up for questions …

Mike Whitaker
FAA Central Region – Veteran's Recognition
November 5, 2014
Kansas City, MO

Thank you, Joe [*Miniace*].[1] I'm glad to be here for today's veterans recognition.

When our veterans sign up, they commit themselves to a cause greater than self. Some of you have to put off plans for family or education so you can serve your country. Some of you aren't able to see your families for months or even years at a time.

Often, it's tough on your families. Spouses have to be both a mom and a dad when you're on deployment. Sometimes they have to move to a new city with each new assignment. Or they might be taking care of a wounded soldier.

[1] Central Regional Administrator

As we mark Veteran's Day, let's make a point of expressing our gratitude to our veterans when we have the opportunity. I'd like to take this moment do so. Could all of our veterans please stand and be recognized?

[*Lead Applause*]

When many of our veterans leave active duty, they find new ways to serve. In the Transportation Department, veterans make up more than one quarter of our workforce[2]. In the FAA alone, we have about 15,000 veterans.

I'd like to highlight a few of our DOT veterans who work here in the regional office[3].

First, I'd like to recognize and thank Tim Coronado for his service. Tim is a motor power and equipment safety inspector in the Federal Railway Administration. He inspects freight rail cars and locomotives for safety

[2] Cynthia M. Vaughan, Director, Departmental Office of Human Resource Management, October 28, 2014.
[3] All three should be present in the audience.

compliance. He has been a part of our military for 29 years. Tim was in the Army, active duty for five years … and continues to serve in the Army National Guard.

In 2005-2006, Tim was part of Operation Iraqi Freedom, stationed in the city of Ramadi, where he worked as an engineering equipment warrant officer.

Tim ran a shop that provided maintenance support for an engineering battalion. His group was involved in building roads and other infrastructure projects. They also repaired Humvees, bulldozers, power generators and other motor equipment. They had to do their work while facing the threat of incoming rockets and mortar fire – about 2-3 times a week.

Tim says that the military helped him learn how to operate in a safety-conscious environment, which enables him to better serve the public as a safety inspector.

I'd also like to recognize and thank Donald Harper for this service. Donald works in the FAA's Airports Division.

He's an airport engineer and supports the Airport Improvement Program here in the region. He signed up with the Air Force, active duty for five years, and he continues to serve in Kansas Air National Guard.

In 2004, Donald was deployed to Iraq -- stationed at Kirkuk Air Base, and then at Camp Victory near Baghdad in 2006. Donald was a project engineer, and supported efforts to build infrastructure, including repaving roads and conducting large drainage projects. He helped to set up trauma centers and hospitals that treated injured American soldiers. Like Tim, Donald and his service members faced the threat of rockets and mortars several times a week, very often at night.

In 2010, Donald supported relief efforts in Haiti after the Earthquake struck. You remember how terrible that was – 7.0 on the Richter scale … more than 200,000 dead … and 1.5 million people displaced.

Donald worked to set up living quarters for U.S. military personnel, which were essentially rows of tents

with electrical generators and shower units. He also helped set up hospitals for Haitian citizens to get treatment.

And Donald was part of a team to manage the airport – making sure it had lighting, and helping relief agencies like the Salvation Army and the American Red Cross get their flights in and out.

Donald says that through the military, he honed the skills of discipline, managing priorities and paying attention to detail. He reinforced core values including integrity and honesty – all of which enable him to continue serving the public at the FAA.

Finally, I'd like to recognize and thank Oronde [*Oh – RON – DAY*] Smith for his service. Oronde is an assistant manager in the FAA's Flight Standards Division. His team provides administrative support for our safety inspector workforce. Oronde has served in the military for 19 years. He was in the Air Force, active duty for 10 years, where he was on the ROTC faculty at Kansas State University. His

job was to prepare students to be fighter pilots, cargo pilots, and support staff.

Now, Oronde is a member of the reserves. He is a First Sergeant in the 303rd fighter squadron, where he advises the commander on a wide range of topics including the health, professional development and wellbeing of all assigned pilots and enlisted members. He works to make sure that pilots meet their physical and academic requirements, and maintain their flight hours and their type rating.

In comparing his military service to his service at the FAA, Oronde says, “It’s the same fight, just a different mission. In both jobs, you make sure that aircraft and pilots and passengers are safe and can get from point A to point B.”

Tim, Donald, and Oronde are only a few of the DOT’s veterans who are making great contributions for our nation.

All of our veterans have given so much to us. Let's make a point of giving back. There's many ways to do that. Maybe we can help a returning vet find a job. Or help them with medical assistance … or do something to help their families, especially if their loves ones are deployed.

And let's definitely thank our veterans for their service … and for fighting for the freedom we all value so much as Americans.

Thank you very much.

#

Mike Whitaker
AAAE Runway Safety Summit
December 9, 2014

Thank you, Randy [*Berg, AAAE Chairman*]. I'm glad to be here.

Commercial aviation is a very safe industry.

- We've driven down the rate of commercial airline accidents to an exceedingly low level.
- But as good as the record is, the FAA is not satisfied.
- We know there is still risk in the aerospace system – both in the air and on the surface.

Runway safety continues to be a priority for the FAA.

- Congress … The National Transportation Safety Board … the Transportation Department's Office of the Inspector General … and the FAA's own data shows that this is an area that requires a continued focus.

The FAA takes a proactive approach that focuses on reducing safety risk.

- We're committed to preventing accidents long before they can happen.
- Our approach can be summed up in three parts: **we collect … we find … and we fix.**
    - First, we **collect** safety data from many sources -- including automated air traffic data gathering tools … and voluntary safety reports from pilots, air traffic controllers, technicians and other sources.
    - Then, we **find** the potential safety hazards and assess the risk. We also determine the root causes and precursors of accidents.
    - And last, we **fix** the problem by putting in place corrective actions.

Today, I'd like to talk about how we're employing this proactive approach to ensure runway safety.

Let me start by saying that we've made great progress in reducing serious runway incursions.

- The number of serious runway incursions has gone down 77% since 2000.
- The nationwide rate of serious runway incursions was .282 per million operations at the end of FY2014[1].

[1] This is below the FAA's performance limit of .395 incursions per million operations.

Yet, an article published last month in USA Today painted a false picture, I would argue.

- The article reports that runway incursions have increased substantially in the past decade.
- But it's not always intuitive.
- I'll say it again -- serious runway incursions have gone down 77% since 2000 … and most of the incursions we count involve no risk of collision.
- The article's claims of an "increase" in overall runway incursions is explained in part by changes the FAA made in the way we count incursions. In 2007, the FAA reclassified it's runway incursion count to include additional types of surface incidents, in order to be consistent with international aviation standards.
- Then in 2012, the FAA implemented improved reporting systems that have enabled us to capture more safety data than ever before. More data means we're identifying more incursions – even ones that pose no risk of collision.
- So we're documenting more incursions because we're counting more things and capturing more data.
- This is a good thing – we're in a better position to nip potentially serious problems in the bud.

This proactive, data-driven, risk-based approach is working – take for example our efforts to reduce safety risk associated with converging runway operations.

- This includes those operations with non-intersecting runways with intersecting flight paths.
- Our safety data showed that there was a higher risk when aircraft execute a go around that conflicted with another aircraft departing from a non-intersecting runway, creating the potential for collision.
- To address the problem, we worked with our stakeholders, and put in place policy changes and new automation tools at 140 airports where this risk was identified. This was one of the most significant reductions in safety risk we've made over the past decade.

And we're making many other efforts, both using technology and partnerships with airports.

First, Technology…

We're deploying a program called Runway Status Lights, or RWSL.

- RWSLs are a series of red lights embedded in the runway pavement.
- These lights provide a visual signal to pilots and vehicle operators indicating that it is unsafe to enter, cross, or begin takeoff on a runway.
- We've deployed RWSL at 8 airports, including Orlando, Washington Dulles, Phoenix, Houston, Minneapolis, Seattle, Las Vegas, and Charlotte … and we plan to deploy it at a total of 17 airports by 2017.

We are also working together with airports and port authorities to implement another technology -- ADS-B Out Vehicle Squitters.

- These units are installed on ground vehicles, including fire trucks and snow plows.
- Like the transponder on an aircraft, these units allow the control tower and the airport operations center to see the ground vehicle's position.
- With a tablet computer, the ground vehicle operators can see their own position as well.
- This capability helps to ensure the safety of the vehicle operator and the aircraft on the airport surface.

Second, Collaboration…

The FAA is working collaboratively with airports and the aviation community to address runway safety risk.

- For example, we teamed up with the Aircraft Owners and Pilots Association to create an online runway safety training course for General Aviation pilots.
- The course helps pilots see the potential factors that could lead to a runway incursion, and how to prevent it.
- Since the launch in 2009, there have been nearly 61,000 completions of the course … and next month, we expect the new, updated course to be available.

The FAA also requires a Runway Safety Action Team (RSAT) meeting at each towered airport once a year.

- These teams include air traffic personnel, the airport operator, and often other stakeholders like pilot groups.
- The team identifies potential problem areas on the airport surface and takes specific actions to mitigate the risk. These actions could include: enhancing surface markings

and signage … vehicle driver training programs … and pilot education and awareness.

Looking ahead, the FAA's Airports office is starting a new 15-year initiative to improve taxiway geometry to reduce the likelihood of runway incursions.

- Through our safety data analysis, we've identified specific intersections at airports around the country where there is some safety risk associated with the geometry – it could be something with the angle or number of taxiways intersecting the runway at a specific location … a direct access from a ramp onto a runway … or because the width of the pavement causes the signs to be far away … or other things like this.
- We want to address these "hotspots" before it can result in an incident or accident.
- For corrective actions, we'll use a risk-based decision making approach – we will prioritize the locations based on the frequency of the incursions taking place … the number of operations at that airport … and the type of geometry causing the most issues.
- In 2015, we'll begin reaching out to the airport community and work with them to determine corrective options and recommend improvements.

Runway Excursions…

We're taking specific steps to address runway excursions as well.

- Of course, this is when a departing or landing aircraft veers off or overruns the runway surface.
- Runway excursions are the most common runway accidents to occur and account for the majority of runway fatalities.
- The number of excursions has not decreased in more than 20 years, according to the International Civil Aviation Organization.
- Just like with incursions … and just like with all aviation safety problems … we want to know the root causes, so we can mitigate the risk.

We're actively working to improve runway safety areas, so that they conform to a standard length, which is 1,000 feet from the runway end at larger airports.

- In some places, however, this is not practical because of lack of land or other obstruction.

- So we're employing other options. **EMAS** is one alternative – it stands for **Engineered Material Arresting System.**
- The FAA has obligated funds to put EMAS in at some airports.
- EMAS uses crushable material placed at the end of a runway to stop an aircraft that overruns the runway.
- Currently, EMAS is installed at 83 runway ends at 53 airports … and we're continuing the deployment at additional airports.
- To date, EMAS has safely stopped nine overrunning aircraft with a total of 243 crew and passengers aboard those flights.

These are just a few of the many efforts the FAA is making to ensure runway safety.

In closing…

- Just as we've made midair collisions almost nonexistent … and just as we've driven down the rate of commercial airline accidents and fatalities … we have to continue to take the next big leap in safety.
- The FAA is taking aim at runway safety problems … and we're doing it through a proactive data-driven, risk-based approach.
- In doing so, we'll continue to maintain a very safe aerospace system.

#

Mike Whitaker
Equip 2020 meeting
Portals 3 Room
March 18, 2015

Reviewed by: Bruce DeCleene, James Marks

Thanks Hoot. I'm glad to be here.

- At the FAA's Call to Action in October, many arrived with great concerns and individual interests.
- But we've been able to come together – operators, industry, and government – to identify and resolve barriers to the equipage of ADS-B Out.
- We're making great progress.

In general aviation, we are seeing a marked uptick in equipage

- More than 3,500 GA aircraft[1] have equipped since October: A more than 50 percent spike.
- I want to thank the GA Working Group for their efforts to address the cost concerns voiced by GA pilots and operators.
- Competition amongst avionics manufacturers has led to a dramatic cost reduction in equipage – over a 50 percent price drop since October.
- Several sources now exist for units at prices lower than $2,000.[2]

[1] James Marks, Aviation Safety Inspector, ADS-B/EFVS/TCAS, Flight Standards Service, Avionics Branch (AFS-360), March 6, 2015.

[2] In February, the FAA also published a technical correction to the rule to address concerns from the experimental aircraft community. Experimental aircraft are not certified by the FAA, but we had inadvertently implied that their ADS-B equipment had to be certified. Manufacturers have already announced solutions for this market for under $1000 (Source: Bruce DeCleene, February 17, 2015).

We're making progress on airline equipage.

- Four airlines publicly declared they will meet the 2020 deadline – Delta … American … Jet Blue … and FedEx (At the Feb. 26th NAC meeting).
- I want to commend the work done by the GPS Receiver Working Group.
    - You reached an agreement that allows air carriers with first and second generation receivers (e.g. SA aware) to continue to use them until 2025, recognizing their dedication in adopting early and it provides time to upgrade to the best available receiver technology.
    - It also recognizes that we want to reward – not punish – early adopters of technology. We want to ensure earlier equippers have flexibility in compliance with final standards.
    - This has been an unresolved issue for three years … but after the Call to Action, we got an agreement in about 60 days. It's a good example of what can be accomplished when experts work together as a team.

I want to credit Equip 2020 for developing an equipage tracking database.

- With this effort, you'll be able to capture data from suppliers (the solutions and products they're offering) … and you'll be

able capture data from the air carriers (what are they buying?, when are they buying it?, etc.)[3].

- With this information, you'll be able to track the equipage trends … specifically, by comparing supplier plans with air carrier plans and spot potential risks to achieving equipage compliance by the deadline.
- This way, we'll know if we're on track for 2020 … and if not, redouble our efforts accordingly.

I also want to credit the Education and Information Working Group for developing a strategic communications plan to encourage equipage.

- It's especially important for the GA community. We need to let them know what the benefits of equipage are, what the options are, etc.
- The FAA Safety Teams are a key part of the FAA's outreach to the GA folks. They will continue to provide aircraft owners and operators with ADS-B equipage information.
- We must continue to reach out to GA at key venues like AirVenture, as we did last year.

Equip 2020 has accomplished a lot in just 4 ½ months. And there's still much more to do.

- There will be another month of hard work as you continue to establish agreements and build the specific plans.
- Then, I understand you'll be shifting to bi-monthly or quarterly meetings to assess progress and make any necessary changes.
- I look forward to staying in close touch to see the great results in the months ahead.

[3] The supplier data base will include info on all aircraft types (air carrier, GA). The carrier database will only include air carriers, as it is not possible to acquire info from every GA operator. (Bruce DeCleene, Feb. 17, 2015).

Closing.

- Again, I want to thank everyone for your efforts and teamwork.
- We're developing solutions for tough problems.
- When all said and done, everyone here will have a lot to be proud of.

Mike Whitaker
Jeppesen CONNECT
March 17, 2015

Reviewed by: Mary Lou Pickel, Jesse Wijntjes, Jim Robb, Erik Amend, Jim Linney, Brian Hint, Lynn Ray, Lisa Zagaroli, Steve Bradford

As you know, NextGen is the FAA's plan to modernize the U.S. airspace system.

- We're moving from a radar-based system to a satellite-based system to control air traffic.

- We're moving from largely voice communications, to less error-prone digital communications. We're adding new tools that give pilots, controllers and other users more information at the right time.

- NextGen provides greater efficiency and predictability to our system. It will enhance safety, and help us be greener by reducing fuel consumption and emissions.

- NextGen is happening now. It's being integrated into the airspace system every day.

NextGen's Foundation

- We're on the verge of finalizing automation upgrades at 20 planned en route centers.

- We're in full production mode with automation upgrades in our terminal facilities.

    - With these new systems, we can process more flight data, more efficiently, from more sensors.

    - All of this leads to improved efficiency for the entire airspace and gives us the foundation to employ other NextGen tools that track aircraft much more precisely than radar -- like ADS-B.

- Last year, we completed the installation of 634 radios that make up the ground infrastructure for ADS-B – which enables more efficient separation of aircraft … and provides coverage in the mountains and over water.

- SWIM provides airspace users with a one-stop shop for real-time data products, including weather and air traffic information.

- SWIM includes more than 60 information products that the FAA makes available to the airlines, the Department of Defense, and air traffic facilities … and we expect to have about 115 products by the end of the year.

- Last year, we completed feasibility demonstrations with Virgin America and United Airlines to enable airborne access to SWIM products through Electronic Flight Bags (EFBs[1]), to provide air crews with the same information available to air traffic controllers (info on weather, NOTAMS about runway closures or procedural changes at the airport). This year, we are continuing to expand on the concept by demonstrating improved collaboration through bi-directional information exchange between aircraft and SWIM. Pilots can submit information including about turbulence, temperature, and wind, to their dispatchers and they can come up with flight preferences that they can submit to air traffic for clearance through voice or data communications.

NextGen's Capabilities - these are like apps that we can run on this foundation.

Navigation (PBN)

- We have implemented more than 7,000 performance-based procedures and routes around the nation, which exceeds the number of traditional procedures. These procedures enable more direct routes … cut flight time … cut fuel burn and emissions … and improve access to airports.

- The FAA's Metroplex program is a way to target the benefits of PBN in busy metro areas.

- This past year, we implemented scores of new satellite-based procedures in the Houston, North Texas and Washington DC metro areas.

- These procedures include ones that enable planes to climb and descend without leveling off, reducing fuel usage and emissions.

- In Houston, where we put in place 61 new satellite-based procedures, post-implementation data analysis shows an annual savings of $6 million from reduced fuel consumption.

- We're in the process of conducting post analysis in North Texas, where we put in place 80 satellite-based procedures.

[1] This can be on the cockpit display or through commercial off the shelf products like iPad or other smart tablets.

- For the Washington DC metroplex, we will implement a total of 49 new satellite-based procedures by June 25 … and we project that airspace users will annually save 2.5 million gallons of fuel … $6.4 million in fuel costs … and a reduction of 25,000 metric tons of carbon dioxide.

Communications (Data Comm)

- Through Data Communications, controllers and pilots will be able to communicate by exchanging digital messages, to supplement current voice communication.

- We have trials underway at two U.S. airports (Memphis and Newark) to test Data Comm's departure clearance capability.

- Each site is using Data Comm, 24/7, to conduct as many as 80 operations a day.

- Our airline partners include United, FedEx, UPS, British Airways, Lufthansa, and Scandinavian Airlines.

- In these trials, we're seeing reduced communications time, resulting in faster taxi outs, reduced delays, and reduced pilot and controller workload.

- When fully implemented, Data Comm will enable more dynamic rerouting, both in the pre-departure and airborne phases of flight.

- Our plan is to deploy Data Comm's tower services at Salt Lake airport and Houston's Bush and Hobby airports this year, and at 53 more airports in 2016. This schedule represents an acceleration of our plans to deploy this service into the national airspace system.

- We plan to deploy Data Comm's en route services starting in 2019.

- On February 25th, the FAA made an adjustment to its 2008 flight recorder improvement rule that should help facilitate aircraft equipage of Data Comm.

- The application of the data link recording rule was confusing and inconsistent for older aircraft. Also, the cost of equipping older aircraft with data link recording as part of Data Comm was reducing industry participation.

- The new policy applies the recorder rule only to new aircraft, manufactured after the effective date of the rule (2010 for air carriers), and to those aircraft which did not have any data link solutions available before the effective date.

- This new policy will allow the rule to be applied in a consistent and predictable manner, and it enables thousands of older aircraft to affordably access the safety and efficiency benefits of data communications.

In NextGen, we're concentrating our efforts on four priorities in the next one to three years.

- 1.) increasing the availability and use of Performance Based Navigation,
- 2.) making multiple runway operations more efficient,
- 3.) improving surface operations, and
- 4.) implementing Data Communications.
- We believe, and the aviation industry agrees, that progress in these areas can benefit all of us in the near term.
- This past October, we submitted a plan to Congress with specific commitments, including locations and dates, to deliver capabilities in these four areas.

Integrated System (by 2025)

The systems we're putting in place are enabling a more networked airspace system, in which information is more easily shared between air traffic facilities and with airspace users, enabling greater flexibility and collaboration.

- For instance, because of ERAM, en route centers will have the same access to all flight plans filed in the system. So instead of one en route center telling the next en route center that an aircraft is on its way, air traffic controllers will already have better knowledge of what to expect, which will enable them to make decisions to optimize performance.
- In the future, we're also moving our voice system and our radar surveillance sensors onto a communications network. So if one facility has an outage, other facilities can pick up and manage their air traffic in a timelier manner.

4D Trajectory (4DT) is what the future looks like and where NextGen is leading us.

- With 4DT, we'll have a more precise description of the aircraft path (latitude, longitude, altitude, and time).
- Under this concept, the airspace user submits a plan to fly a preferred route. Air Traffic can check it against the current constraints of the system, and then issue a clearance. Air Traffic may provide a required time of arrival – (i.e. the aircraft will be obliged to reach certain points at defined times.)

- Through SWIM, everyone will have a common set of information and therefore common situational awareness (about weather, runway construction, ground delays/stops, altitude restrictions, speed restrictions, etc.). With common information, air traffic and airspace users can negotiate preferences digitally through a pilot's iPad or smart tablet, and come up with the most efficient, deconflicted reroutes around bad weather, all before the controller issues the final clearance (which they can do through Data Comm, enabling more efficiency.)
- This kind of trajectory management will allow the aircraft to move at its maximum performance, making air traffic operations more efficient and increase overall predictability of the air traffic system.

In this future state, we will be able to apply these same capabilities for larger unmanned aircraft, as they will be sharing the same airspace as the passenger planes.

For now, we're taking steps to integrate small unmanned aircraft into the airspace system.

- This is an exciting new technology with wide-ranging applications from aerial photography … crop monitoring … moviemaking … search and rescue … and many more.
- On February 15, we proposed new rules permitting the use of small unmanned aircraft—those that weigh less than 55 pounds—for non-recreational purposes. These rules are now available for public comment.
- The rule limits small UAS to daylight flights and requires the operator to maintain visual line of site. The rule also proposes qualifications that an operator would need to fly a small UAS, and proposes operating limits to minimize risks to other aircraft and people and property on the ground.
- Before we can permit a wider level of integration, we still have to answer additional questions, including those related to system safety, command and control link, and "sense and avoid" capability.
- We'll be able to answer these questions from ongoing research being done by the FAA, NASA, the Department of Defense, and six FAA-approved test sites around the country[2].

Unknowns?

[2] The University of Alaska-Fairbanks, the State of Nevada, New York's Griffiss International Airport, the North Dakota Department of Commerce, Texas A&M University-Corpus Christi, and Virginia Tech.

Mike Whitaker
MITRE AAC meeting
March 20, 2015

Reviewed by: Mark House, Bob Schramm, Mary Lou Pickel, Erik Amend, Lynn Ray, Jesse Wijntjes, Raquel Girvin, Pamela Gomez, Lorne Cass

Thank you, Jane [*Garvey*]. It's good to be here.

- The FAA continues to believe strongly in the importance of collaboration with the aviation community, including labor, industry and international partners.

- We all have a stake in maintaining a 21st century airspace system … and we need to continue to work together – whether it be on NextGen priorities … establishing a consensus on the services FAA should provide … and continuing to foster America's leadership in global aviation.

- Today, I'd like to update you on four fronts: NextGen … small UAS rule … the FAA's Reauthorization … and our Budget.

NextGen's Foundation / Equipage.

- We're on the verge of finalizing automation upgrades at 20 planned en route centers. This is one of the biggest technological transformations in the agency's history.

- We're in full production mode with automation upgrades in our terminal facilities.

- As you know, last year, we completed the ground infrastructure for ADS-B. We're working through Equip 2020 to accomplish more rapid equipage of ADS-B Out (consistent with one of MITRE's recommendations from their NextGen assessment report last year).

    - We've seen a more than 50% spike in GA aircraft that have equipped since the FAA's Call to Action in October. More significantly, we've seen a 50% price drop since then - Several sources now exist for units at prices lower than $2,000.[1]

[1] In February, the FAA also published a technical correction to the rule to address concerns from the experimental aircraft community. Experimental aircraft are not certified by the FAA, but we had inadvertently implied that their ADS-B equipment had to be certified. Manufacturers have already announced solutions for this market for under $1000 (Source: Bruce DeCleene, February 17, 2015).

- Four airlines have publicly declared they will meet the 2020 deadline – Delta … American … Jet Blue … and FedEx (At the Feb. NAC meeting). We've reached an agreement to allow air carriers with first and second generation receivers (e.g. SA aware) to continue to use them until 2025, recognizing their dedication in adopting early and it provides time to upgrade to the best available receiver technology.

For NextGen, we submitted a plan to Congress this past October, outlining specific commitments in four key priority areas:

- 1.) increasing the availability and use of Performance Based Navigation,
- 2.) making multiple runway operations more efficient,
- 3.) improving surface operations, and
- 4.) implementing Data Communications.

Since the plan was submitted, we've made a lot of progress.

In the PBN area:

- This past year, as part of the FAA's Metroplex program, we implemented scores of new satellite-based procedures in the Houston and North Texas metropolitan areas.
- In Houston, where we put in place 61 new satellite-based procedures, post-implementation data analysis shows an annual savings of $6 million from reduced fuel consumption.
- We're in the process of conducting post analysis in North Texas, where we put in place 80 satellite-based procedures.
- For the Washington DC metroplex, we will implement a total of 49 new satellite-based procedures by June 25 … and we project that airspace users will annually save 2.5 million gallons of fuel … $6.4 million in fuel costs … and a reduction of 25,000 metric tons of carbon dioxide.

In the Multiple Runway area:

- We completed Wake RECAT in Houston in December … and in the New York area, just this month.

- We're seeing great results in Atlanta. The FAA has improved the arrival rate at Atlanta by approximately five percent by using Wake RECAT.

- These results are having a tremendous impact and increasing our stakeholder confidence in NextGen.

In the Surface area:

- We are working to increase predictability and provide actionable and measurable surface efficiency improvements by sharing more data with air traffic facilities.

- This effort includes expanding the deployment of the SWIM Surface Visualization Tool (SVT), which is giving TRACON controllers a visual depiction of the surface activity at airports equipped with ASDE-X. This month, we'll complete the deployment of this tool at eight TRACONS, plus the Command Center.[2]

- At the February NAC meeting, the FAA announced it will deploy Advanced Electronic Flight Strips (AEFS) at Newark Tower in 2016. AEFS replaces paper flight strips, reducing controller workload, and improving taxi-out and departure clearance times.

In the Data Comm area:

- Our plan is to deploy Data Comm's tower services at Salt Lake airport and Houston's Bush and Hobby airports this year, and at 53 more airports in 2016. This schedule represents an acceleration of our plans to deploy this service into the national airspace system.

- We completed a final investment decision for initial en-route services for Data Comm … and we plan to deploy these services at en route facilities starting in 2019.

- On February 25th, the FAA made an adjustment to its 2008 flight recorder improvement rule that should help facilitate aircraft equipage of Data Comm.

- The application of the data link recording rule was confusing and inconsistent for older aircraft. Also, the cost of equipping older aircraft with data link recording as part of Data Comm was reducing industry participation.

[2] SoCal, NoCal, Houston, Louisville, Boston, New York, Chicago, Potomac, plus the FAA Command Center

- The new policy applies the recorder rule only to new aircraft, manufactured after the effective date of the rule (2010 for air carriers), and to those aircraft which did not have any data link solutions available before the effective date.

- This new policy will allow the rule to be applied in a consistent and predictable manner, and it enables thousands of older aircraft to affordably access the safety and efficiency benefits of data communications.

FAA will need MITRE's help in continuing to assess the performance impacts these priorities are having in the airspace system.

- This analysis helps us document benefits and give the user community continued confidence in the success of NextGen.

We're taking steps to integrate small unmanned aircraft into the airspace system.

- On February 15, we proposed a new rule permitting the use of small unmanned aircraft—those that weigh less than 55 pounds—for non-recreational purposes. These rules are now available for public comment.
- The rule allows small UAS during daylight and requires the operator to maintain visual line of site. Rather than requiring a private pilot's license, we propose that operators obtain a newly created FAA unmanned aircraft operator's certificate by passing a knowledge test focusing on the rules of the air. The operator must renew their certificate every two years by passing a written proficiency test. The rule also proposes operating limits to minimize risks to other aircraft and people and property on the ground.
- Before we can permit a wider level of integration, we still have to answer additional questions, including those related to system safety, command and control link, and "detect and avoid" capability.
- We'll be able to answer these questions from ongoing research being done by the FAA, NASA, the Department of Defense, and six FAA-approved test sites around the country[3].

[3] The University of Alaska-Fairbanks, the State of Nevada, New York's Griffiss International Airport, the North Dakota Department of Commerce, Texas A&M University-Corpus Christi, and Virginia Tech.

Reauthorization

- The FAA's current authorization expires on September 30, 2015.

- We have a joint responsibility – government and industry – to pull together to create the air traffic system that will carry this nation well into the 21st century.

- The United States stands as a leader in aviation internationally, and we intend to remain the gold standard. We are truly unique in that we have the most diverse aviation community, which includes new users like unmanned aircraft and commercial space vehicles.

- Domestically, the FAA faces several challenges:

  - Competing priorities among our stakeholders – one of the byproducts of a healthy, diverse system.

  - Having to navigate a constrained fiscal environment in recent years, with nearly two dozen short term extensions prior to our 2012 reauthorization.

- To maintain our global leadership and to continue to reap the economic benefits of the aviation industry, we should use the upcoming reauthorization to provide the FAA with the tools necessary to meet the pressing demands of the future:

  - Stable funding for core air traffic control operations, NextGen investments, and efficient recapitalization and right-sizing of aging facilities.

  - Flexibility to prioritize resources and leverage new technology to respond nimbly to evolving challenges.

- Success will require compromise and setting aside many of the differences between different sectors and stakeholders.

To that end, the Administration has developed a set of principles that we believe will improve our nation's airspace system and set the course for future progress:

- Reauthorization should maintain our excellent safety record and foster the use of data and analysis to focus our precious resources on the areas of highest risk in our aviation system.

- We must continue the modernization of our air traffic control system. Part of that effort is to ensure stable funding for core operations and NextGen investments.

- We should secure appropriate funding for our nation's airports.

- Reauthorization should enable the integration of new users into our airspace system and support the agency in fostering a culture of innovation and efficiency.

- The FAA also needs to realign today's airspace system with current demands (i.e.

rightsizing/more efficient, streamlined services). We need the flexibility to make investment choices that further the health of our airspace system so everyone can benefit.

- And we need to maintain our position of aviation leadership on the world stage. This means the FAA needs to remain at the table to shape and harmonize international aviation standards that promote seamless travel around the world.

- The Administration looks forward to working with Congress on FAA's reauthorization.

IF ASKED About Governance Changes:

- There have been conversations on alternative models for FAA governance by some stakeholders and in Congress. The Secretary and the Administrator have expressed openness to taking part in these conversations.

- We need to be sure that any governance changes would work to solve the challenges FAA faces.

- Any movement away from the present model needs to ensure more direct accountability to users of the National Airspace System (NAS) and be mindful of the linkage and integration of safety, NextGen, airport infrastructure, and other functions.

- We need to get to a place that best positions us to advance safety improvements, make the national airspace system more efficient, improve service for air travelers and other stakeholders, and enhance America's leadership in aviation.

- Proposed solutions will need to ensure that we make improvements in all aspects of FAA's mission and that any change does not set us back in the progress that we have made.

Budget

- The FAA's total FY 2016 budget request of $15.83 billion will support our ongoing mission and a continued, but measured, transition to the future.
- This budget request supports today's infrastructure while deploying key NextGen benefits to our stakeholders and upholding our critical safety programs. This budget enables us to continue supporting the nation's airports … and to safely integrate unmanned aircraft systems and commercial space launches into the airspace system.
- The FY 2016 request includes $2.85 billion for Facilities & Equipment and restores the program to a healthier, more balanced level after the major sequester reductions in FY 2013 that were then continued in FY 2014 and FY 2015. The $255 million (nearly 10 percent) increase provides funding for the four near-term NextGen priorities, maintenance of the existing infrastructure, as well as forward movement on unmanned aircraft systems and commercial space transportation.

- The FY 2016 Research, Engineering & Development budget request of $166 million is a $9.3 million (6 percent) increase over the FY 2015 enacted level. This request supports our continued efforts to make aviation more fuel efficient and greener … and conduct necessary research on unmanned aircraft integration and commercial space transportation.
- The FY 2016 budget includes a total of $956 million for NextGen. This funding will enable our continued commitment to deploying performance-based navigation capabilities … continue the integration of ADS-B applications … and deploy Data Communications, among other investments.

In closing…

- Let me reiterate that we're making very good progress with NextGen.
- We value our partnership with MITRE. We look forward to continuing that relationship … and we look forward to working with the aviation community in the months and years ahead.

#

Mike Whitaker
Senior Executive Service Video Teleconference
Washington, DC
March 25, 2015

Thank you, Michael. I'm glad to be here.

As you said, NextGen implementation is one of our top priorities as an agency. And thanks to the hard work of our team, and a successful collaboration with industry, we're successfully delivering the benefits of it – today.

So, I'd like to give everyone a few quick updates on where some of our most important initiatives stand.

ERAM

- We've made tremendous progress with transitioning our air traffic automation platform over to ERAM, which represents one of the largest technology upgrades the FAA has ever undertaken.
- ERAM is the backbone of our airspace system – processing flight and radar data, providing communications, and generating data for controllers' screens.
- By enabling a more networked airspace system, ERAM will allow us to move more air traffic more efficiently.

    - We'll know when aircraft are approaching, where they're going, and where bottlenecks are likely to develop due to congestion or bad weather.
    - This will help air traffic controllers safely space aircraft and reroute them quickly when needed.

- We're on the verge of completing the transition to ERAM at 20 U.S. en route centers.
    - Atlanta declared Operational Readiness earlier this month. And by the end of March, our last two centers in New York and metro D.C. will operate on ERAM and be turning off the old HOST system.
- ERAM will also allow us to continue implementing other NextGen technologies.
- We'll begin initial integration testing with ERAM to deploy DataComm at select airports this summer.
    - This will help us replace the labor-intensive voice communications between pilots and controllers with direct digital communications.
- ERAM will also help us continue making progress with our transition to ADS-B.

ADS-B Equipage

- Automatic Dependent Surveillance Broadcast is one of the most important foundational technologies of NextGen – moving us from a ground-based radar navigation system to a more accurate, satellite-based system.

- ADS-B will allow aircraft to fly more directly from point A to point B, saving time, money, and fuel burn. We can also use it on the ground to monitor airport traffic, reducing the risk of runway incursions – and increasing safety.

- Needless to say, this is groundbreaking technology – which is why we're working to make sure all of the users in our airspace are equipped and ready to use it as soon as possible.

- We've set a deadline that mandates all aircraft flying in certain controlled airspace must be equipped with ADS-B Out by January 1, 2020.

- And we've been working closely with all of our industry stakeholders to stay on track for meeting that deadline.

    - Four airlines have publicly declared that they'll be fully equipped by 2020 – Delta, American, jetBlue, and FedEx.

- Our Equip 2020 team also reached an agreement that allows air carriers with first and second generation receivers to continue using them until 2025 – ensuring we don't punish early adopters of new technologies.

- We're seeing positive trends in general aviation, as well.

- More than 3,500 GA aircraft have equipped in the last six months – a more than 50 percent spike.
- And competition between avionics manufacturers has led to a dramatic reduction in the cost of ADS-B equipment. There are now units available for less than $2,000 that comply with the rule – so we hope to see those GA equipage rates continue to rise.

All of these developments show that the FAA is making good progress on its promise to deliver real-world NextGen benefits – making air travel safer and more efficient for all users.

And I once again applaud our team for all they've done to make that happen.

Back to you, Michael.

###

Mike Whitaker
InfoShare
Pittsburgh, PA
April 14, 2015

Thank you for the introduction, Warren [*Randolph, FAA's Manager of Integrated Safety Teams*].

It's great to be here with all of you today – and it's great to see how this conference has grown in the last six years. InfoShare started as a small gathering of nearly a hundred attendees. This year, more than 800 have registered. I think that deserves a round of applause.

All of us are here today because safety is our number one priority, and we believe in collaborating and sharing data to reduce risk and enhance safety.

Thanks to the work of the Commercial Aviation Safety Team and the Aviation Safety Information Analysis and Sharing program, we have unprecedented insight into how our system is running. By leveraging data from across the industry, we can connect the dots to identify patterns we otherwise might not see.

Let me give you an example of the importance of sharing data.

Last year, an airline identified an issue involving an incorrect takeoff configuration setting through its voluntary safety program. The airline shared that knowledge with ASIAS to determine if it was a unique occurrence, or had been seen by other carriers. ASIAS was able to analyze a larger pool of data and find that, while infrequent, other airlines had experienced similar issues. Working closely with industry partners, CAST initiated a study to identify contributing factors. In the interim, we issued a Safety Alert for Operators to let them know about this potential problem. When the study is completed, CAST will adopt mitigations, as needed, to address the issue moving forward.

In another instance, operators here at InfoShare alerted us to potential risks involving RNAV departures. After analyzing this information in ASIAS, we were able to identify opportunities to improve how we design these procedures, as well as potential enhancements to pilot and controller training.

The fact is, solid data is the foundation for making good decisions. Now, with 45 carriers covering 99 percent of U.S. passenger operations feeding information into ASIAS, the data we're getting is better than ever. It's helping us keep commercial aviation safer than ever.

But, as all of us in the safety business know, our work is never done. We must continue building on our momentum as we look to improve aviation's safety culture.

Reaching the next level of safety is already a priority for many airlines, and I commend them for taking the lead on implementing Safety Management Systems, or SMS. SMS helps to minimize aviation risk. In fact, more than half of the presentations at InfoShare have come from these voluntary safety programs.

I'm pleased to report that, because of the success of these programs, the FAA has codified what has become industry practice in many cases – issuing a final rule requiring most U.S. commercial carriers to have Safety Management Systems in place by 2018.

At the FAA, we are committed to embedding risk-based decision-making into our culture. We know that it's not enough to analyze data from an accident after it happens. We need to analyze data from the entire spectrum of our operations. This will help us identify areas of risk and mitigate them before an incident occurs.

To be successful in this effort, we must continue our work together. That's why your participation in forums like InfoShare is critical. We need government and industry to continue to have an ongoing conversation that includes sharing data, ideas, and best practices. That's how we've built the best aviation system in the world. And as we look to tackle the challenges we'll face in the years ahead, our partnerships will be more important than ever.

I'm sure the next few days of presentations will be informative. There's so much we can learn from each other. With all of us sharing the same bedrock committment to safety and finding ways to improve, I know there's so much more we can – and will – accomplish.

Thank you.

Mike Whitaker
Sun ‘n Fun “Meet the FAA” Session
Lakeland, FL
April 23, 2015

Thank you for that introduction, Dennis [*Roberts, Regional Administrator for the Southern Region*]. Congratulations on your new position.

Hello, everyone. It’s great to be back with you at Sun ‘n Fun. I’m particularly excited this year to be speaking with you, not only as the Deputy Administrator for the FAA, but also as a new pilot.

Earning my pilot certificate last year gave me a whole new appreciation and love for general aviation. For seven months, I spent much of my free time studying and flying a Cessna 172 out of Freeway Airport located between Washington, D.C. and Annapolis, Maryland.

Being a pilot is giving me a better perspective on our work at the FAA. Today, I’d like to talk about this and share a story with you about how one of my experiences in the cockpit gave

me an opportunity to apply firsthand some of our new technologies and best practices.

During my training, I set out to do one of my night flights with my instructor. We were only in the air for a few minutes when the sky lit up with lightning. Baltimore Tower contacted us to let us know that weather was ahead, but that they could re-route us directly through to our destination in Lancaster, Pennsylvania.

I was tempted to do just that. But, because we were flying in a plane equipped with ADS-B weather capabilities in the cockpit, I was able to pull up a picture and see just how big the storm was.

Because of ADS-B, I made the call to turn around and try again another night. I can't stress enough how valuable that kind of situational awareness is. And it's available now to all general aviation pilots who get equipped.

ADS-B brings free weather and traffic updates from coast to coast directly to the cockpit. This means you're getting the

most up-to-date information on hazardous weather, temporary flight restrictions, and notices to airmen when you need it most.

Additionally, ADS-B's satellite-based technology helps controllers determine your aircraft's location with far greater accuracy. So if you operate in remote areas where radar coverage is limited, like Alaska or the Gulf of Mexico, ADS-B will make flying safer. If you run into trouble, it helps us take the "search" out of search-and-rescue – a potentially life-saving benefit.

I'm sure everyone here is aware of the January 1, 2020 deadline to equip for ADS-B Out in controlled airspace. Many of you have asked about that deadline, and if it might be extended. The answer is no – the date is set – so I want to strongly encourage all of you to make plans to get equipped as soon as possible. You don't want to end up grounded in the early months of 2020 because of a parts or installation delay.

I've been so pleased to see a number of avionics manufacturers stepping up to produce equipment that complies with the ADS-B Out mandate. A great result of this increased

competition is that it has driven costs down considerably. Some units are now available for less than $2,000.

If you haven't researched getting ADS-B equipment for a while, now is a great time to take a second look. In fact, you can even talk with manufacturers and check out the latest technology in the exhibitor's area right here at Sun 'n Fun.

Since our Call to Action last October, more than 8,000 GA aircraft have equipped – a really promising start. And we hope to see those equipage rates continue to rise.

Let's go back to my night flight and the benefits of having ADS-B in my plane. Because of this technology, I had a better picture of the weather front I was heading into. However, the decision about what to do with that information was on me. I turned to my personal minimums – the checklist of questions I ask myself before deciding to fly.

I faced a night filled with storms. And I knew that if we got delayed in Lancaster, I might not be flying back until two or three in the morning. Bad weather and potential fatigue – two

items on my checklist – were immediate indications that the safe move was to turn around and head home for the night.

You might say, "Well, people tend to be very cautious when they're first learning how to fly – you'll get more comfortable." But the fact is, no matter how long you've been a pilot, it's actually a good thing to be extra vigilant – or a little "uncomfortable" – whenever you're flying.

We need to consider safety every time we sit in the cockpit. Being a pilot isn't a right – it's a responsibility. That means every time we take flight, we have a responsibility – to ourselves, to our families, and to the people on the ground – to make sure we're doing it safely.

It's a responsibility the FAA shares with you. We want to help you in your efforts to fly safely. That's reflected in a goal we've set to reduce the GA fatality rate by 10 percent by 2018. I'm happy to report that our efforts, along with our collaboration with the General Aviation Joint Steering Committee, are resulting in good progress toward this goal.

Another example of our efforts to support pilots in flying safely is the *"Got Weather?"* campaign we ran last year. The program reminded pilots about potential weather challenges they might face, and provided tips on how to best deal with them. The campaign reached 4.5 million people – a big success – and I want to thank all of you here today who participated in this effort.

In order for us to keep making progress on safety, we constantly need your help and engagement.

If there's one thing I've learned in the last year, it's that there's a lot more to flying than just knowing the rules and pushing buttons. It takes discipline. It requires skill. And it demands a true sense of professionalism – not the kind that comes from getting a paycheck, but from a deep, unwavering commitment to doing the right thing.

I know everyone here today shares that commitment. By working together, I know we can make general aviation safer.

So I hope that – whether you're a Master Pilot like the ones we honored earlier, or a newcomer to flying like me – you'll

always embrace that feeling I mentioned earlier, of being just a little "uncomfortable" in the cockpit. It'll keep you focused, and it'll keep you safe.

As for me, I'll be putting my pilot certificate to good use this summer as I log more hours and pursue my instrument rating. Being here at Sun 'n Fun is definitely inspiring me to continue sharpening my skills so that I can keep up with all of you.

I'm going to conclude on that point. The main reason I came today is to talk with you. Before I take your questions, I'm going to ask a few of my colleagues from the FAA to come up here and join me. Thanks so much for having me, and I'm eager to hear from you.

###

Mike Whitaker
Labor Management Forum
Room 9AB
April 29, 2015

Reviewed by: Raquel Girvin, Hoot Gibson, Lisa Zagaroli, Jessica Sypniewski, Mary Lou Pickel

Thanks, Michele [*Coppedge*]. I'm glad to be here.

- I want to thank everyone here for the leadership, engagement and collaboration you've all shown.
- We've made progress together on many fronts – deploying NextGen, completing the new Valuing Performance system, and many others.

Today, I'd like to talk about some of the progress we've made on NextGen since the last time we met on January 28th. Specifically, I'd like to talk about:

- ERAM
- ADS-B
- Our near-term NextGen priorities …
- … and I'd also like to talk about the FAA's Reauthorization efforts.

Last month, we finalized the deployment of ERAM at 20 en route traffic control centers across the continental United States.

- This effort was one of the largest technology changeovers in the FAA's history.
- With ERAM in place, we're able to process more air traffic data, more efficiently, from more sensors.
- En route controllers can now track 1,900 aircraft at a time, instead of the previous 1,100. And ERAM provides our en route centers with the same access to all flight plans filed in the system. Transitions between sectors and centers will be automatic, even when planes divert from their planned course.
- All of this means increased capacity and improved efficiency for the U.S. airspace system.

Tomorrow [*April 30*], we will be holding a press event at National Airport to publicize ERAM's completion.

- Transportation Secretary Foxx, Administrator Huerta, our COO Teri Bristol, and NATCA representative Julio Henriques will be speaking.
- They'll talk about what ERAM means for the traveling public, what it means for air traffic operations, and how labor-management collaboration was essential to making it a success.

Let me briefly speak about the collaboration on ERAM.

- Labor and management worked together, as part of the National User Team.
- This team ensured that controllers had early input in ERAM's development.
- Through this input, we were able to more effectively communicate to our vendor, Lockheed Martin, what improvements should be made, and just as importantly, how these changes should be made.
- This approach saved us millions of dollars, resulted in performance improvements for ERAM, and gave Congress and the Transportation Department more confidence in our ability to handle large-scale deployments.

ERAM is a key part of NextGen's foundation. So is ADS-B, and we're making progress there too.

- As you know, last year, we completed the nationwide deployment of 634 radios that make up the ground infrastructure for ADS-B.
- We've done our part, and we're looking to industry to do its part by equipping with ADS-B Out avionics.
- The deadline is January 1, 2020. We've been emphatic in saying publicly that this deadline is certain. It will not change.

We're currently making efforts to spur more rapid equipage of ADS-B Out.

- As you know, we held a Call to Action last October, bringing together industry, operators, and government to identify existing barriers to equipage, and find solutions.
- From that meeting, we stood up the Equip 2020 working group, a public-private partnership.
- Since the last time this forum met, the Equip 2020 group has accomplished a great deal.
- Equip 2020 worked to address the cost concerns voiced by the GA community. Competition among avionics manufacturers has led to a dramatic cost reduction in equipage – over a 50 percent price drop since October. Several companies are selling units at prices lower than $2,000.

- In support of airline equipage, the Equip 2020 team reached an agreement that would potentially allow air carriers with first and second generation receivers (SA aware) to continue to use these until 2025[1]. This agreement would provide time to upgrade to the best available receiver technology.

- At the FAA's NextGen Advisory Committee meeting in February, four airlines have publicly declared they will meet the 2020 deadline – Delta … American … Jet Blue … and FedEx.
- These developments are very encouraging, and we look forward to seeing greater progress.

We submitted a focused NextGen plan to Congress this past October, outlining specific commitments in four key priority areas:

- 1.) increasing the availability and use of Performance Based Navigation,
- 2.) making multiple runway operations more efficient,
- 3.) improving surface operations, and
- 4.) implementing Data Communications.
- We determined these priorities, in collaboration with the aviation industry, through our NextGen Advisory Committee.
- We believe, and industry agrees, that progress in these areas can benefit all of us in the near term.
- We submitted a plan to Congress last fall outlining specific activities for these areas, which includes commitments by both the FAA and the aviation industry.
- To date, we have already met 17 milestones, and are delivering capabilities that are saving time and fuel in some of these priority areas. Some of this progress includes work done for our Metroplex initiative, and safely reducing wake turbulence separation standards at airports around the country.

We're gearing up for the FAA's Reauthorization.

- We've had to navigate a constrained fiscal environment in recent years, with nearly two dozen short term extensions prior to our 2012 reauthorization, as well as the sequester, furloughs, and a complete government shutdown.
- The FAA's current authorization expires on September 30, 2015.

[1] Bruce DeCleene stresses that you should say "potentially," because Equip 2020 does not have regulatory authority.

- We should use the upcoming reauthorization to provide the FAA with the tools necessary to meet the pressing demands of the future. Two broad things we need are:
    - Stable funding for core air traffic control operations, NextGen investments, and efficient recapitalization of equipment and of aging facilities.
    - Flexibility to prioritize resources and leverage new technology to respond nimbly to evolving challenges.

To that end, the Administration is continuing work on a set of principles that we believe will improve our nation's airspace system and set the course for future progress:

- Reauthorization should maintain our excellent safety record and foster the use of data and analysis to focus our precious resources on the areas of highest risk in our aviation system.
- We must continue the modernization of our air traffic control system. Part of that effort is to ensure stable funding for core operations and NextGen investments.
- We should secure appropriate funding for our nation's airports.
- Reauthorization should enable the integration of new users into our airspace system and support the agency in fostering a culture of innovation and efficiency.
- The FAA also needs to realign today's airspace system with current demands. We need the flexibility to make investment choices that further the health of our airspace system so everyone can benefit.
- And we need to maintain our position of aviation leadership on the world stage. This means the FAA needs to participate actively in shaping international aviation standards that promote seamless travel around the world.
- We look forward to working with our stakeholders, and Congress on reauthorization.

The FAA's Management Advisory Council is working to provide us with potential recommendations as we prepare for reauthorization.

- The MAC agrees with us that there is a need for continuity of funding given the work and nature of investments made by the FAA. They are also looking at ways to further improve our processes around certification and regulatory functions, and looking at scenarios for the FAA's structure and governance (removing the Air Traffic Organization from FAA, creating a Federal Corporation incorporating a full set of functions within FAA, or no change)
- The MAC is continuing its work and we look forward to their potential recommendations.

[*If asked*]

We all know there have been conversations on alternative models for FAA governance by some stakeholders and Congress.

- The Secretary and the Administrator have expressed openness to taking part in these conversations.
- We need to be sure that any governance changes would work to solve the challenges the FAA faces.
- Any movement away from the present model needs to ensure more direct accountability to users of the National Airspace System (NAS) and be mindful of the linkage and integration of safety, NextGen, airport infrastructure, and other functions.
- We need to get to a place that best positions us to advance safety improvements, make the national airspace system more efficient, improve service for air travelers and other stakeholders, and enhance America's leadership in aviation.
- Proposed solutions will need to ensure that we make improvements in all aspects of FAA's mission and that any change does not result in unintended consequences or that sets us back in the progress that we have made. Our aviation system is too vital for our economy, our nation's wellbeing, and our global leadership.

Mike Whitaker
NextGen Advisory Committee
Washington, D.C.
June 05, 2015

Introduction

Thank you, Richard (Anderson, NAC Chairman). Good morning everyone. It's great to be here with you today.

This morning I want to update you on important events since we last met in February, then use some of my time for a continued discussion around PBN strategy and direction, picking up on a conversation we started in Atlanta in February.

Earlier this week we filed our Annual NextGen Update to Congress. You should have copies of that document at your place. It is designed to be a brief and readable recap of what we have achieved over the past year. Much of that focuses on the work of the NAC and what we have been able to accomplish together.

Since we met in February, our partnership has led to substantial progress with several key NextGen technologies. I'd like to take a moment to share these important milestones with you.

In April, thanks to our partners in this room, particularly NATCA, PASS and Lockheed Martin, we completed one of the most complex technological projects in agency history. ERAM is now fully operational at 20 en route centers.

As you know, ERAM is the backbone of the nation's air traffic control system, serving as the operating platform for critical NextGen technologies such as ADS-B and Data Comm.

It enables controllers to handle more aircraft over larger sections of the sky, increasing capacity and efficiency while enhancing safety in what is already the world's safest aviation system. It is also incredibly reliable: ERAM has been running for well over 300,000 hours since December 2011 with an availability of 99.9997 percent.

Data Comm

Last month, thanks to our partners in this room -- including Fed Ex, UPS, United, Harris and Thales -- we celebrated successful trials of Data Comm at Memphis and Newark. We took reporters into the tower and onto flight decks of aircraft owned by FedEx, UPS and United to show them how pilots and controllers are communicating through the instant, accurate exchange of data rather than a two-way voice conversation .

Data Comm is a game-changer. Especially during bad weather. Pilots simply press "wilco" to accept re-routes, which are then immediately loaded into onboard systems and sent to their operations centers.

Judging by the coverage we received, the reporters were as impressed with this technology as we are. And Memphis and Newark are just the beginning. This summer Data Comm will be rolled out at Houston's two major airports, as well as Salt Lake City.

Next year, 53 more airports will get this revolutionary technology.

ADS-B

A couple of weeks ago -- thanks to our partners in this room, including JetBlue, NATCA and PASS -- we conducted a successful, live demonstration of ADS-B with a JetBlue aircraft flying far off the East Coast in airspace where radar coverage was limited. The ERAM system at New York Center seamlessly switched from traditional ground-based radar to satellite-based ADS-B, tracking the JetBlue aircraft with the pinpoint accuracy that is the hallmark of this next leap in air traffic control.

As we move toward the January 1, 2020 deadline to install ADSB-Out in all aircraft that operate in controlled airspace, we continue to work with all of you to identify and resolve barriers to equipage. We appreciate the support from AOPA and all of our other industry partners who are actively encouraging their members to take this step so we may fully realize the benefits of ADS-B.

A recent survey conducted by Embry Riddle found that about 56% of General Aviation aircraft owners surveyed indicated that they don't plan to install ADS-B until the price comes down. This survey of course pre-dates the 50 percent price drop we've seen for GA ADS-B products over the last several months. But this shows more than 100,000 aircraft owners are sitting on the fence.

It doesn't take a mathematician to figure out that not all of these operators will be able to wait until 2019 and still expect to get their airplanes out of the shop by the deadline. As the price of equipment has now dropped below $2000, we appreciate the push NAC members are making in support of equipage.

We are working closely with these organizations through our Equip 2020 working group and the NAC ADS-B Ad Hoc group to identify and get past any barriers standing in the way. You'll hear more about this later today.

Benefits to everyone as we continue to build the system

Overall, we're building a strong foundation for NextGen while delivering benefits to *everyone* who uses our airspace system. As many of you know, we worked with McKinsey Consulting to identify specific benefits that airlines are getting from the NextGen technologies and procedures already in place.

We found through this data-driven survey that we've already realized $1.6 billion in benefits system-wide. More than $500 million of this goes directly to aircraft operators. These benefits are being generated by improvements such as ELSO, Wake Recat, PBN routing and Time Based Flow Management.

We expect that these capabilities will continue to produce an additional $11.4 billion in benefits over the next 15 years. This is a return on investments that we've already made.

Importance of NAC partnership

You've heard me use the words "partners" and "partnership" several times already today. Without the cooperation of the people in this room, we wouldn't be anywhere close to maintaining our schedule on what we all agree is the necessary modernization of our nation's air traffic control system.

Time and again, we have rolled up our sleeves and collaborated with labor and the aviation industry to achieve great things. Our work here on the NAC is an excellent example of what we can accomplish when government and industry partner on common goals.

The joint implementation plan we developed last year prioritized four NextGen areas where we can deliver concrete benefits over the next three years. In 2014, we collectively delivered on 19 of our commitments – three ahead of schedule. You will hear more about that in some detail today.

PBN Strategy

PBN is another area where we have worked closely with the NAC – and its predecessor – to implement satellite procedures throughout the NAS. With your help, we have so far implemented more than 7,000 satellite-based procedures in the National Airspace System. We now have more satellite-based procedures than radar-based procedures.

Last year, we successfully implemented our Houston and North Texas Metroplex plans, flipping the switch overnight on dozens of NextGen procedures in each of these busy areas. This year, we did the same thing with the Washington, D.C., and Northern California areas.

Although the vast majority of our NextGen projects have gone without a hitch, we are aware that some of them have been – and continue to be – controversial with the general public. We have done noise modeling on all of these

projects. In all of them, the modeling indicates that there would be no significant noise impacts as a result of the proposed changes. Nevertheless, earlier this week the City of Phoenix filed a law suit against the FAA over the new departure procedures at that airport.

We are always striving to get better at what we do, and part of that is learning from experience. While our mandate is for safety and efficiency, we are very conscious of the noise issue as it relates to the improvements we're making for the flying public.

In the meantime, we will continue our transition from ground-based to satellite-based procedures. We began a discussion at the last NAC meeting about the future of PBN, and if and how do we get to an all-PBN NAS. A fully implemented NAS based on PBN would minimize the risks and consequences of maintaining two navigation systems -- particularly as one of them is equipment-intensive and continues to become more costly and complex to keep in working order.

At the FAA we continue to look at options for our PBN strategy, looking at key navigation capabilities and operations that we'll need over the next 15 years. We want to continue to include the NAC in that conversation as we develop a roadmap for deploying and effectively using PBN in the NAS while ensuring safety and efficiency.

It's important that the FAA and industry agree on a strategy that will allow for a transition that effectively integrates PBN and related technologies and ensures that these technologies work together as a system.

Now, I'm going to hand things over to FAA PBN Program Manager Josh Gustin and FAA Flight Technologies and Procedures Division Manager Bruce DeCleene, who will share our thinking on PBN strategy.

[JOSH GUSTIN AND BRUCE DECLEENE DELIVERS REMARKS]

[YOU WRAP UP]

Thank you, Josh and Bruce.

Conclusion: Staying the course will require steady funding

Finally, a word about funding.

We remain confident that the benefits of NextGen will only increase as more capabilities come on line, but this will only happen if we can secure a continuous, reliable source of funding to deliver the next milestones.

That's where you, as members of the NextGen Advisory Committee, can help us stress the importance of keeping this vital initiative on schedule.

Over the last few years, we carved up our capital investments into increasingly smaller pieces to make them affordable after we received lower-than-planned funding from Congress. This might help with near-term budget

constraints, but it makes it difficult to know when we'll achieve the anticipated benefits.

For example, Data Comm is a multi-year program with a multi-year budget. When we originally included DataComm as a NextGen priority, we planned to make a single investment decision for en route services. But when we saw the budget outlook, it was apparent that we could not predict a stable funding stream.

Last November, we had to split the en route investment into two packages, raising questions about when we will be able to complete the program. The second package is pending a firm decision later this year.

But Data Comm is just one of the four NextGen priorities we have set with industry through the NAC. So it comes down to trade-offs.

We all understand that trade-offs are a part of every budgeting process, whether it's here in the government or in your own boardrooms. Our immediate concern with NextGen is that -- within our current funding environment – the trade-offs we are forced to make are cutting deeper and may require us to choose among NextGen improvements.

At the February NAC meeting in Atlanta, the FAA's Chief Financial Officer presented our five-year capital investment plan. Since that time, we received the initial Fiscal Year 2016 budget markup from the House of Representatives. Unfortunately, that includes a capital account $355 million below our budget request – and $100 million lower than our appropriations for the current fiscal

year. We are now waiting to see what happens with the Senate and conference committee.

This will obviously affect our NextGen plans. We need the support of you, our partners, to help us ensure sufficient funding.

Reauthorization

As we wait to see what happens with the budget, we're also keeping a watchful eye on the FAA's upcoming reauthorization. Our current authorization expires on Sept. 30, and we are committed to working closely with Congress to pass a long-term bill.

Although we don't know what it will exactly look like, we do know that it must embrace a few key principles, such as making it possible for us to maintain our exceptional safety record, securing appropriate funding for airports, and strengthening America's global aviation leadership.

Most notably for this group, reauthorization must enable us to continue our progress in modernizing the air traffic system.

We have all seen how sequestration and lapses in funding make it hard for us to plan and execute these critical projects. Now is the time for us to build on our momentum – not slow it down.

Thank you. That concludes the FAA report.

FINAL **6/29/2015 3:00 PM**

Mike Whitaker
General Aviation Safety Summit
Washington, DC
June 30, 2015

Introduction

- Good morning, everyone. Thank you for joining us.
- We're here today to talk about general aviation safety, and how to improve it.
- Before we get into numbers and accident rates, I first want to talk a bit about responsibility.
- Everyone in this room has a role to play when it comes to improving general aviation safety.
- We also have to recognize how important education and training are.
- When a pilot's judgment, experience, or awareness fails, the result is often catastrophic, sometimes fatal, and all too often a repeat of incidents we've seen before.
- We can and must work together to address this.
- In 2009, we set a goal is to reduce the GA fatality rate by 10 percent by 2018.
- While the number of fatal GA accidents over the last decade has gone down, so have the number of total GA flight hours.
- The fatal accident rate has remained stubbornly high – and too many lives are being lost.
- Last year, 434 people were killed in 251 GA accidents. We missed our annual goal for reducing fatal accidents by nine incidents.
- We need to find new ways to move the needle.

- I know I can count on this group to help find a way to do it.
- You've dedicated time and resources to making the General Aviation Joint Steering Committee a success.
- The Committee has been instrumental in developing risk mitigations and promoting important safety technologies and best practices.
- Thanks to your efforts, we have a good foundation of accomplishments that should help us build momentum and bring the GA fatal accident rate down in the years to come.

Making Safety Enhancements

- The GA Joint Steering Committee has been instrumental in promoting important safety technologies and best practices.
- You designed and implemented a campaign to educate pilots about the safety benefits of Angle of Attack indicators, which can help prevent stalls by providing more reliable information about airflow over the wing of an aircraft.
- These campaign materials, along with accident case studies on Loss of Control and AOPA's online education course on AOA, have been viewed by more than 50,000 pilots. That's a big accomplishment.
- You've also done important work to raise awareness about the effects different medications can have on pilots when they fly.
- The FAA has issued recommendations and guidance on the appropriate use of medications while flying in order to ensure pilots remain alert and capable in the cockpit.
- Thanks to your efforts, the FAA, Jeppesen, and other flight training organizations will include medication awareness training for all pilots in their curriculums.
- Medical organizations will also be encouraged to remind physicians about the importance of finding out if patients are pilots – and educating them if the medication they're prescribing could be a hazard to safe flight.

Supporting the Got Weather Campaign

- I also want to thank you for being such invaluable partners in our Got Weather campaign last year. We reached 4.5 million people.
- Got Weather reminded pilots about potential weather challenges they might face and provided tips on how to best deal with them.
- This year, we're looking to do even better on another key issue: Loss of Control.

Launching the Fly Safe Campaign

- Earlier this month, the FAA and industry launched a new national safety campaign to educate the GA community on how to avoid Loss of Control accidents. We're calling it *Fly Safe*.
- Loss of Control is the number one cause of fatal GA accidents and is on the NTSB's Most Wanted list.
- *Fly Safe* will highlight different Loss of Control causes and tips each month.
- For June, we've highlighted Angle of Attack indicators and the importance of transition training.
- Over the next year, we'll highlight:
    - The best ways to manage unexpected events, like weather;
    - Survival tips in the event of an accident;
    - Technologies like Enhanced Vision Systems;
    - And much more.
- We'll be promoting this campaign on our website and across all of our social media platforms, including Facebook, Twitter, and Instagram.
- In order to make *Fly Safe* a success, we need your help.

- The GA community looks to your organizations for guidance and best practices.

- I hope you'll work with us to promote *Fly Safe* by liking the campaign on Facebook, sharing our posts, and re-tweeting on Twitter.

Supporting Runway Safety Call to Action Initiatives

- I also want to update you on another important safety initiative the FAA is working on with industry.

- Last week, the FAA hosted a Runway Safety Call to Action that brought together a wide range of aviation partners to discuss ways to cut down on runway incursions.

- Runway incursions are a particularly serious issue for the general aviation community, and I appreciate all of you who attended and contributed.

- We received a number of useful ideas and recommendations that the FAA is going to be reviewing in the weeks and months to come.

- For example, we heard a lot about the distractions GA pilots have to deal with during take-offs and landings. So one recommendation was to create a campaign that reminds GA pilots to focus on what's happening in and around their aircraft during these critical flight moments.

- Another idea involved creating guidance that would help inform air traffic controllers if a pilot is flying into or out of an unfamiliar airport. This would give them an opportunity to offer the pilot extra instructions.

- These are just a few of the valuable suggestions we received, and I'm hopeful that they will help us reduce the number of future runway incursions in our system.

- I also hope we can count on you to work with us as we set out to review and implement these ideas.

Equipping for ADS-B

- Finally, I want to thank all of you for continuing to support our efforts to get GA pilots to equip for ADS-B Out in advance of the January 1, 2020 deadline.

- We all know ADS-B provides real safety benefits for GA pilots.

- It allows air traffic controllers to pinpoint aircraft with far greater accuracy – which is especially important in areas where radar coverage is limited, like Alaska or the Gulf of Mexico.

- ADS-B also provides free weather and traffic updates that help pilots make better-informed decisions in the cockpit.

- The FAA will continue to partner closely with all of you through our Equip 2020 working group to identify and resolve the barriers delaying pilots from getting equipped.

- Fortunately, one of the most common barriers – cost – is becoming less of an issue.

- A number of manufacturers are bringing equipment that complies with the ADS-B Out mandate to market – and this competition is driving prices down. Some units are now available for less than $2,000.

- We hope this means we'll see equipage rates continue to rise. Since our Call to Action last October, the number of equipped GA aircraft has more than doubled.

Conclusion

- Before we get to today's discussion, let me leave you with this thought.

- All of the initiatives I just mentioned are a testament to how much we can accomplish when government and industry work together.

- Summits like this one give us a unique opportunity to share ideas and find solutions that will help us achieve our common goal: making general aviation in America as safe as possible.

- I'm eager to hear from all of you – so don't hold back.

At End of Summit

- Acknowledge any action items that came out of the discussion.
- Reiterate request for support on the *Fly Safe* campaign, which will be running all year.
- Thank group for their continued partnership and efforts to improve general aviation safety.
- Challenge attendees to make more safety enhancements, consider ways to assess or measure their effectiveness, and report what findings might be available the results at the next GA Safety Summit.

Mike Whitaker
Equip 2020
September 15, 2015
Alexandra, VA

Reviewed by: Bruce DeCleene, Jessica Sypniewski, Jenny Rosenberg, Hoot Gibson

Thanks Hoot.

- Hello everyone. I'm glad to be here.
- Hoot, I want to thank you for your leadership in Equip 2020.
- Hoot was selected for a position to assist the FAA with the integration of unmanned aircraft into the airspace system.
- He'll be very busy in this new role. We look forward having him do for unmanned aircraft what he's done for ADS-B equipage.
- But we remain fully committed to continuing Equip 2020's important work. The details of the transition will be forthcoming.

Recap Equip 2020's Success.

- It's been nearly a year since the FAA held its ADS-B Call to Action.
- It rose out of a conversation with Paula Derks and Ric Peri. The goal was to bring stakeholders together to identify barriers to equipage and develop solutions.
- Equip 2020 has been instrumental in this effort.

- **I want to thank everyone here for your dedication and teamwork.**
- Of the 43 initial tasks we established, 23 are complete, and 17 are nearly complete.
- Last month, the FAA granted A4A's petition to allow air carriers with first and second generation receivers to continue to use it until 2025. This provides them with five years to transition to the best available receiver technology.
    - We're making it clear that this is not an extension. It's an acknowledgement that these operators equipped early, and we want to reward and encourage that.
    - This exemption would assure that the FAA's investment in NextGen is useable by operators and allows the FAA to maintain its NextGen schedule with no safety impact.
- This group succeeded in bringing the cost down for GA equipage. Units are now priced as low as $1,500 and there is also greater diversity of product out there. At this price, AOPA was able to promote early equipage to their members.
- Also, Equip 2020 helped developed a GA outreach plan which has worked to address the needs of aircraft owners. We have seen a very positive response to the introduction of the Google Airspace Map, which you are familiar with[1].

[1] The FAA created a Google Earth –based application that provides an interactive 3-D map of the United States and it depicts all the commercial and private airports as well as airspace that will require ADS-B Out

- We have also developed an equipage tracking database, which enables us to capture data from both suppliers and operators. This way, we can track the equipage trends and make sure we're on target for the 2020 deadline.
- So we've accomplished a lot. It's taken a lot of cooperation by both government and industry.

More work to do.

- Equipage trends still lag expectations.
- About 13,500 GA aircraft have been equipped, with about 6,300 being equipped since last fall's Call to Action[2].
- We want to accelerate these numbers.
- I've spoken to the Aircraft Electronics folks, Regional Airlines, and other groups.
- The Administrator has been to AirVenture and other places.
- We've been making it clear to both industry and Congress that the deadline is firm. It will not change.
- We're urging operators not to wait until the last minute.
- The Aircraft Electronics Association has been encouraging operators to sign up for a slot, even if they're not certain they'll equip at that time. This helps make it more real for them.

---

as of 2020. We created it in response to a GA desire to understand where ADS-B airspace exists in relation to the airports and airspace where they typically fly. Source: Scott Foose, NextGen Office, September 11, 2015.

[2] James Marks, ADS-B Focus Team Lead, AFS-360, September 9, 2015.

- The regional carriers are stepping up their efforts.
    - This morning, Perry Solmonson from Horizon Air will give us an update on this progress.
    - I want to thank Perry for his leadership.
    - In fact, Horizon Air has been a model for early adoption. They were one of the very first US air carriers to obtain RNP operational approval and to equip with WAAS, and are now leading the way for the regional airline community on ADS-B Out equipage.
- On the international front, IATA is getting more involved now. Japan Air Lines has also expressed interest in being part of Equip 2020. We welcome participation from other international partners, and look forward to further engagement with the global community.
- I know we have to resolve other issues. The helicopter community has concerns about equipping older model aircraft.
- Groups like NBAA have raised privacy concerns.[3]
- As you know, these can be thorny issues, and it highlights the need for us to stay committed and bring forth creative solutions.

[3] NBAA has expressed concerns about the privacy of passengers on business jets, being violated through the ADS-B signals. Equip 2020 is evaluating possible short term and long term solutions to address this issue.

Closing

- We've accomplished a lot in less than 12 months.
- Again, I want to thank everyone here for all of your hard work and dedication and I look forward to celebrating more success in months ahead.

Mike Whitaker
NextGen Advisory Committee Meeting – FAA Report
Memphis, TN
October 8, 2015

Introduction

Thank you, Richard [*Anderson, NAC Chairman*]. Good morning, everyone.

It's great to be here with you today, and I look forward to updating the Committee on important events since our last meeting in June.

David [*Cunningham, FedEx Express Chief Operating Officer*], our thanks go out to you and FedEx for hosting today's event.

FedEx has been supporting our efforts to demonstrate NextGen capabilities for many years, and we value that partnership. You've been leaders in Controller Pilot Data Link Communications, and a key participant in our efforts to enable Data Comm capabilities in the NAS. Wake RECAT was also born here, as FedEx likes to say, and we are all very excited about the benefits we are seeing with it.

We also heard this morning about the benefits of low-visibility capabilities like enhanced flight vision. The FAA continues to pursue a rulemaking on Enhanced Flight Vision Systems, which will help reduce our ground infrastructure requirements and lead to lower NAS maintenance costs. In fact, NASA is hosting a

workshop next week highlighting its research in this area, as well as a session on next steps for using flight vision technologies in a NextGen environment.

This type of interagency collaboration is important to the future of NextGen. That's why I'm pleased that we've added Dr. Jaiwon Shin [*JAY-won Shin*], Associate Administrator for NASA's Aeronautics Research Mission Directorate, as a new member of the NAC. Dr. Shin sends his regrets that he couldn't make today's meeting, but he looks forward to working closely with the Committee in the future.

I also want to give a warm welcome to our other new NAC member: Jim Bowman, the Senior Vice President at FedEx, Flight Operations.

FAA News

Now before I get into the FAA's NextGen report, I want to briefly update you on some of the most important issues currently facing the agency.

Reauthorization

First, I have to address one of the foremost topics on everyone's mind: reauthorization.

As you all know, Congress passed a six-month extension of the FAA's authority last week. This buys Congress some time to enact a longer-term bill. As part of that, there have been a lot of conversations happening on Capitol Hill about what a new FAA reauthorization should look like. We're committed to working closely with Congress to pass a bill that embraces a few key principles.

- Reauthorization must help us maintain our exceptional safety record by providing more opportunities to use risk-based decision-making.

- It should strengthen America's global leadership on aviation.

- It should allow us to continue to integrate new users in the NAS, and realign our airspace system with current demands.

- Reauthorization must provide further support for the modernization of our air traffic control system with stable funding for our core operations and NextGen investments.

As Congress works on a bill in the months ahead, discussions are likely to continue about the structure of the FAA and our air traffic operations. We're open to having these conversations, but we must ensure that any potential changes under consideration provide long-term, stable funding for our air traffic operations and help us maintain the safest airspace system in the world.

Congress has approved a Continuing Resolution, or CR, to keep the government funded through December 11 – a two-and-one-half month extension of our funding. Needless to say, we will continue to push for a long-term reauthorization bill, and long-term funding. We don't want a return to the days before our 2012 authorization, when we had 23 short-term extensions. We need a long-term bill that will provide stable, reliable funding for the critical projects we're supporting and help us maintain America's role as a global aviation leader.

Compliance Philosophy

I'd also like to update you on an announcement Administrator Huerta made earlier this week about the FAA's new Compliance Philosophy.

It's often said that America is the gold standard in aviation. One reason for this is the dramatic improvements we've made together on safety. In recent years, our approach has matured to focus on identifying areas of risk and mitigating them before an incident occurs. As part of this shift to risk-based decision-making, our enforcement efforts are evolving as well.

The Compliance Philosophy cements in writing what much of the agency has been doing for quite some time. It's based on open and transparent exchange of information and data between the FAA and industry.

Our goal is to have safe operators, not operators who inadvertently make a mistake and then hide it because they're afraid of being punished. If there is a failing, whether human or mechanical, we want to know about it, learn from it, and make the changes necessary to prevent it from happening again.

By aiming for compliance with the standard first, we free up our inspectors to spend more time identifying and correcting problems, rather than putting together enforcement cases for unintentional infractions.

This doesn't mean we're going to go easy on compliance, or ignore minor issues, or let anyone believe they have a free pass. We will continue to have zero tolerance for intentionally reckless behavior, repeat failures, or deviation from regulatory standards. We will continue to vigorously pursue enforcement action in these circumstances.

In fact, earlier this week, the FAA proposed a $1.9 million civil penalty against a company that knowingly conducted dozens of unauthorized flights with an unmanned aircraft over Chicago and New York for the purposes of aerial

photography. This is the largest proposed civil penalty to date against an unmanned aircraft operator.

But in cases where we find flawed procedures, simple mistakes, a lack of understanding, or diminished skills, we will use tools like training or documented improvements to procedures to ensure compliance.

This approach recognizes that all aviation stakeholders have a vested interest in the safety of our system. That's what Compliance Philosophy is all about.

Unmanned Aircraft

I'd also like to update you today on the actions the FAA is taking in one of the fastest changing areas of the aviation industry: unmanned aircraft.

Yesterday, I testified at a House Aviation Subcommittee hearing on our UAS efforts. [*AD LIB IMPRESSIONS FROM HEARING. ½ PAGE SPACE FOR NOTES.*]

Integrating unmanned aircraft into our airspace is a big job, and it's one the FAA is determined to get right. We recently filled two executive-level positions that are going to build on our momentum and help us accomplish this goal.

One of them is familiar to everyone in this room. Hoot Gibson, who worked with us very effectively in leading the Equip 2020 effort, has been chosen to serve as the FAA's Senior Advisor on UAS Integration. He will focus on external outreach and education, as well as interagency initiatives.

As all of you know, Hoot is coming to us from the NextGen Institute, where he showed tremendous leadership as the Executive Director. With his departure and the substantial progress we've made on the Institute's goals, the FAA will be transitioning the NextGen Institute's activities into the agency in the months ahead as we continue to work closely with industry through similar entities like RTCA.

We've also tapped Earl Lawrence as the Director of the UAS Integration Office within the FAA's Aviation Safety organization. Earl previously served as

the Manager of the FAA Small Airplane Directorate. In his new role, he'll lead our efforts to safely and effectively integrate unmanned aircraft into our nation's airspace.

Earlier this year, we took an important step forward on that goal by releasing a proposed rule that laid out a flexible framework for allowing the routine use of small unmanned aircraft. The FAA received more than 4,500 public comments on this proposal, and we're working to address them before finalizing the rule.

This, however, is a lengthy process – so we're simultaneously pursuing other ways to expand the use of unmanned aircraft.

We've accommodated more than 1,800 requests for commercial operations under our Section 333 exemption process.

NextGen Progress

Now, I'd like to move on and share some recent highlights from our work implementing NextGen.

Infrastructure Progress

As I detailed at our last meeting, the FAA has made tremendous progress on building the infrastructure that supports all of our NextGen capabilities.

ERAM is now installed and operational at all 20 of our planned en route control centers. We've finished the coast-to-coast installation of the ADS-B network, and ADS-B is integrated at all of our en route centers. And last month, we took a big step forward on Data Communications, one of our key NextGen technologies and one of our four NextGen priority focus areas.

We reached initial operating capability for Data Comm's departure clearance services at our three key site towers: Salt Lake City, and both Houston airports. These sites are in addition to the highly successful Data Comm trials that we implemented at Newark and here in Memphis.

This is an exciting milestone, and there are many people who deserve credit for getting us to this point. Everyone at the Salt Lake, Bush, and Hobby control towers, as well as at the Salt Lake, Houston, and Atlanta Air Route Traffic Control Centers, worked hard to install, test, train on, and manage this capability. Our labor partners at both the national and local facility levels also made invaluable contributions to accomplishing this milestone.

Additionally, I have to thank our industry partners, including FedEx, Southwest, United, and UPS, who provided dedicated flight crews so we could test this new capability prior to Data Comm activation at these three airports. We're also working closely with the Air Force, which has an air national guard base at Salt Lake International.

As we continue to roll out these new NextGen technologies, we also experience the occasional glitch – as we did with ERAM at the Washington Air Route Traffic Control Center in August. I've asked Teri Bristol, our Chief Operating Officer at the FAA's Air Traffic Organization, to update the group on that incident, as well as our cyber security strategy for Data Comm.

[TERI BRISTOL DELIVERS REMARKS]

Today's Agenda

We've got a number of other interesting topics on the agenda for today.

We will start with an update on our joint priorities. Thanks to the work we have done in partnership with the NAC, we continue to be successful in delivering on these priorities together.

Over the past year, we have implemented wake recategorization at numerous locations. We have implemented new performance based navigation procedures. We have published national standards. We have improved data sharing. We have also used the results of our studies and assessments to identify additional next steps for work that is important to industry.

Most recently, as I mentioned, we completed implementation of our first Data Comm key sites. Starting next year, we will deploy Data Comm in more than 50 of our air traffic control towers.

We've made significant progress in surface operations and data sharing this summer thanks to industry leadership. They've brought in airport operators to the collaborative decision-making process, and they've made sure that all users have real-time air traffic control and flight movement information to manage air operations more effectively.

Industry has also worked closely with the FAA to simplify the application process for System Wide Information Management data – a much-needed improvement in our ability to access this important information.

I continue to be impressed with the collaborative work at the subcommittee level and among the NextGen Integration Working Group leadership as well.

Over the last few months, we interviewed more than 20 industry and FAA leaders who were involved in the effort to set priorities over the last year. You will hear the highlights from those interviews this morning.

As a result, the NextGen Integration Working Group leaders have been talking about how we can move forward and ensure our plan remains current and relevant to our ever-changing industry.

While we've had a successful year, this is only the beginning. We want to maximize our NextGen capabilities and the benefits we're delivering, and we continue to make progress on our efforts to measure these impacts.

The FAA and industry leads for the NextGen Priorities will be providing updates on our milestones later this morning, and I know we are all looking forward to their report.

While we're all very focused on the priorities outlined in our Joint Implementation Plan, NextGen is more than just these four focus areas. Following a request made at the last NAC, Paul Fontaine is going to provide a high-level overview of the full scope of our NextGen capabilities. With some new NAC members joining us, this is a good opportunity to review the overall breadth of our NextGen plans.

We'll also be delivering on an IOU from our last NAC meeting by providing an update on ADS-B equipage progress and trends. John Hickey has our team ready to brief you today on where we are with the key issues the Equip 2020 team is working on. Equipage rates are increasing, but as you will see, we still have a lot of hard work to do to ensure we make that important 2020 deadline.

With Hoot Gibson's move to my office to lead our UAS outreach efforts, I want to reiterate the FAA's commitment to supporting Equip 2020. Quarterly meetings will be held as planned, and we will continue to provide logistics and technical support.

We all know what important work this group is doing – and we're not the only ones. Last week, we received word that the Air Traffic Control Association will be presenting the Chairman's Citation of Merit Award to the Equip 2020 team at their annual conference next month. This recognition would not have been possible without your participation and leadership, so thank you and congratulations.

I also want to thank all of our industry partners for their work promoting ADS-B equipage. I am confident that aligning our messaging – like we did with the NextGen Institute, AOPA, GAMA, and the Aircraft Electronics Association at the FAA Safety Center in Oshkosh this year – will deliver the results we're after.

Jim Linney and Bruce DeCleene will also provide an ADS-B surveillance roadmap, including:

- The status of the ground infrastructure and airborne equipage activity for ADS-B Out;
- The definition and status of initial applications for ADS-B In; and
- Proposed future ADS-B In applications.

Jim will also cover the FAA's work on space-based ADS-B and our progress toward a common weather picture.

Additionally, you'll have the opportunity to hear from Mark Bradley on our work to formulate a new PBN Strategy. At the FAA's request, the PARC kicked off a technical review of this PBN Strategy document in August. They've identified two non-technical areas where they would like support from this Committee. Not surprisingly, one of those areas is traffic flow.

Traffic flow management is essential to optimizing the flow of aircraft as they approach and depart congested airspace. The FAA has been working on this issue using Time Based Flow Management, or TBFM.

We're on target to publish a set of national procedures this December that includes a policy for the use of TBFM to support PBN implementation. We've conducted an in-depth study on the soft skills and culture changes that will be necessary to make TBFM a success. We held our first TBFM Customer Forum in August, and we'll be holding discussions on how to measure TBFM performance and activities going forward.

While the importance of flow management and its associated automation capabilities are well known, the PARC agreed that additional focus from the NAC in this area is needed.

Community Engagement on Noise

Finally, we can't discuss PBN without also engaging on the issue of noise.

There are now more satellite-based procedures than conventional procedures in our skies, and the vast majority of PBN procedures have been implemented seamlessly and without controversy.

Over the last two decades, we've made significant progress in reducing the noise footprint for people living around airports. This has been accomplished with

advances in aircraft technology, operational procedures, and programs to work with airports to mitigate noise.

But as individual aircraft noise levels have decreased, we've seen increases in the number of operations, particularly during nighttime hours, and in the number of people living around airports. Our procedural actions as we implement NextGen also sometimes result in changing flight patterns and noise for communities around airports.

As a result, we've seen an increasing level of public debate, political interest, and even litigation related to aircraft noise. Given these trends, the FAA's engagement with communities is more important than ever.

Efforts are already under way within the FAA to improve our ability to interact with communities on noise issues in ways that are transparent, inclusive, responsive, and productive. We're committed to being smart and thoughtful about educating, involving, and getting input from residents – building on good past practices and using new techniques, including social media.

In Southern California, for example, we just today closed an unprecedented 120-day public comment period for the Southern California Metroplex Draft Environmental Assessment. We've held more than twice as many public workshops as we have for any other Metroplex project. And we've made a number

of online tools available that let residents look up noise levels for their communities and see current and proposed flight tracks on Google Earth maps.

We're also conducting early outreach to airport authorities to help us identify local environmental sensitivities and improve decision-making. Additionally, we are starting to introduce environmental considerations earlier in the procedural design process to better understand interdependencies and consequences.

But this issue won't be solved by the FAA alone. We need to work together to ensure that NextGen enhancements are successful and provide a sustainable environment for underlying communities.

We all have to lean in.

We need the entire aviation industry to work with us on engaging communities, getting them comfortable with proposed changes, and explaining the capacity and efficiency benefits of new procedures.

By working together, we can make sure NextGen has a net positive impact for everyone.

Conclusion

Thank you for the opportunity to address you today. This concludes the FAA report.

DRAFT – NOT FOR RELEASE **10/7/2015 11:15 AM**

Mike Whitaker
ICAO NACC meeting
October 13, 2015
Montego Bay, Jamaica

Reviewed by: Carey Fagan, Krista Berquist, Michelle Westover

Thank you, Mr. Chairman.

Hello everyone.

- I regret that I will be unable to stay until the end of the meeting, but a few hours in a place like this is worth the trip. My thanks to Mr. Nari (NAR-e) Williams-Singh and the JCAA for their gracious welcome and their hospitality.
- On behalf of the United States, I am pleased to present Working Paper 1.
- The United States is a proud member of the NACC region.
- We're eager to partner with our neighbors to ensure the safety and efficiency of aviation in this region.
- In this working paper, we want to highlight some priority areas in need of additional attention to meet our shared goals.

Regional Air Traffic Data

- Nearly 75% of international flights from the U.S. are headed for destinations in the Western Hemisphere region.
- Of that traffic, nearly 17% are going to the Caribbean.
- In 2014, more than 7 million passengers originating in the U.S. flew to the Caribbean.
- We also have more than 900,000 aircraft that cross 7 adjacent flight information regions in the Central American and Caribbean (CAR) region.

Forecasted Growth

- Looking to the future, the traffic between the United States and the CAR region will likely outpace the growth with other regions.
- In fact, air traffic in the Caribbean is expected to grow rapidly, between 5-6% over the next two decades; the region is second in the world behind the Middle East in terms of aviation.[1]
- Looking behind these numbers – we see trade, tourism, and greater prosperity for our respective countries.
- We want to enable this growth in a way that ensures safety and maximizes efficiency.

Port of Spain Declaration

- In 2013, the NACC Member States approved the Port of Spain Declaration to prioritize regional implementation of ICAO standards aligned with the Global Air Navigation Plan (GANP) and the Global Aviation Safety Plan (GASP).
- We've seen, however, a lack of effective regional implementation of standards in the area of aerodrome safety, and slow implementation of Aviation Safety Block Upgrade (ASBU)-related technologies.
- As identified in Paragraph 2 of Working Paper 1, let me cover these areas a bit more.

Aerodrome Safety

- The Port of Spain Declaration includes a performance target to increase the number of certified aerodromes in the region.
- The region also has identified deficiencies related to aerodrome certification, runway safety, and wildlife mitigation programs.
- Addressing aerodrome safety matters is critical to creating a safe airfield environment for operating aircraft and to minimize risks related to runway excursions and their consequences.

[1] According to the International Air Transport Association

Air Navigation

- Region-wide Air Traffic Flow Management (ATFM) implementation is a key goal in the Port of Spain Declaration, and significant support is needed to support Member States on this initiative.
- This region is characterized by multiple air navigation service providers operating in a non-integrated network.
- Highly variable weather patterns and system complexities contribute to schedule uncertainties and delays.
- The FAA has been a strong advocate for the global implementation of Collaborative Decision Making (CDM) within an integrated ATFM system. The development of a regional ATFM/CDM network in collaboration with ICAO and industry partners would contribute to greater operational efficiency in the Caribbean Region.

System Wide Information Management

- The FAA recommends greater regional implementation of System Wide Information Management (SWIM).
- SWIM will provide the region with increased capacity for exchanging information on traffic flow constraints such as ground delays and ground stops.
- SWIM implementation also provides the ability to automatically distribute weather-related pilot observations to controllers, which will further enhance safety and capacity.

FAA Support for Regional Initiatives

- The FAA and other regional members have provided technical expertise as part of ICAO's CAR Project, which aims to support regional ASBU implementation and remedy air navigation deficiencies.
- In terms of regional achievements, I want to point out the welcome developments in the normalization of US relations with Cuba. This administration believes that the most effective way of working with our neighbors is through engagement and the FAA is proud of its track record in support of this.

- I am happy to say that the years of engagement have proven successful and have guaranteed safe passage between our adjoining airspaces for millions of passengers.
- In fact, this week the FAA has an expert in Cuba to support a CAR Project on runway safety. Also, this past July, we sent someone to Cuba to assist with ATFM capabilities.

In Closing…

- The Port of Spain declaration is a strategic plan for implementation of the GANP and the GASP, but it can be challenging to complete critical targets on your own.
- Working Paper 1 provides two recommended actions. The first encourages all NACC Member States to consider the Port of Spain Declaration regional performance targets and take action in meeting these goals. What can we do by 2016 to make real progress on these goals?
- The second recommended action strongly encourages the ICAO Council, through application of the "No Country Left Behind" initiative, to give attention and resources to regional initiatives that are aligned with regional performance targets. Specifically, priority goals related to aerodrome certification and air navigation improvements should be a major focus.
- Providing needed attention to these issues will ultimately improve aviation on a system-wide basis throughout the NACC, and ultimately contribute to a more effective global aviation system.

Administrator Michael Huerta
Deputy Administrator Mike Whitaker
FAA Town Hall
Washington, DC
December 3, 2015

OPENING: THE "BEST OF" FAA (1/2)
[HUERTA LEADS]

- **It's hard to believe the end of 2015 is almost here.**

- **You know what that means – "Best of 2015" lists are popping up all over the place.**

    - **People are debating the best movies, best restaurants, best albums – I'm personally partial to [*AD LIB*].**

- **This, of course, got me thinking about our own "Best of" list.**

- **It was certainly a big year for the aviation industry as a whole.**

    - **The American Airlines – US Airways merger closed.**

    - **Delta bolted from Airlines for America.**

OPENING: THE "BEST OF" FAA (2/2)
[HUERTA LEADS]

- **A gyrocopter took a trip down the National Mall.**

- **And Mike and I got called to testify at more Congressional hearings than we can even recall.**

- **But when I think about our year here at the FAA, I'm filled with a tremendous amount of pride.**

- **We accomplished a lot – so today, Mike and I are going to make our own "Best of" list:**

  - **Five areas where we think we made the most progress in 2015, and**
  - **What we see on the horizon for 2016.**

- **Then we'll get to your questions.**

GLOBAL LEADERSHIP (1/2)
[HUERTA LEADS]

- **This year, I've made a number of trips abroad – from London and Paris to Dubai. I even have a series of meetings scheduled in Israel in a few weeks.**

- **Meeting with our international counterparts is an important opportunity to advance America's aviation interests abroad.**

- **Since safety is our top priority, I shared best practices for maintaining strong regulatory oversight and manufacturing standards in growing markets like the Middle East while I was in Dubai.**

- **In Paris, I focused on harmonization agreements that ensure NextGen will be interoperable with other air traffic modernization systems like SESAR in Europe.**

GLOBAL LEADERSHIP (2/2)
[HUERTA LEADS]

- **Other countries often wrestle with the same issues we do, so these meetings also let us learn from each other. In London, we discussed the challenges of integrating unmanned aircraft and commercial space, as well as working with communities on environmental issues associated with performance based navigation.**

- **International engagement also helps us find ways we can work together to promote aviation safety around the globe.**

    - **In the aftermath of the disappearance of MH370, the FAA committed to working with ICAO to find a way to make global flight tracking a reality.**

    - **We're also working with other ICAO members to share more information about conflict zones that may threaten civil aviation.**

NEXTGEN (1/2)
[WHITAKER LEADS]

- **The FAA made tremendous progress in building the infrastructure that supports NextGen this year.**
    - **ERAM is now installed and operational at all 20 of our planned en route control centers.**
    - **ADS-B is now integrated at all of our en route centers.**
    - **Data Communications is now in use at Newark, Memphis, Salt Lake City, and both Houston airports.**
- **We continue to work closely with the NextGen Advisory Committee to deliver measureable benefits to consumers, industry, and aviation stakeholders across the country.**

NEXTGEN (2/2)
[WHITAKER LEADS]

- **Over the past year, we've implemented new performance based navigation procedures and wake re-categorization at numerous locations.**

- **We've also improved data sharing and identified next steps for work that is important to industry.**

- **We made progress on our commitment to making aviation more environmentally-friendly, as well.**

  - **We kicked off CLEEN II by selecting eight companies to develop technologies that reduce fuel consumption, emissions, and noise.**

  - **We also stepped up our efforts to engage with communities on noise issues, like we did with the Northern California Metroplex.**

COMPLIANCE PHILOSOPHY (1/2)
[HUERTA LEADS]

- **The FAA's new Compliance Philosophy is designed to help us achieve a higher level of safety.**

- **The goal of the Compliance Philosophy is to:**
  - **Find problems before they result in an incident**
  - **Use the most appropriate tools to fix those problems, and**
  - **Monitor the situation to ensure they stay fixed.**

- **The success of the Compliance Philosophy relies on buy-in from FAA employees – and we're already seeing good results as we roll it out across the agency.**

- **In October, the Flight Standards and Aircraft Certification teams took more than 300 compliance actions in total.**

COMPLIANCE PHILOSOPHY (2/2)
[HUERTA LEADS]

- **This means that issues were identified and documented, and corrective actions were applied – without having to take enforcement actions.**

- **This doesn't mean enforcement actions are off the table. They are still being used when it's appropriate – like when we find intentional or reckless deviations from regulatory standards or patterns of negative behavior or performance that represent an unacceptable risk to safety.**

- **But the data shows us that there's been a decrease in the use of enforcement between October and November.**

- **We'll continue to monitor the metrics, but initial indications show our new Compliance Philosophy is delivering positive results from a safety, resource, and efficiency perspective.**

SAFETY (1/2)
[WHITAKER LEADS]

- **Our Compliance Philosophy is just one part of our overall efforts to improve safety by embracing risk-based decision-making at the FAA.**

- **Earlier this year, we finalized a rule requiring most U.S. commercial carriers to have Safety Management Systems in place by 2018.**

    - **This formalizes what many airlines are already doing voluntarily and brings those who aren't already involved on board.**

- **We hosted a Runway Safety Call to Action that brought together a wide range of aviation partners to discuss ways to cut down on runway incursions.**

    - **I also want to thank all of our employees who submitted ideas through our Runway Safety Idea Challenge on IdeaHub.**

SAFETY (2/2)
[WHITAKER LEADS]

- **We also made important strides forward in general aviation safety.**

- **This summer, we launched *Fly Safe*, a new national safety campaign to educate the GA community on how to avoid Loss of Control accidents.**

- **We also continue to promote ADS-B equipage in advance of the January 2020 deadline.**

    - **ADS-B provides real safety benefits for GA pilots – allowing air traffic controllers to pinpoint their aircraft with far greater accuracy and providing free weather and traffic updates that improves situational awareness.**

UNMANNED AIRCRAFT (1/2)
[HUERTA LEADS]

- **The FAA is committed to create a strong culture of safety and responsibility in the unmanned aircraft community through:**
    - **Registration. We're considering task force recommendations and public comments, and we will have a system in place soon. FAA employees will soon have an opportunity to test this registration system, and I encourage everyone to participate so we can make improvements before the public launch.**
    - **Education. We're working with government and industry partners to conduct outreach through the Know Before You Fly and No Drone Zone campaigns. We also launched a beta version of the B4UFLY app.**
    - **Enforcement. We're pursuing penalties and enforcement actions against people who don't operate within the law.**

UNMANNED AIRCRAFT (2/2)
[HUERTA LEADS]

- **We're also working to put a regulatory framework in place for commercial unmanned aircraft operations.**
    - **Earlier this year, we proposed a rule that would allow small UAS operations we know are safe.**
    - **We've approved more than 2,200 requests for commercial operations under our Section 333 authority.**
    - **We launched the Pathfinder Program, a public-private partnership that will help us expand UAS operations beyond the parameters of the small UAS rule.**
- **As we look to the future, we know that our approach to integrating unmanned aircraft must be as nimble as the technology itself.**

CONCLUSION: LOOKING TO 2016 (1/3)
[HUERTA LEADS]

- **While it's important to reflect on all we've accomplished at this time of year, it's also an opportunity to look toward the future.**

- **For example, in 2016:**
  - **Congress will consider our reauthorization bill.**
  - **We'll finalize our small unmanned aircraft rule.**
  - **We'll release our long-awaited re-write of Part 23.**
  - **We'll ramp up work on our new Caribbean Strategy, which will help our neighbors mature their aviation systems.**

- **If we're going to be successful in tackling these, and so many other issues, we're going to need help from each and every one of our employees.**

- **I would ask each of you to think about how we can work safer, smarter, better, and together – every day.**

CONCLUSION: LOOKING TO 2016 (2/3)
[HUERTA LEADS]

- **As an organization, the FAA can't achieve any of its goals if we don't have the right people to work on them.**

- **That's why we're committed to building the Workforce of the Future and developing employees into the leaders the FAA needs to be successful.**

    - **This year, we rolled out a New Hire Orientation program that helps new employees better understand the FAA's mission and their role supporting it.**

    - **The FAA Leadership and Learning Institute also launched new and updated curriculum for management trainees.**

CONCLUSION: LOOKING TO 2016 (3/3)
[HUERTA LEADS]

- **With Annie Andrews, our new Assistant Administrator for Human Resource Management, on board, I know we'll be able to build on this momentum in 2016.**

- **What makes America's aviation system the best in the world is all of you – our employees.**

- **So let me close by simply saying: thank you.**

- **Mike and I, along with the entire FAA leadership team, value your service, and your feedback.**

- **Now, let's get to your questions.**

Deputy Administrator Mike Whitaker
FAA Town Hall
Washington, DC
February 11, 2016

- **As Michael points out, we continue to accomplish a lot as congress and industry debate this bill. YOU continue to accomplish a lot and keep our system safe.**

- **During our last town hall, Michael and I discussed some of the FAA's achievements in 2015.**

    - **Building the infrastructure that supports NextGen:**
        - **ERAM was completed last year – we now have cutting edge technology running the heart of our ATC system**
        - **The ADS-B ground infrastructure has been fully installed**
    - **We continue to reach higher levels of safety with SMS and our new Compliance Philosophy; and**
    - **We're preparing our workforce for the future with new onboarding and training initiatives.**

- **That good work continues this year as we finalize the small unmanned aircraft rule,**
    - **and release our long-awaited rewrite of Part 23.**

- **Even with the uncertainty surrounding reauthorization right now, we must continue working toward these goals.**

- **And as Michael said, those goals are evolving as the aviation industry rapidly changes.**

- **Much of this change relates to our efforts to incorporate new users in the NAS – commercial space and UAS – both of which are part of our strategic priorities.**

- **Last week, I spoke at the Commercial Space Transportation Conference, and discussed the fact that in 2012 there were only three licensed commercial space transportation operations. This year, that number will be close to 50.**

- **The President's budget reflects this tremendous growth by requesting additional resources to support our commercial space integration efforts.**

- **For UAS, as you all know, our employees undertook a heroic effort – working weekends and holidays – to build and launch a registration system in record time.**

- **Employees from across the agency stepped up to do this.**

- **This was a major step in our efforts to create a culture of safety and responsibility in the unmanned aircraft community, and the speed at which you accomplished this is a true testament to your dedication.**

- **We're already seeing great results from your hard work.**
    - **To date more than 330,000 pilots have registered.**
- **You may also be aware that we've teamed with various outside entities on our No Drone Zone campaign. One of the public service announcements we produced aired on the scoreboard before the Super Bowl, reaching a wide and diverse audience.**
- **All of this success is a credit to you. No matter the situation, the FAA workforce is known for its unwavering focus on maintaining the safest and most efficient aerospace system in the world.**
- **I have no doubt you'll maintain that focus in the days and weeks ahead.**

[HAND BACK TO MICHAEL FOR ADDITIONAL REMARKS]

FINAL **3/7/2016 1:00 PM**

Mike Whitaker
AOC All-Hands Meeting
Washington, DC
March 8, 2016

- As Jenny mentioned, AOC accomplished a lot last year – working with every line of business to promote the FAA's mission of providing the safest, most efficient airspace system in the world.

- [*REFLECT ON WHAT YOU HEARD DURING PRESENTATION.*]

- In 2016, we're not slowing down.

- The FAA is working on a lot of high-profile issues – from NextGen to unmanned aircraft – and the American people are looking to our agency for guidance.

- So as we innovate the way we manage air traffic in this country, we should also think about how we can innovate the way we communicate with the people who care about our work.

- We need to find new ways to reach our audience – whether it's Congress, manufacturing and industry stakeholders, or a hobbyist who just bought their first drone.

- We also need to find new ways to work together – because whether you work in internal or external communications, we all need to be speaking with the same voice.

- AOC is a small office, but its impacts can be felt in every corner of the FAA. Thank you, and keep up the good work.

Deputy Administrator Mike Whitaker
GA Safety Summit
Washington, DC
March 31, 2016

- **Hello everyone. Thank you for joining us.**

- **Before we get started, I want to briefly mention that we announced the selection of Shell and Swift Fuels as finalists for testing an unleaded replacement for avgas earlier this week.**

- **This is an important step forward in our efforts to eliminate the GA community's reliance on leaded fuel, which I know many of you are interested in and have been supportive of.**

- **We're on track for testing to begin this summer and conclude in 2018, and we're looking forward to seeing the results.**

- **Now let's get to our reason for being here today: general aviation safety.**

- **In 2009, we committed to reducing the GA fatal accident rate by 10 percent by 2018.**

- **Today, I'm happy to share some good news: last year, we hit our goal for the first time.**

- **And 2016 is off to a great start – we're already meeting our numbers for this year.**

- **Our gains are impressive – and they're a testament to the work being done by the GA Joint Steering Committee, which Griff will talk about in a few minutes.**

- **But we still have more work to do. Last year, 384 people died in 238 general aviation accidents.**

- **We're approaching this from a few different angles – some of them technological, some of them regulatory, and some of them educational.**

- **On the technology side, I got to see some of the benefits firsthand when I went airplane shopping recently and checked out a Cirrus SR20 that came equipped with an Angle of Attack indicator, as well as ADS-B In and Out.**

- **There's no question that ADS-B is one of NextGen's most important safety technologies, and we're continuing to work closely with the Equip 2020 team to get it into more general aviation aircraft.**

    - **As of March 1st, more than 13,000 GA aircraft currently have rule-compliant ADS-B equipment.**

    - **We estimate as many as 140,000 additional aircraft must be modified in advance of the January 2020 deadline.**

    - **We'll be working with the GA community to announce some ideas about how to increase early equipage in the coming weeks.**

- **We're also looking for better ways to help the private sector access aeronautical data currently provided by the FAA, as well as identify additional data we could provide.**
    - **Our goal is to help industry be in a position to create innovative products and technologies that are intended to improve safety and efficiency in the aviation industry.**
    - **We'll begin the conversation at Sun 'n Fun, and we'll be contacting you in the next few months for feedback on how the GA industry can work together to ensure the FAA is providing the data you need.**
- **On the regulatory side, we've made considerable progress on a few notable issues.**
- **As you all know, we recently released our proposed rewrite of Part 23, which would overhaul the airworthiness standards for small GA aircraft.**

- **We hope to help incorporate emerging technologies into the marketplace, as well as encourage new, safer product designs.**

- **I want to thank all of you who worked closely with us on this rewrite.**

- **Another policy we've been working on will streamline the approval process for Non-Required Safety Enhancing Equipment.**

  - **We're reviewing the public comments on our draft proposal now and will issue the final policy in the coming months.**

  - **Ultimately, this will make it easier to get safety-enhancing equipment into GA aircraft.**

- **We're also updating key elements of the airman certification system by replacing the practical test standards with certification standards that focus on risk management.**

- **This will help pilots understand how knowledge, skill, and risk assessment work together to ensure safe operations.**

- **Finally, we all know how important education and training are to improving general aviation safety.**

- **I want to thank all of you for continuing to collaborate on the Fly Safe campaign, which is educating the GA community on how to avoid Loss of Control accidents.**

  - **Together we have reached 35 million followers on our social media platforms, including Twitter, Facebook, LinkedIn, Instagram, and YouTube.**

- **When government and industry work together, like we are doing through the GA Joint Steering Committee and the U.S. Helicopter Safety Team, we can make a significant difference.**

- **Summits like this provide an excellent opportunity to continue building on the momentum by sharing ideas and working on solutions.**

- **Thank you again for being here today, and I look forward to our discussion.**

Deputy Administrator Mike Whitaker
Sun ‘n Fun External Data Access Initiative Listening Session
Washington, DC
April 7, 2016

INTRODUCTION

- **Some of you probably showed up today expecting to hear from John and Martha King – and instead, you're stuck with me.**

- **And I'm here to talk about data! Wait, don't all head for the doors at once.**

- **I know it can be hard to get excited about massive spreadsheets and a bunch of ones and zeros.**

- **But data is the foundation for everything we do at the FAA.**

- **It helps us maintain the safest aviation system in the world, and it allows us to make our processes more effective and efficient.**

- **We also believe this data has the potential to spur innovation in the marketplace via the creation of new applications and services that aviation users want and need.**

INTRODUCTION

- **That's why we recently launched a new initiative – Got Data? – to increase the public's access to the FAA's aeronautical data.**

- **We're reaching out to stakeholders who have used this type of data in the past, as well as companies that may be interested in using it in the future.**

- **Today, we want to hear from all of you.**

    - **What types of additional aeronautical data would you like the FAA to provide to the public?**

    - **How can we improve your access to aeronautical data, and in what formats?**

    - **With better access to data, what kinds of products and services do you think could be developed to advance the aviation industry?**

INTRODUCTION

- **But before we get to that, I think it'd be valuable to provide some context on the FAA's current data sharing practices.**

- **I'm going to turn things over to Larry Grossman, the FAA's Deputy Director for Information Security and Privacy, who will talk briefly about what data you currently have access to.**

- **Then he'll open it up for discussion.**

CONCLUSION

- **Thank you all for being here today. This has been a productive discussion, and I look forward to taking your feedback to our team at the FAA.**

- **Today is only the beginning of this conversation about data access – and we've got a few ways you can continue to provide input.**

    - **You can arrange a one-on-one meeting with a member of our team, which Larry can help you set up.**

    - **You can also let Larry know if you'd like to participate in a stakeholder task force meeting in Washington, DC, at the end of April.**

    - **And if you know anyone who isn't here today who would like to provide input, you can direct them to the online survey we've created. We've got the details and the web address on some flyers up here.**

FINAL **4/6/2016 2:00PM**

Mike Whitaker
Sun ‘n Fun
Lakeland, FL
April 8, 2016

Thank you for that introduction, Dennis [*Roberts, Regional Administrator for the Southern Region*].

It’s great to be back here for Sun ‘n Fun. This is always one of my favorite events, both as Deputy Administrator of the FAA, and as a pilot.

Being surrounded by all of you – people who live and breathe aviation – is an inspiration to me. I can only hope one day I’ll have accomplished half as much as the Master Pilots we honored earlier. I’m already counting the minutes until I can climb into the cockpit again.

When I got here yesterday, I made sure I had plenty of time to check out all of the aircraft and exhibits – and there was plenty of innovation on display. [*AD LIB impressions from tour.*]

Yesterday wasn't just about checking out the latest and greatest technologies, though – I also fit in some time for business. I held a listening session on the FAA's new "Got Data?" initiative.

I know, I know – it sounds pretty boring. It's tough to get excited about data – massive spreadsheets and a bunch of ones and zeros. But data is the foundation for everything we do at the FAA. And our data often makes its way into the tools you rely on in the cockpit every time you fly.

Avionics manufacturers turn the navigational charts and instrument approaches the FAA produces into a wide variety of electronic products. These feed into your flight management systems and iPads. The biggest advantage of these new products is that they enable pilots to have greater awareness about where they are, and what lies ahead, than ever before. And it all fits in the space of a silicon chip.

Now imagine what could be possible if we opened up more of our data to more partners in more formats. That's the idea behind Got Data. We want to find better ways to help the private sector access aeronautical data currently offered by the FAA.

We also want to identify additional data resources we could provide. Our goal is to help industry be in a position to create innovative products and technologies that are intended to improve safety and efficiency in the aviation industry.

We got great feedback at our listening session. [*AD LIB impressions from meeting.*]

That's one of the many things I love about Sun 'n Fun. The general aviation community doesn't hesitate to speak up. And the FAA is listening to what you have to say.

One area we heard you loud and clear on was pilot testing. As someone who got his pilot certificate not too long ago, I think we can all agree that there was plenty of room for improvement on the knowledge test. It focused too much on memorizing things you didn't really need to know to be a safe pilot. And it didn't ask anything about risk management, which every pilot needs to use in real-world operations.

That's changing. This June, we're starting the rollout of our new Airman Certification Standards. By integrating knowledge and risk management with practical skills, these standards define

what a pilot needs to know, consider, and do to fly safely in America's complex airspace.

This is good news, whether you're planning to get a new certificate or you've had your pilot's license as long as some of our Master Pilots. By keeping knowledge questions current and incorporating risk management into pilot training and testing, we can ensure our airspace is safer for everyone.

We're not just improving our approach to pilot certification. Hobbyists and manufacturers alike have asked the FAA to revisit our small airplane certification standards for years.

Last month, we took a significant step forward by releasing our proposed rule to rewrite Part 23. Instead of requiring certain design elements on specific technologies, the new Part 23 will define the safety outcomes we want to achieve. This approach recognizes there's more than one way to deliver on safety – and it provides room for flexibility and innovation in the marketplace.

Our Part 23 rewrite will overhaul how we certify aircraft in the future. But we also recognize how important it is to modernize the existing general aviation fleet.

In 2014, we developed a streamlined process for installing angle of attack indicator systems. Last year, we clarified the process for installing electronic attitude indicators. We're now building on this progress with a new policy that will make it easier to install other non-required safety-enhancing equipment in GA aircraft.

We want to reduce unnecessary regulatory barriers that make it costly and time-consuming to develop and install these exciting technologies. They might not be required by a rule, but these tools still provide a number of valuable safety benefits – and we want to make sure you can easily take advantage of them.

Of course, some tools are so revolutionary that the FAA does require them for all aircraft. ADS-B is one of these technologies.

I've talked here before about ADS-B and all of its benefits. I got to see them firsthand when I went airplane shopping recently and checked out a Cirrus SR20 that came equipped with ADS-B In and Out. It gives a GA pilot a view that's similar to what a commercial jetliner pilot can see with the Traffic Alert and Collision Avoidance System. And it's particularly useful – and enhances safety – in busy airspace.

All of us have been in the sky and had a controller tell us something like: you've got traffic at 2 o'clock, at an altitude of 400 feet below you. The response is almost always the same: you start craning your neck and peering into the distance so you can report, "Traffic in sight."

With ADS-B, that traffic will be displayed on your screen. You'll know exactly where that other aircraft is, the other pilot will know where you are, and you'll both have a good idea of what the controller is seeing as well.

But this only works if everyone in our airspace is using the technology. That's why we're holding firm on the January 1, 2020 equipage deadline.

I know the issue with this, obviously. If someone tells me I have to do something by 2020, that means I'm not thinking about it until 2019 – late 2018 at the earliest. Unfortunately, since there's likely to be a capacity issue at repair stations as we get closer to the deadline, this approach may end up leaving your aircraft grounded for the early part of 2020.

My advice is: don't wait until the last minute. This is a great time to get your aircraft in ahead of the crowds. Prices on ADS-B equipment have fallen considerably – some units can be found for as low as $1,500. So visit some of the manufacturers here at Sun 'n Fun. Make an appointment with your local repair shop. The time to equip is now.

There's one theme at the heart of all of the initiatives I just mentioned: safety. It's the common goal that unites the FAA with every level of the aviation industry. And it's the principle that unites each of us – pilot to pilot.

I hope you'll join me today in making a personal commitment to safety. It's our responsibility to keep our skills sharp and operate safely every time we sit in the cockpit. No matter how long you've been flying, a safety refresher is always

a good idea. I hope you'll consider checking out our Fly Safe campaign, which we launched last year on FAA.gov to help prevent Loss of Control accidents. We have a lot of terrific resources available for you to take advantage of.

Thanks for being here today. Now it's time for my favorite part of the day: hearing from you. I'm going to ask a few of my colleagues from the FAA to come up here and join me so we can answer some of your questions.

###

FINAL **4/6/2016 2:00PM**

Mike Whitaker
Sun ‘n Fun Outline
Lakeland, FL
April 8, 2016

Sun ‘n Fun is one of my favorite events as both Deputy Administrator and as a pilot.

- Impressions from exhibits on Thursday.

Yesterday I held a listening session on the FAA’s new Got Data? Initiative.

- Data feeds valuable tools we use in the cockpit.
- Got Data? goals:
    - Improve industry access to aeronautical data the FAA currently provides.
    - Identify additional data we could provide.
    - Support industry’s creation of innovative tools that are intended to improve safety and efficiency.

The GA community doesn't hesitate to speak up, and we've heard you on a number of issues.

- Pilot Testing
- Small Airplane Certification
- Safety Technologies

In June, we're rolling out new Airman Certification Standards.

- Integrates knowledge and risk management with practical skills.
- Tests pilots on what they need to know and do to operate safely in real-world scenarios.

We're revamping our small airplane certification standards.

- Published rule to rewrite Part 23 early last month.
- Moves from prescriptive design requirements to a new performance-based standard.
- Ensures safety while allowing for industry innovation and flexibility.

We also support modernizing the existing GA fleet.

- 2014: Streamlined process for installing angle of attack indicators.
- 2015: Clarified process for installing electronic attitude indicators.
- 2016: Building on this progress with new NORSEE policy.
    - NORSEE = Non-Required Safety Enhancing Equipment.
    - Makes it easier to get safety-enhancing equipment into GA aircraft.
    - Expect final policy in the coming months.

ADS-B is a revolutionary technology – that's why the FAA is requiring it for all aircraft.

- Impressions from using ADS-B In and Out in the cockpit.
- Full benefits require everyone to be equipped.
- January 1, 2020 deadline is set.
- Don't wait until the last minute to equip.
    - Prices as low as $1,500.
    - Get in ahead of the crowds at repair stations.

Safety is at the heart of all the initiatives I just mentioned.

- Make a personal commitment to safety.
- Check out Fly Safe campaign on FAA.gov.

Mike Whitaker
ADS-B Rebate Program Launch Conference Call
Washington, DC
June 6, 2016

Thank you, Mr. Secretary.

Automatic Dependent Surveillance – Broadcast consists of two pieces: ADS-B Out, and ADS-B In.

ADS-B Out transmits information about a plane's altitude, speed, and location to air traffic control and other nearby aircraft.

ADS-B In allows aircraft to receive traffic and weather information from ground stations and see nearby aircraft that are broadcasting their positions through ADS-B Out.

As the Secretary mentioned, we've set a January 1, 2020 deadline for aircraft to be equipped with ADS-B Out. Owners can choose to install ADS-B Out equipment to meet this requirement, or they can purchase an integrated system that includes ADS-B In.

Our new $500 rebate will help offset the cost of purchasing this equipment.

Owners of U.S.-registered, fixed-wing, single-engine piston aircraft can take advantage of this offer, provided they purchase equipment that meets the FAA's technical standards. To be in compliance, an aircraft must have installed an approved GPS receiver and an ADS-B Out system.

Only installations performed after the program launches this fall will be eligible for the rebate. New aircraft or aircraft that have already been equipped with ADS-B will not be able to participate.

We'll be issuing 20,000 rebates on a first-come, first-serve basis for one year starting this fall, or until all 20,000 rebates are claimed – whichever comes first.

So our message to general aviation aircraft owners is pretty simple: it's time to equip. The 2020 deadline will not change. Apply as soon as the rebate system is launched to reserve your spot and get a rebate.

It’s particularly important for owners to contact their local repair shops and schedule an installation appointment, as well.

There’s likely to be capacity issues at repair stations as we get closer to the deadline. We don’t want pilots to end up grounded in the early months of 2020 because of an installation delay.

We’ll be working closely with the Aircraft Owners and Pilots Association, the Aircraft Electronics Association, and the General Aviation Manufacturers Association to help get the word out about our new rebate incentive.

Full details about the program and application process can be found on our website, and I’d encourage aircraft owners to sign up to be notified as additional information and deadlines become available in the coming months.

Thank you.

###

Deputy Administrator Mike Whitaker
Executive Off-Site
Cambridge, MD
June 28, 2016

DAY 1: UNMANNED AIRCRAFT REGISTRY CASE STUDY SESSION

- **In late October, Secretary Foxx laid out an ambitious goal for our team: to create and launch a registration system for unmanned aircraft before Christmas.**

- **This was no easy feat.**

    - **We had to convene a task force of government and industry stakeholders to get their feedback.**

    - **We had to review their recommendations.**

    - **We had to write an interim final rule.**

    - **We had to build and test a new registration system that would be easy for consumers to use.**

    - **And we had to do everything in less than two months.**

- **This kind of project – on that kind of timeline – isn't supposed to be possible in government.**

- **But we set the goal and put a stake in the ground.**

- **We brought all hands on deck, from many different lines of business.**

- **Everyone stepped up – working long hours and going above and beyond to help get this project across the finish line.**

- **Some even worked weekends and holidays.**

- **And we got it done.**

- **Thanks to the efforts of our team, almost 500,000 unmanned aircraft owners from across the county have already registered their devices.**

- **This wasn't just a huge accomplishment for the FAA as an agency.**

- **It was an example of government innovating, cutting through red tape, and using technology to tackle emerging risks.**

- **Now I'd like to ask Jim Eck and some of his team members who are here on stage to talk about this project from their own perspective.**

[JIM ECK & TEAM SPEAK]

- **We need to see more of this type of problem-solving – of taking a blank sheet of paper and figuring out the best way to tackle an issue before trying to fit it into one of our existing processes.**

- **We know it isn't possible to tackle every project within the timeline of the unmanned aircraft registry, but we can approach our work with the clarity and focus that the team just talked about.**

- **The question for us to explore today is: How could we make it easier to work this way? Are there barriers to remove? Are there new processes to put in place?**

Michael G. Whitaker

U.S. Senate Committee on Commerce, Science, and Transportation Questic

Speeches, Panel Discussions and Presentations

Year	Month	Date	Organization	Location	Type
2013	June	6/27/13	Runway Safety Improvements at Boston Logan International Airport	Boston, MA	Speech
2013	July	7/9/13	RTCA Policy Board	Washington, D.C.	Remarks
2013	July	7/16/13	JPDO Board meeting	Washington, D.C.	Board meeting
2013	July	7/18/13	ALPA -- Air Safety Forum - closing remarks	Washington, D.C.	Forum
2013	July	7/24/13	Tech Center Town Hall	Atlantic City	Remarks
2013	July	7/25/13	NextGen Institute Meeting	Washington, D.C.	Remarks
2013	August	8/7/13	ALPA - flight and duty time symposium	Washington, D.C.	Speech
2013	August	8/12/13	Commercial Aviation Panel Discussion: Global Outlook, Opportunities, Challenges	Los Angeles	Panel Disussion
2013	August	8/13/13	AWP -- Los Angeles Town Hall	Los Angeles	Town Hall
2013	August	8/14/13	Oklahoma Town Hall	Oklahoma City	Town Hall
2013	August	8/20/13	First Annual AFN Awards Ceremony	Washington, D.C.	Award Ceremony
2013	September	9/10/13	Aviation Week, NextGen Air Traffic Modernization conference	Washington, D.C.	Speech
2013	September	9/12/13	AVS Awards Ceremony	Washington, D.C.	Award Ceremony
2013	September	9/18/13	Great Lakes Recognition	Chicago, IL	Remarks

2013	September	9/19/13	NextGen Advisory Committee	Washington, D.C.	Speech
2013	October	10/21/13	ATCA Speech	National Harbor	Speech
2013	November	11/14/13	ALTA meeting in Mexico	Cancun, Mexico	Keynote speaker
2013	November	11/21/13	AIA	Phoenix	Remarks
2013	December	12/2/13	7th Triennial International Aircraft and Fire Cabin Safety Research Conference	Philadelphia	Speech
2013	December	12/11/13	COMSTAC	Washington, D.C.	Speech
2013	December	12/20/13	Many Advancements, New Challenges	Washington, D.C.	Speech
2014	January	1/15/14	TRB Panel	Washington, D.C.	Remarks
2014	January	1/24/14	European Aviation Club: Overview of NextGen	Brussels	Remarks
2014	February	2/5/14	17th Annual Commercial Space Transportation Conference	Washington, D.C	Speech
2014	February	2/20/14	NextGen Advisory Board	Phoenix	Speech
2014	February	2/27/14	Roundtable on NextGen Priorities	Washington, D.C.	Remarks
2014	March	3/8/14	Women in Aviation	Lake Buena Vista, FL	Remarks

2014	March	3/13/14	Western Hemisphere Flight Standards Conference	Washington, D.C.	Remarks
2014	March	3/18/14	Southern California TRACON 20th Anniversary	California	Remarks
2014	March	3/20/14	NBAA Board Meeting	Washington, DC	Discussion
2014	March	3/26/14	NATCA's 2014 Communicating for Safety Conference	Las Vegas, NV	Remarks
2014	March	3/27/14	ACI-NA/AAAE Annual Washington Legislative Conference	Washington, D.C.	Remarks
2014	April	4/3/14	SMU Air and Space Law Conference	Dallas	Speech
2014	April	4/4/14	Sun n Fun: Master Pilo and Mechanics Awards	Lakeland, FL	Remarks
2014	April	4/14/14	Air Carrier Training Steering Group opening meeting	Washington, D.C.	Remarks
2014	April	4/17/14	REDAC Meeting	Washington, D.C.	Remarks
2014	May	5/12/14	Town Hall and Recognition for Houston I90 TRACON	Dallas, TX	Remarks
2014	May	5/13/14	North Texas FSDO and Employee All Hands Meeting	North TX	Remarks
2014	May	5/13/14	Fort Worth Center All Hands meeting	Fort Worth, TX	Remarks
2014	May	5/14/14	Awards Ceremony in OKC	Oklahoma City, OK	Remarks

2014	May	5/14/14	Town Hall at OKC	Oklahoma City, OK	Remarks
2014	June	6/3/14	NAC meeting, FAA report	Washington, D.C.	Talking points
2014	June	6/4/14	RTCA Symposium, 11:30 a.m.	Washington, D.C.	Q&A
2014	June	6/19/14	Town Hall, Southern Region	Atlanta, GA	Speech
2014	June	6/19/14	2014 AIAA Aviation Conference	Atlanta, GA	Speech
2014	June	6/24/14	MAC Meeting - ANG sent powerpoint 6/16/14	Washington	NextGen talking points
2014	August	8/4/14	Congressional workshop for regional folks, sponsored by AGI.	Washington, D.C.	Remarks
2014	August	8/5/14	National Hispanic Coalition	Washington, D.C.	Remarks
2014	September	9/4/14	Seattle Town Hall	Seattle	Remarks
2014	September	9/9/14	Alaska Aviation Coordination Council	Anchorage	Remarks
2014	September	9/16/14	NextGen Test Bed event	Daytona Beach, Fla.	Remarks
2014	September	9/19/14	NextGen Institute's Annual Public Meeting	Washington, DC	Speech
2014	October	10/8/14	NextGen Advisory Committee	Washington, D.C.	Speech
2014	October	10/9/14	Employee Town Hall	Washington, DC	Speech

2014	October	10/22/14	IALI, International, Aviation Law Institute, 10th Anniversary Luncheon	Chicago, IL	Speech
2014	October	10/24/14	Labor Management Forum	Washington, D.C.	Remarks
2014	October	10/28/14	ADS-B Call to Action	Washington, D.C.	Remarks
2014	November	11/5/14	Veteran's Day Ceremony	Trip to Central Region	Speech
2014	November	11/6/14	NATA	Washington, D.C.	Remarks
2014	November	11/8/14	GAMA, Board of Directors	South Carolina	Remarks
2014	November	11/18/14	Volpe - Transportation and the Economy Speakers Series	Cambridge, MA	Speech
2014	December	12/4/14	NBAA Board of Directors Meeting		Remarks
2014	December	12/9/14	AAAE Annual Runway Safety Summit	Salt Lake City, Utah	Speech
2014	December	12/11/14	Town Hall, Oklahoma City	Oklahoma City	Remarks
2014	February	2/26/04	CAPA	Washington, D.C.	Remarks
2014	April	4/27-4/30	5th meeting of Directors of Civil Aviation of the International civil Aviation Organization's (ICAO) North America	Trinidad and Tobago	Chief delegate for the U.S.
2014	September	9/8-9/14	Alaska Town Hall	Anchorage	Remarks
2015	February	2/3/15	Budget Stakeholder Calls 1 p.m.	Washington, D.C.	Q&A
2015	February	2/18/15	Equip 2020 Meeting	Washington, D.C.	Speech
2015	February	2/27/15	NAC Meeting	Atlanta	Speech

2015	March	3/17/15	Jeppensen Connect	Charlotte, N.C.	Speech
2015	March	3/18/15	Equip 2020 Meeting	Washington, D.C.	Remarks
2015	March	3/20/15	MITRE --Aviation Advisory Committee	McLean, VA	Speech
2015	March	3/23/15	ICAO Remotely Piloted Vehicles	Montreal	Speech
2015	March	3/25/15	SES Video Teleconference	Washington, D.C.	Speech
2015	April	4/8/15	Aircraft Electronics Association Convention	Dallas	Speech
2015	April	4/9/15	Southwest Region Town Hall	Fort Worth	Remarks
2015	April	4/14/15	InfoShare	Pennsylvania	Speech
2015	April	4/21/15	World Aviation Training Symposium	Orlando, Fla.	Speech
2015	April	4/21/15	WATS: The Evolving Role of Training in Aviation Safety	Orlando, Fla.	Speech
2015	April	4/22/15	Sun 'N Fun	Lakeland, Fla.	Speech
2015	April	4/29/15	Labor Management Forum	Washington, D.C.	Remarks
2015	May	5/13/15	Regional Airline Association Convention	Cleveland, Ohio	Speech
2015	June	6/5/15	NAC	Washington, D.C.	Speech
2015	June	6/30/15	GA Safety Summit	Washington, D.C.	Speech
2015	August	8/11/15	ANE All Hands	Wakefield, MA	Remarks
2015	August	8/14/15	UAS Symposium w/ Sen Wyden	Portland, OR	Remarks
2015	September	9/15/15	Equip 2020	Washington, DC	Speech
2015	October	10/8/15	NAC	Memphis, TN	Speech

2015	October	10/13/15	NACC/DCA meeting	Montego Bay, Jamaica	Speech
2015	October	10/15/15	ORD Runway Commissioning	Chicago, IL	Remarks
2015	October	10/20/15	FAAMA	Las Vegas, NV	Remarks
2015	November	11/19/15	Aerospace Industries Association (AIA)	San Diego	Remarks
2015	December	12/1/15	ATO Leadership Meeting	Ft McNair	Remarks
2015	December	12/3/15	Town Hall	FAA HQ	Speech
2015	December	12/14/15	Small Unmanned Aircraft Registration Rule Press Call	Washington, DC	Speech
2015	November	11/1 - 4/2015	ATCA 60th Annual Conference	Gaylord Convention Center	Remarks
2015	July	7/20-7/26	AirVenture	Oshkosh	Remarks
2016	February	2/2/16	19th Annual Commercial Space Transportation Conference	Washington, DC	Speech
2016	February	2/11/16	FAA Town Hall (Reautherization)	Washington, DC	Speech
2016	February	2/25/16	NAC Meeting	Atlanta, GA	Speech
2016	March	3/8/16	AOC All-Hands	FAA HQ	Speech
2016	March	3/23/16	NATCA 2016 Communicating for Safety conference	Las Vegas, NV	Speech
2016	March	3/31/16	GA Summit	FAA HQ	Speech
2016	April	4/7/16	Sun 'N Fun: External Data Access Initiative Listening Session	Lakeland, FL	Speech
2016	April	4/8/16	Sun 'N Fun	Lakeland, FL	Keynote Speech
2016	April	4/15/16	IFALPA	New Orleans, LA	Keynote Speaker

2016	April	4/28/16	Aero Club of Northern California	Silicon Valley, CA	Remarks
2016	May	5/11/16	Labor Management Forum	FAA HQ	Remarks
2016	June	6/2/16	Charlotte Tower Groundbreaking	Charlotte, NC	Remarks
2016	June	6/6/16	ADS-B Rebate Program Launch Conference Call	Washington, DC	Remarks
2016	June	6/7/16	New England Regional Administrator's Awards ceremony	ANE Regional office	Remarks
2016	June	6/28/16	Executive Off-Site	Cambridge, MD	Remarks

Michael G. Whitaker

U.S. Senate Committee on Commerce, Science, and Tr

Public Statements

Year	Date	Organization	Type
2013	7-Sep	Experts say stricter FAA rules for pilots too costly, won't improve safety	Press
2014	1-Apr	FAA Inaugurates New Houston Air-Traffic Facility	Press
2014	2-Apr	Houston TRACON Dedication	Event
2014	4-Jun	NextGen Enters Critical Era	Press
2014	10-Jun	United Airlines Starts NextGen Flight Procedures in Houston	Press
2014	18-Sep	FAA Calls on the Aviation Industry to Equip for NextGen and Help Increase Safety and Efficiency	Press
2014	18-Sep	FAA Calls On The Aviation Industry To Equip For NextGen and Help Increase Safety and Efficiency	Press
2014	19-Sep	FAA asks industry to equip for NextGen, help to increase safety and efficiency	Press
2014	19-Sep	FAA Calls on the aviation industry to equip for NextGen	Press

2014	19-Sep	FAA calls on the aviation industry to equip for NextGen and help increase safety and efficiency	Press
2014	19-Sep	FAA: Aviation industry needs to embrace ADS-B, NextGen initiatives	Press
2014	19-Sep	Much Remains to be Seen: The Future of NextGen	Press
2014	21-Sep	FAA Calls ADS-B 'Summit'	Press
2014	21-Sep	FAA Calls on the aviation industry to equip for NextGen, increase safety and efficiency	Press
2014	23-Sep	FAA calls on aviation industry to equip for NextGen	Press
2014	24-Sep	FAA Calls on the Aviation Industry for Help	Press
2014	26-Sep	FAA preps NextGen summit, but questions remain about drones	Press
2014	29-Sep	FAA Issues "Call to Action" on NextGen Equipage	Event
2014	4-Oct	AOPA Fly In Town Hall: Third Class Medical Reform	Event
2014	24-Oct	FAA Denies Bell Canada appeal for 429 weight increase	Letter
2014	30-Oct	The Three-Year NextGen Plan: DataComm, MRO, PBN and Surface Ops	Press
2014	4-Nov	Safety News | November 2014	Press

2014	18-Dec	AOPA Magazine: FAA Deputy Administrator a New Pilot by Sarah Deener	Interview
2015	9-Jan	Got ADS-B?	Press
2015	7-Apr	Airline GPS Receiver Issues Being Resolved Through Equip 2020	Press
2015	9-Apr	North America Remains Largest Market for GA Avionics Sales	Press
2015	23-Apr	Equip 2020: The Latest on ADS-B Equipage, Pricing, Privacy Issues	Press
2015	28-Apr	Do You Have What it Takes To Be a Political Appointee? By Mark A. Abramson and Paul R. Lawrence.	Interview
2015	6-Jun	AOPA Fly In Town Hall: Lessons from a Hard Landing	Event
2015	8-Jun	FAA and GA Community Launch Fly Safe Campaign	FAA Press
2015	16-Jun	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2015	17-Jun	Amazon Says it wants to use drones to deliver packages in 30 minutes	Press
2015	17-Jun	Amazon says its 30 minute drone delivery service will be ready in a year - if FAA changes it rules on flights	Press
2015	17-Jun	Congress warned that drones present 'a nightmare scenario for civil liberties'	Press
2015	17-Jun	Delivery by drone in 30 minutes or less?	Press

2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it’s coming	Press
2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it’s coming	Press
2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it’s coming	Press
2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it’s coming	Press
2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it’s coming.	Press
2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it's coming	Press
2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it's coming	Press
2015	17-Jun	Delivery by drone in 30 minutes? Amazon says it's coming	Press
2015	18-Jun	Delivery by drone in 30 minutes? Amazon says it's coming	Press
2015	18-Jun	Delivery by Drone in 30 Minutes? Amazon Says It's Coming	Press
2015	18-Jun	FAA Expects to Issue Commercial UAS Rule in 2016	Press
2015	22-Jun	Centaur Flies Unmanned at New York UAS Test Site	Press
2015	22-Jun	Centaur Flies Unmanned at New York UAS Test Site	Press
2015	24-Jun	Amazon Says States Should Not Undermine FAA Rules	Press

2015	27-Jun	Remote-controlled passenger flights 5 years away, CEO says.	Press
2015	1-Jul	FAA and GA Community Focus on Safety	FAA Press
2015	2-Jul	Amazon Scanning Backyards In Seattle, Suggesting Drone Delivery In Its Sights.	Press
2015	6-Jul	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2015	2-Aug	Franklin startup at heart of drone industry's cutting edge.	Testimony
2015	3-Aug	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2015	1-Sep	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2015	2-Sep	Drone incidents may cast shadow on remote-control aviators in Phoenix area.	Interview / Quote
2015	2-Sep	Why it's so hard for DC to make rules for drones	Press
2015	14-Sep	Amazon: A Prime Time for Drone Delivery	Press
2015	1-Oct	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2015	7-Oct	Drone use booms, but one collision with an airplane could ground industry	Press
2015	7-Oct	FAA Expands Unmanned Aircraft Pathfinder Efforts	FAA Press

2015	7-Oct	The Government Is Testing Military-Grade Technology to Keep Drones Away From Airports	Press
2015	7-Oct	NBAA: House Hearing Highlights Need for Action on UAS Regulations	Press
2015	8-Oct	Congressional Hearing Tackles Drone Safety	Press
2015	8-Oct	FAA assessing drone tracking technology	Press
2015	8-Oct	FAA Testing Technology to Track Drones Near Airports.	Press
2015	15-Oct	Chicago O'Hare opens new runway, control tower.	Event
2015	15-Oct	Latest runway opens in decadelong modernization	Event
2015	15-Oct	O'Hare opens latest new runway in decadelong modernization	Event
2015	15-Oct	O'Hare opens latest new runway in decadelong modernization	Event
2015	19-Oct	Government Hailed for Strides in Modernising Air Transport Sector.	Event
2015	19-Oct	O'Hare (Finally) Opens New Runway	Press
2015	19-Oct	O'Hare opens latest new runway in decadelong modernization.	Event
2015	20-Oct	Drone Legal Issues	Press
2015	23-Oct	U.S. Indonesia Agreement on Sustainable Air Transportation and Aviation Alternative Fuels	FAA Press

2015	26-Oct	Exclusive - Wal-Mart seeks to test drones for home delivery, pickup	Press
2015	26-Oct	Get ready for the battle of the home delivery drones: Wal-Mart set to take on Amazon and Google with fleet of unmanned craft	Press
2015	26-Oct	Walmart applies to test drones for home delivery	Press
2015	26-Oct	Wal-Mart Seeks to Test Drones for Home Delivery, Pickup	Press
2015	26-Oct	Wal-Mart Seeks To Test Drones For Home Delivery, Pickup	Press
2015	26-Oct	Wal-Mart seeks to test drones for home delivery, pickup	Press
2015	26-Oct	Wal-Mart Seeks to Test Drones for Home Delivery, Pickup	Press
2015	26-Oct	Wal-Mart Wants to Test Delivery Drones	Press
2015	26-Oct	Walmart wants to test drones for home delivery	Press
2015	26-Oct	Wal-Mart Wants to Test Drones for Home Delivery	Press
2015	27-Oct	Exclusive: Wal-Mart seeks to test drones for home delivery, pickup.	Press
2015	27-Oct	How Will We Handle a Sky Full of Drones?	Press
2015	27-Oct	Wal-Mart applies to test delivery drones	Press
2015	27-Oct	Wal-Mart seeks permit to test drones for home delivery	Press

2015	27-Oct	Wal-Mart To Challenge Amazon On Drone Delivery	Press
2015	1-Nov	From the Hill: ALPA Tells Congress UAS Need Greater Oversight	Press
2015	2-Nov	Google reveals its drone package delivery service set to begin in 2017	Press
2015	2-Nov	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2015	9-Nov	FAA expands effort to detect unmanned aircraft near airports	Press
2015	25-Nov	FAA Task Force Recommends UAS Registration Requirements	Press
2015	8-Dec	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2015	14-Dec	Controversial drone rules announced	Press
2015	14-Dec	Expecting a drone this holiday season? The FAA wants to know about it.	Press
2015	14-Dec	FAA and DOT Announce Recreational Drone Registration Process – Gadget Guru Editorial	Press
2015	14-Dec	FAA announces drone requirements	Press
2015	14-Dec	FAA to require most drones to be registered and marked	Press
2015	14-Dec	FAA to require most drones to be registered and marked	Press
2015	14-Dec	Hobbyists Required to Register UAS Under New IFR	Press

2015	14-Dec	Is Your Drone Naughty or Nice? The FAA Begins Drone Registry Requirement on December 21	Press
2015	14-Dec	NPR: Small drone integration	Interview
2015	14-Dec	Press Call on Small Unmanned Aircraft Registration Rule	FAA Press
2015	14-Dec	FAA, DOT Unveil Small, Unmanned Aircraft System Registration Requirements	Press
2015	15-Dec	Drone questions up in the air	Press
2015	15-Dec	New rules for drones	Press
2015	17-Dec	Hobbyists required to register drones	Press
2015	18-Dec	New FAA Rule: Drone Operators Are Aviators and Need to Register by Feb. 2016	Press
2015	19-Dec	New rules for drones	Press
2015	21-Dec	Unmanned Aircraft Registration System Takes Flight	Press
2015	22-Dec	Golden Gate Bridge to Become ‘No Drone Zone’	Press
2015	22-Dec	No Drone Zone' Signs Go Up Around Golden Gate Bridge	Press
2016	1-Jan	Drones and the Law: What you Need to Know	Press

2016	4-Jan	2015 Drone Year in Review	Press
2016	5-Jan	Wal-Mart Seeks to Test Drones for Home Delivery, Pickup	Press
2016	8-Feb	FAA says there are now more registered drone operators than licensed pilots.	FAA Press
2016	23-Mar	FAA TV: NextGen Update	FAA Press
2016	31-Mar	FAA and GA Community Are Making the Skies Safer	FAA Press
2016	31-Mar	FAA, NBAA Recognize Advances, Opportunities to Improve Safety	Press
2016	1-Apr	FAA: Voluntary Safety Measures 'Making Difference'	Press
2016	2-Apr	Fatal U.S. Small Plane Accidents Declined in 2015.	Event
2016	2-Apr	Fatal U.S. Small Plane Accidents Declined in 2015.	Press
2016	8-Apr	FAA and GA Community Are Making the Skies Safer	Press
2016	12-Apr	Sun ‘N Fun Air Show: Got Data?	Press
2016	2-May	Delivery by drone in 30 minutes? Amazon says it's coming	Press
2016	12-May	Transportation Research Circular: Transformational Technologies in Transportation	Report
2016	16-May	Drone delivery start-up Flirtey taking on Google, Amazon in race to satisfy safety regulators	Press

2016	18-May	Drone delivery start-up Flirtey taking on Google, Amazon in race to satisfy safety regulators	Press
2016	20-May	Fly Safe: Prevent Loss of Control Accidents	FAA Press
2016	1-Jun	A Conversation with FAA Deputy Administrator about the challenges and opportunities facing the FAA	Interview
2016	1-Jun	The FAA Gave Us a List of Every Drone Pilot Who Has Ever Been Fined	Press
2016	1-Jun	The FAA Has Never Fined Anyone for Flying a Drone Commercially	Press
2016	2-Jun	FAA Breaks Ground for New Air Traffic Control Tower at Charlotte Douglas International Airport	Press
2016	2-Jun	FAA Breaks Ground for New Air Traffic Control Tower at Charlotte Douglas International Airport	FAA Press
2016	7-Jun	FAA Offers ADS-B Incentive Program	Press
2016	12-Jun	He Flew a Drone to Take Photos for a Friend. Now He's Facing $55K in Government Fines.	Press
2016	8-Sep-16	AOPA Responds to Crash Report: NBC Story Lacks Context, Clarity.	Event
2015/2016	N/A	A Brief History of Unmanned Aeriel Vehicles AKA Drones	Press

DATE	OUTLET	SOURCE TYPE
4/24/22	http://dronelife.com/	Press
4/25/22	http://aerospacetestinginternational.com/	Press
5/6/22	http://naijaloaded.com.ng/	Press
5/8/22	http://architecturaldigest.in/	Press
5/18/22	http://luxurylifestyle.com/	Press
5/3/22	http://ien.com/	Press
5/3/22	http://impomag.com/	Press
5/3/22	http://manufacturing.net/	Press
5/3/22	http://designdevelopmenttoday.com/	Press
5/3/22	http://mbtmag.com/	Press
7/18/22	http://aiaa.org/	Press
7/21/22	http://pressnewsagency.org/	Press
7/21/22	http://newswwc.com/	Press
7/21/22	http://newstocheck.com/	Press
7/21/22	http://henryclubs.com/	Press
7/21/22	http://politico.eu/	Press
7/21/22	http://newswwc.com/	Press
7/21/22	http://agadir-group.com/	Press
7/28/22	http://politico.eu/	Press
5/14/22	http://wsj.com/	Press
5/14/22	http://newsupdate.uk/	Press
5/14/22	http://newsbit.us/	Press
5/14/22	http://techilive.in/	Press
5/14/22	http://newsazi.com/	Press

5/14/22	http://blogspot.com/	Press
5/15/22	http://topmostpopular.com/	Press
5/15/22	http://dellyranks.com/	Press
5/1/22	http://euronews.com/	Press
5/1/22	http://akilligundem.com/	Press
5/1/22	http://blogspot.com/	Press
5/2/22	http://vervetimes.com/	Press
5/1/22	http://ctvnews.ca/	Press
5/2/22	http://abc17news.com/	Press
5/2/22	http://kesq.com/	Press
5/2/22	http://ktvz.com/	Press
5/2/22	http://openjaw.com/	Press
5/2/22	http://newslanes.com/	Press
5/10/22	http://impactlab.com/	Press
4/25/22	http://evaint.com/	Press
4/25/22	http://yahoo.com/	Press
4/25/22	http://yahoo.com/	Press
4/25/22	http://businessairportinternational.com/	Press
4/25/22	http://air101.co.uk/	Press
4/27/22	http://iotworldtoday.com/	Press
4/27/22	http://designboom.com/	Press
4/27/22	http://africapearl.com/	Press
4/28/22	http://businessairnews.com/	Press
5/1/22	http://btnews.co.uk/	Press
4/26/22	http://indiatimes.com/	Press

4/25/22	http://breitbart.com/	Press
4/25/22	http://menafn.com/	Press
4/25/22	http://techxplore.com/	Press
4/25/22	http://newsbit.us/	Press
4/25/22	http://barrons.com/	Press
4/25/22	http://ibtimes.com/	Press
4/25/22	http://digitaljournal.com/	Press
4/25/22	http://rfi.fr/	Press
4/25/22	http://newsazi.com/	Press
4/25/22	http://rtl.lu/	Press
4/25/22	http://newsupdate.uk/	Press
4/25/22	http://sharjah24.ae/	Press
4/25/22	http://mb.com.ph/	Press
4/25/22	http://thenews.com.pk/	Press
4/25/22	http://pledgetimes.com/	Press
4/26/22	http://easterneye.biz/	Press
4/26/22	http://newswwc.com/	Press
4/26/22	http://newswwc.com/	Press
4/26/22	http://cyberworldtechnologies.co.in/	Press
4/26/22	http://newsbit.us/	Press
4/26/22	http://indiaweekly.biz/	Press
4/26/22	http://asiantimes.biz/	Press
4/26/22	http://gg2.net/	Press
4/26/22	http://bangladeshweekly.com/	Press
4/26/22	http://urallnews.com/	Press
4/26/22	http://indiatimes.com/	Press

4/28/22	http://hamariweb.com/	Press
4/28/22	http://suchtv.pk/	Press
4/28/22	http://urduwire.com/	Press
4/28/22	http://urduwire.com/	Press
4/28/22	http://hamariweb.com/	Press
4/28/22	http://blogspot.com/	Press
4/28/22	http://timesofnews.com/	Press
6/19/22	http://desi123.com/	Press
4/24/22	http://moodiedavittreport.com/	Press
4/24/22	http://itsinternational.com/	Press
4/24/22	http://adsadvance.co.uk/	Press
4/25/22	http://airport-world.com/	Press
4/25/22	http://airtrafficmanagement.net/	Press
4/25/22	http://airwaysmag.com/	Press
4/25/22	http://fuelcellsworks.com/	Press
4/25/22	http://edie.net/	Press
4/25/22	http://theweek.in/	Press
4/25/22	http://tradebrains.in/	Press
4/25/22	http://forecourttrader.co.uk/	Press
4/25/22	http://latestly.com/	Press
4/25/22	http://devdiscourse.com/	Press
4/25/22	http://indiatimes.com/	Press
4/25/22	http://flyingmag.com/	Press

4/25/22	http://50skyshades.com/	Press
4/25/22	http://urallnews.com/	Press
4/25/22	http://theweek.in/	Press
4/25/22	http://coventry.gov.uk/	Press
4/25/22	http://aviation24.be/	Press
4/25/22	http://bobrtimes.com/	Press
4/26/22	http://aviation.com.ua/	Press
4/26/22	http://uasvision.com/	Press
4/26/22	http://india.com/	Press
4/26/22	http://greenfleet.net/	Press
4/26/22	http://traffictechnologytoday.com/	Press
4/26/22	http://wonderfulengineering.com/	Press
4/26/22	http://thebusinessdesk.com/	Press
4/26/22	http://blogspot.com/	Press
4/27/22	http://passengerterminaltoday.com/	Press
4/27/22	http://businessgreen.com/	Press
4/29/22	http://mrobusinesstoday.com/	Press
10/25/22	http://latestnigeriannews.com/	Press
1/12/23	http://wyso.org/	Press
1/12/23	http://wuwf.org/	Press
1/12/23	http://southcarolinapublicradio.org/	Press
1/12/23	http://wuwm.com/	Press
1/12/23	http://publicradioeast.org/	Press

1/12/23	http://northernpublicradio.org/	Press
1/12/23	http://klcc.org/	Press
1/12/23	http://delawarepublic.org/	Press
1/12/23	http://apr.org/	Press
1/12/23	http://wjct.org/	Press
1/12/23	http://ktep.org/	Press
1/12/23	http://wvtf.org/	Press
1/12/23	http://wqcs.org/	Press
1/12/23	http://capeandislands.org/	Press
1/12/23	http://wkyufm.org/	Press
1/12/23	http://redriverradio.org/	Press
1/12/23	http://wcbe.org/	Press
1/12/23	http://tspr.org/	Press
1/12/23	http://krwg.org/	Press
1/12/23	http://wuky.org/	Press
1/12/23	http://aspenpublicradio.org/	Press
1/12/23	http://wvasfm.org/	Press
1/12/23	http://spokanepublicradio.org/	Press
1/12/23	http://wsiu.org/	Press
1/12/23	http://kwbu.org/	Press
1/12/23	http://wjsu.org/	Press
1/12/23	http://wboi.org/	Press
1/12/23	http://wuot.org/	Press

1/12/23	http://kvnf.org/	Press
1/12/23	http://ksjd.org/	Press
1/12/23	http://nhpr.org/	Press
1/12/23	http://wmra.org/	Press
1/12/23	http://wwno.org/	Press
1/12/23	http://krcu.org/	Press
1/12/23	http://whqr.org/	Press
1/12/23	http://ksmu.org/	Press
1/12/23	http://kawc.org/	Press
1/12/23	http://kasu.org/	Press
1/12/23	http://wfae.org/	Press
1/12/23	http://kvcrnews.org/	Press
1/12/23	http://wmfe.org/	Press
1/12/23	http://kunm.org/	Press
1/12/23	http://wknofm.org/	Press
1/12/23	http://wxxinews.org/	Press
1/12/23	http://ypradio.org/	Press
1/12/23	http://kunr.org/	Press
1/12/23	http://ksut.org/	Press
1/12/23	http://wpsu.org/	Press
1/12/23	http://wyomingpublicmedia.org/	Press
1/12/23	http://wcmu.org/	Press
1/12/23	http://wlrn.org/	Press

1/12/23	http://mtpr.org/	Press
1/12/23	http://ctpublic.org/	Press
1/12/23	http://usf.edu/	Press
1/12/23	http://weku.org/	Press
1/12/23	http://wrkf.org/	Press
1/12/23	http://kwit.org/	Press
1/12/23	http://wdiy.org/	Press
1/12/23	http://nepm.org/	Press
1/12/23	http://boisestatepublicradio.org/	Press
1/12/23	http://kazu.org/	Press
1/12/23	http://knau.org/	Press
1/12/23	http://kedm.org/	Press
1/12/23	http://tpr.org/	Press
1/12/23	http://nprillinois.org/	Press
1/12/23	http://kdll.org/	Press
1/12/23	http://kgou.org/	Press
1/12/23	http://wbaa.org/	Press
1/12/23	http://wuga.org/	Press
1/12/23	http://kosu.org/	Press
1/12/23	http://waer.org/	Press
1/12/23	http://wemu.org/	Press
1/12/23	http://kmuw.org/	Press
1/12/23	http://kccu.org/	Press

1/12/23	http://kclu.org/	Press
1/12/23	http://wnmufm.org/	Press
1/12/23	http://wvik.org/	Press
1/12/23	http://wunc.org/	Press
1/12/23	http://wordpress.com/	Press
1/12/23	http://wuft.org/	Press

URL
https://dronelife.com/2022/04/24/the-air-one-is-the-first-fully-functioning-vertiport-for-advanced-air-operations/
https://www.aerospacetestinginternational.com/news/drones-air-taxis/urban-air-port-opens-uks-first-vertiport-air-one.html
https://www.naijaloaded.com.ng/news/photos-inside-worlds-first-airport-for-flying-cars-unveiled-in-uk
https://www.architecturaldigest.in/story/see-inside-the-worlds-first-airport-for-flying-cars/
https://luxurylifestyle.com/headlines/supernal-and-urban-air-port-debut-worlds-first-functional-advanced-air-mobility-vertiport.html
https://www.ien.com/video/video/22210419/mini-airport-pitches-future-of-hybrid-travel
https://www.impomag.com/video/video/22210422/mini-airport-pitches-future-of-hybrid-travel
https://www.manufacturing.net/video/video/22210422/mini-airport-pitches-future-of-hybrid-travel
https://www.designdevelopmenttoday.com/video/video/22210420/mini-airport-concept-pitches-future-of-hybrid-travel
https://www.mbtmag.com/video/video/22210423/mini-airport-pitches-future-of-hybrid-travel
https://aerospaceamerica.aiaa.org/air-taxi-companies-acknowledge-lack-of-infrastructure-will-restrict-rollout/
https://pressnewsagency.org/politico-pro-morning-mobility-air-taxi-future-ita-on-alitalia-staff-shortage-threat/
https://www.newswwc.com/world/europe/politico-pro-morning-mobility-air-taxi-future-ita-on-alitalia-staff-shortage-threat/
https://www.newstocheck.com/world/europe/politico-pro-morning-mobility-air-taxi-future-ita-on-alitalia-staff-shortage-threat/
https://henryclubs.com/politico-pro-morning-mobility-air-taxi-future-ita-on-alitalia-staff-shortage-threat/
https://www.politico.eu/article/politico-pro-morning-mobility-air-taxis-future-ita-airways-on-alitalia-staff-shortage-threat/
https://newswwc.com/world/europe/politico-pro-morning-mobility-air-taxi-future-ita-on-alitalia-staff-shortage-threat/
https://agadir-group.com/air-taxi-future-ita-on-alitalia-staff-shortage-threat-politico/
https://www.politico.eu/newsletter/global-policy-lab/living-cities-road-to-europes-car-free-future-no-butts-allowed-flying-taxis/
https://www.wsj.com/articles/the-biggest-problem-with-flying-cars-is-on-the-ground-11652500850
https://newsupdate.uk/the-biggest-problem-with-flying-cars-is-on-the-ground/
https://newsbit.us/the-biggest-problem-with-flying-cars-is-on-the-ground/
https://techilive.in/the-biggest-problem-with-flying-cars-is-on-the-ground/
https://newsazi.com/the-biggest-problem-with-flying-cars-is-on-the-ground/

https://mokslas-studijos-ekonomika.blogspot.com/2022/05/among-biggest-challenges-to-flying-cars.html
https://topmostpopular.com/the-biggest-problem-with-flying-cars-is-on-the-ground/

https://dellyranks.com/the-biggest-problem-with-flying-cars-is-on-the-ground/
https://www.euronews.com/2022/05/01/world-s-first-vertiport-could-be-used-for-flying-taxis-in-future
https://www.akilligundem.com/worlds-first-vertiport-could-be-used-for-flying-taxis-in-future/
https://completetips24h.blogspot.com/2022/05/worlds-first-vertiport-could-be-used.html
https://vervetimes.com/airport-for-flying-cars-and-drones-built-in-the-u-k/
https://www.ctvnews.ca/business/the-u-k-now-has-an-airport-for-flying-taxis-and-drones-the-first-of-its-kind-in-the-world-1.5884247
https://abc17news.com/news/2022/05/02/the-u-k-now-has-an-airport-for-flying-taxis-and-drones-the-first-of-its-kind-in-the-world/
https://kesq.com/news/2022/05/02/the-u-k-now-has-an-airport-for-flying-taxis-and-drones-the-first-of-its-kind-in-the-world/
https://ktvz.com/cnn-regional/2022/05/02/the-u-k-now-has-an-airport-for-flying-taxis-and-drones-the-first-of-its-kind-in-the-world/
https://openjaw.com/offsite-news/the-worlds-first-airport-for-flying-cars-takes-urban-travel-to-a-whole-new-level/
https://newslanes.com/2022/05/02/the-u-k-now-has-an-airport-for-flying-taxis-and-drones-the-first-of-its-kind-in-the-world-abc17news/
https://www.impactlab.com/2022/05/10/worlds-first-vertiport-could-be-used-for-flying-taxis-in-future/
https://www.evaint.com/worlds-first-functional-advanced-air-mobility-vertiport-debuts/
https://nz.news.yahoo.com/vertiport-drones-flying-taxis-coventry-100321868.html
https://uk.news.yahoo.com/vertiport-drones-flying-taxis-coventry-100321868.html
https://www.businessairportinternational.com/news/technology/urban-air-port-opens-uks-first-vertiport-air-one.html
https://www.air101.co.uk/2022/04/supernal-and-urban-air-port-debut.html
https://www.iotworldtoday.com/2022/04/27/first-airport-for-flying-taxis-opens/
https://www.designboom.com/technology/urban-air-port-air-one-evtol-hub-04-27-2022/
https://africapearl.com/2022/04/27/urban-air-port-unveils-air-one-the-worlds-first-evtol-hub.html
https://www.businessairnews.com/mag_story.html?ident=24318
https://www.btnews.co.uk/article/19025
https://auto.economictimes.indiatimes.com/news/industry/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/91101103

https://www.breitbart.com/news/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/
https://menafn.com/1104091089/UK-hosts-worlds-first-hub-for-drones-future-flying-taxis
https://techxplore.com/news/2022-04-uk-hosts-world-hub-drones.html
https://newsbit.us/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/
https://www.barrons.com/news/uk-hosts-world-s-first-hub-for-drones-future-flying-taxis-01650907208
https://www.ibtimes.com/uk-hosts-worlds-first-hub-drones-future-flying-taxis-3484347
https://www.digitaljournal.com/business/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/article
https://www.rfi.fr/en/uk-hosts-world-s-first-hub-for-drones-future-flying-taxis
https://newsazi.com/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/
https://today.rtl.lu/news/business-and-tech/a/1903776.html

https://newsupdate.uk/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/
https://www.sharjah24.ae/en/Articles/2022/04/25/UK-hosts-worlds-first-hub-for-drones-future-flying-taxis
https://mb.com.ph/2022/04/26/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/
https://www.thenews.com.pk/print/953369-uk-hosts-world-s-first-hub-for-drones-future-flying-taxis
https://pledgetimes.com/uk-gets-worlds-first-port-for-drones/
https://www.easterneye.biz/britain-launches-urban-port-for-delivery-drones-flying-taxis/
https://www.newswwc.com/automotive/cars/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis-et-auto/
https://newswwc.com/automotive/cars/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis-et-auto/
https://cyberworldtechnologies.co.in/uks-urban-air-port-tests-operations-for-worlds-first-ventiport-meant-for-drones-future-flying-taxis/
https://newsbit.us/uk-firm-launches-worlds-first-hub-for-drones-future-flying-taxis/
https://www.indiaweekly.biz/britain-launches-urban-port-for-delivery-drones-flying-taxis/
https://asiantimes.biz/britain-launches-urban-port-for-delivery-drones-flying-taxis/
https://www.gg2.net/britain-launches-urban-port-for-delivery-drones-flying-taxis/
https://www.bangladeshweekly.com/britain-launches-urban-port-for-delivery-drones-flying-taxis/
https://urallnews.com/uks-urban-air-port-tests-operations-for-worlds-first-ventiport-meant-for-drones-future-flying-taxis/
https://infra.economictimes.indiatimes.com/news/aviation/uk-hosts-worlds-first-hub-for-drones-future-flying-taxis/91114574

http://www.hamariweb.com/enews/uk-hosts-world-s-first-vertiport-for-drones-flying-taxis_nid3494799.aspx
https://www.suchtv.pk/world/item/112942-uk-hosts-world-s-first-vertiport-for-drones-flying-taxis.html
http://www.urduwire.com/enews/newsdetail.aspx?id=3494799
https://urduwire.com/enews/newsdetail.aspx?id=3494799
https://hamariweb.com/enews/uk-hosts-world-s-first-vertiport-for-drones-flying-taxis_nid3494799.aspx
https://getevernews.blogspot.com/2022/04/uk-hosts-worlds-first-vertiport-for.html
https://pakistan.timesofnews.com/breaking-news/uk-hosts-worlds-first-vertiport-for-drones-flying-taxis.html
https://desi123.com/uks-urban-air-port-tests-operations-for-worlds-first-ventiport-meant-for-drones-future-flying-taxis/
https://www.moodiedavittreport.com/air-one-preview-world-first-hub-for-flying-taxis-heralds-new-age-of-travel/
https://www.itsinternational.com/its9/news/come-fly-me-coventry
https://www.adsadvance.co.uk/world-first-hub-for-flying-taxis-opens-in-coventry.html

https://airport-world.com/operational-hub-for-evtol-aircraft-opens-in-coventry/
https://www.airtrafficmanagement.net/article/world-first-hub-flying-taxis-air-one-opens-uk
https://airwaysmag.com/worlds-first-aam-vertiport/
https://fuelcellsworks.com/news/supernal-and-urban-air-port-debut-worlds-first-functional-advanced-air-mobility-vertiport/
https://www.edie.net/flying-electric-taxis-and-drones-and-taxis-showcased-in-coventry-as-vertical-airport-demo-launches/
https://www.theweek.in/wire-updates/business/2022/04/25/fgn51-uk-taxi-london.html
https://tradebrains.in/features/uk-taxi-london/
https://forecourttrader.co.uk/latest-news/hub-opens-in-coventry-to-demonstrate-zero-emission-electric-vertical-take-off-and-landing-vehicles/666859.article
https://www.latestly.com/agency-news/world-news-indian-origin-entrepreneur-fires-starting-gun-for-futuristic-transport-3632449.html
http://www.devdiscourse.com/article/business/2015412-indian-origin-entrepreneur-fires-starting-gun-for-futuristic-transport
https://economictimes.indiatimes.com/news/science/indian-origin-entrepreneur-fires-starting-gun-for-futuristic-transport/articleshow/91079004.cms
https://www.flyingmag.com/worlds-first-evtol-vertiport-opens-in-united-kingdom/

https://50skyshades.com/news/business-aviation/world-first-hub-for-flying-taxis-air-one-opens-in-coventry-uk-heralding-a-new-age-of-zero-emission-transport
https://urallnews.com/futuristic-transport-indian-origin-entrepreneur-fires-beginning-gun-for-futuristic-transport/
https://www.theweek.in/wire-updates/business/2022/04/26/fgn51-uk-taxi-london.html
https://www.coventry.gov.uk/news/article/4232/world-first-hub-for-flying-taxis-air-one-opens-in-coventry-uk-heralding-a-new-age-of-zero-emission-transport
https://www.aviation24.be/airlines/world-first-hub-for-flying-taxis-air-one-opens-in-coventry-uk-heralding-a-new-age-of-zero-emission-transport/
https://bobrtimes.com/england-a-new-vertiport-for-drones-and-flying-taxis-gives-a-glimpse-of-the-future/143975/
http://www.aviation.com.ua/news/78120/remote/
https://www.uasvision.com/2022/04/26/world-first-hub-for-flying-taxis-air-one-opens-in-coventry-uk/
https://zeenews.india.com/aviation/indian-origin-entrepreneur-opens-uks-first-ever-airport-for-flying-taxi-2457578.html
https://greenfleet.net/news/26042022/hub-flying-taxis-and-cargo-drones-opens-coventry
https://www.traffictechnologytoday.com/news/multimodal-systems/worlds-first-operational-hub-for-evtol-aircraft-opens-in-coventry-uk.html
https://wonderfulengineering.com/the-worlds-first-evtol-vertiport-has-opened-up-in-the-united-kingdom/
https://www.thebusinessdesk.com/westmidlands/news/2063287-world%e2%80%99s-first-hub-for-flying-taxis-has-opened-in-coventry
http://intravelreport.blogspot.com/2022/04/world-first-hub-for-flying-taxis-air.html
https://www.passengerterminaltoday.com/news/technology/evtol-hub-opens-in-the-uk.html
https://www.businessgreen.com/feature/4048828/blue-sky-thinking-car-park-coventry-mark-usd1tr-frontier-flying-taxis-delivery-drones
https://www.mrobusinesstoday.com/worlds-first-airport-for-air-taxis-and-delivery-drones/
https://www.latestnigeriannews.com/news/2075166/buhari-advocates-media-literacy-to-curb-fake-news.html
https://www.wyso.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wuwf.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.southcarolinapublicradio.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wuwm.com/economy-business/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.publicradioeast.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation

https://www.northernpublicradio.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.klcc.org/npr-top-stories/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.delawarepublic.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.apr.org/business-education/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://news.wjct.org/national-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://news.wjct.org/national-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wvtf.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wqcs.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.capeandislands.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wkyufm.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.redriverradio.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wcbe.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.tspr.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.krwg.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wuky.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.aspenpublicradio.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wvasfm.org/business/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.spokanepublicradio.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wsiu.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kwbu.org/latest-from-npr/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wjsu.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wboi.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wuot.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation

https://www.kvnf.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.ksjd.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.nhpr.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wmra.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wwno.org/npr-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.krcu.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.whqr.org/national/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.ksmu.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kawc.org/npr-news/npr-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kasu.org/money-economy/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wfae.org/united-states-world/united-states-world/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kvcrnews.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wmfe.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kunm.org/npr-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wknofm.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wxxinews.org/npr-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.ypradio.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kunr.org/u-s-headlines/u-s-headlines/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.ksut.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://radio.wpsu.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wyomingpublicmedia.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://radio.wcmu.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wlrn.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation

https://www.mtpr.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.ctpublic.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://wusfnews.wusf.usf.edu/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.weku.org/local-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wrkf.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kwit.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wdiy.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.nepm.org/national-world-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.boisestatepublicradio.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kazu.org/npr-news/npr-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.knau.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kedm.org/npr-national-news/npr-national-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.tpr.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.nprillinois.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kdll.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kgou.org/business-and-economy/business-and-economy/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wbaa.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wuga.org/national-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kosu.org/u-s-news/u-s-news/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.waer.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wemu.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kmuw.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.kccu.org/u-s/u-s/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation

https://www.kclu.org/economy/economy/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wnmufm.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wvik.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://www.wunc.org/2023-01-12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation
https://ayushcave.wordpress.com/2023/01/12/news-planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation/
https://www.wuft.org/nation-world/2023/01/12/planes-are-back-in-the-sky-but-what-is-going-on-with-u-s-aviation/