

**Statement by Rebecca (Becky) Lutte, Distinguished Professor of Aviation at the Aviation  
Institute of the University of Nebraska at Omaha,  
Before the U.S. Senate Committee on Commerce, Science and Transportation on  
“Strengthening the Aviation Workforce”  
March 16, 2023**

Chairperson Cantwell, Ranking Member Cruz, Chairperson Duckworth, Ranking Member Moran, Members of the Committee:

Thank you for the opportunity to address the U.S. Senate Commerce, Science, and Transportation Committee to highlight the work of the Women in Aviation Advisory Board, and explain how implementing the Board’s recommendations will improve the aviation workforce—*not just for women, but for all.*

My name is Becky Lutte. I am the Distinguished Professor of Aviation at the Aviation Institute of the University of Nebraska at Omaha. I have a PhD in Public Administration with an Aviation Specialization, and I am a commercial, instrument-rated pilot, a flight instructor, and an aircraft owner. My research concentrates on aviation safety and workforce supply—with a focus on women in aviation—and I was a member of the FAA’s Women in Aviation Advisory Board, which served from 2020 to 2022.

Congress established the Women in Aviation Advisory Board in the 2018 FAA Reauthorization Act to develop and provide recommendations and strategies for encouraging more women to pursue careers in aviation. I, and the entire Board, sincerely thank the members of Congress and their staff who championed Section 612 of the Act; they deserve recognition and the industry’s appreciation for providing the foundation for us to conduct this vital work.

To meet the challenges of today and tomorrow, including workforce, the aviation industry *must* attract and retain the best possible talent from the widest possible pool. Women make up almost half the workforce, yet for decades, the introduction of women into the aviation industry—in nearly every functional specialty—has been relatively stagnant. Therefore, the need for the Board’s work—and the importance of implementing our recommendations—is evident.

Attracting, retaining, and advancing women in aviation is critical to the U.S. aviation industry’s safety, sustainability, profitability, and ability to innovate.”<sup>1</sup> No other industry connects humanity like aviation; it expands to all corners of the globe and all aspects of our lives. Aviation is fundamental to the U.S. military and transportation infrastructure, and a key economic engine for our country and the world—contributing 5.2% to the U.S. gross domestic product and generating more than eleven million jobs.<sup>2</sup> In rural and smaller communities across the United

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<sup>1</sup> “Breaking Barriers for Women in Aviation: Flight Plan for the Future,” FAA, 2022, [https://www.faa.gov/regulations\\_policies/rulemaking/committees/documents/media/WIAAB\\_Recommendations\\_Report\\_March\\_2022.pdf](https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/WIAAB_Recommendations_Report_March_2022.pdf), pg. 9.

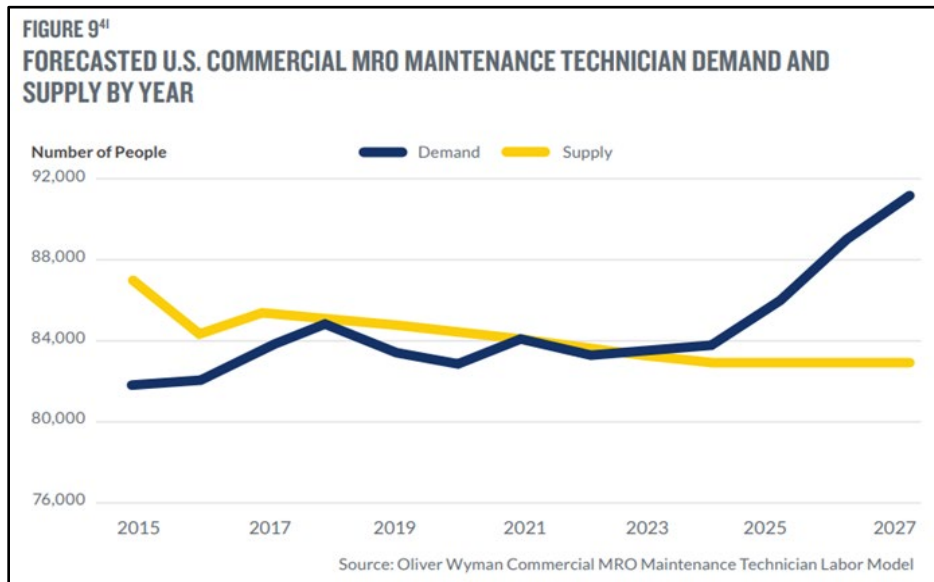
<sup>2</sup> “The Economic Impact of Civil Aviation on the U.S. Economy,” FAA, 2020, [https://www.faa.gov/about/plans\\_reports/media/2020\\_jan\\_economic\\_impact\\_report.pdf](https://www.faa.gov/about/plans_reports/media/2020_jan_economic_impact_report.pdf).

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States, aviation is a lifeline, providing transportation and access to supplies and emergency services, in addition to quality jobs.

We must not take for granted the aviation industry’s continued strength and success. According to a Boeing forecast, over the next twenty years, we will need 602,000 new civilian pilots and 610,000 new maintenance technicians worldwide.<sup>3</sup> This includes over 128,000 pilots and 134,000 maintenance technicians in North America alone.<sup>4</sup> And according to the Aviation Technician Education Council (ATEC) 2022 Pipeline Report, aviation maintenance technicians are retiring at a rate that is outpacing the pipeline for new mechanics.<sup>5</sup> Oliver Wyman projects that a shortage of aviation mechanics within the next decade threatens projected expansion and modernization of the global airline fleet.<sup>6</sup> Aviation workforce needs also extend to new entrants, like uncrewed aerial systems and advanced air mobility, and could impact the development and integration of these new technologies.

### WIAAB [Report](#) Figure – MRO Supply & Demand<sup>7</sup>



An obvious and necessary strategy to address workforce needs throughout the industry is identifying and recruiting talent from underrepresented groups. In most aviation occupations, women make up less than 20% of the workforce. Of the world’s top one hundred passenger

<sup>3</sup> “Pilot and Technician Outlook 2022-2041,” Boeing, 2022, <https://www.boeing.com/resources/boeingdotcom/market/assets/downloads/2022-Pilot-Technician-Outlook.pdf>.

<sup>4</sup> *Id.*

<sup>5</sup> “2022 Pipeline Report & Aviation Maintenance Technician School Directory,” ATEC, Nov. 2022, <https://www.atec-amt.org/pipeline-report.html>.

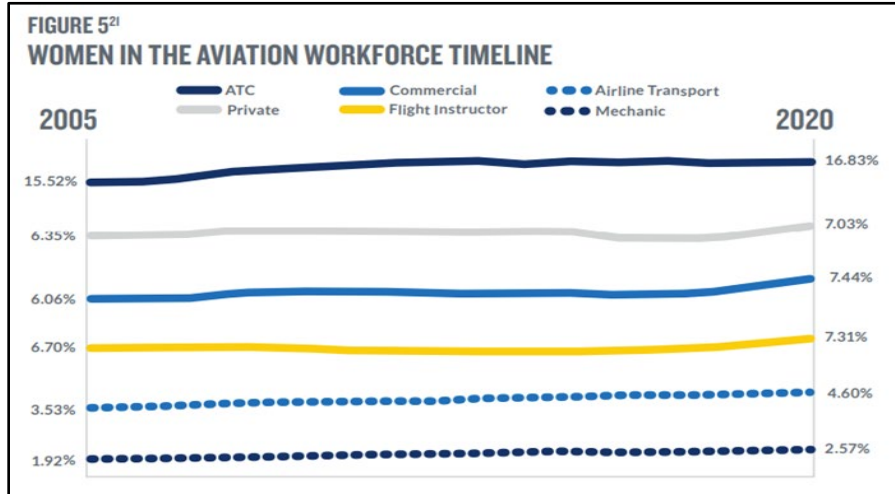
<sup>6</sup> Derek Constanza & Brian Prentice, “Aviation Growth is Outpacing Labor Capacity,” Velocity 2017, [https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/sep/Aviation\\_Growth.pdf](https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2017/sep/Aviation_Growth.pdf), pg. 2.

<sup>7</sup> “Breaking Barriers for Women in Aviation: Flight Plan for the Future,” *supra* note 1, pg. 31.

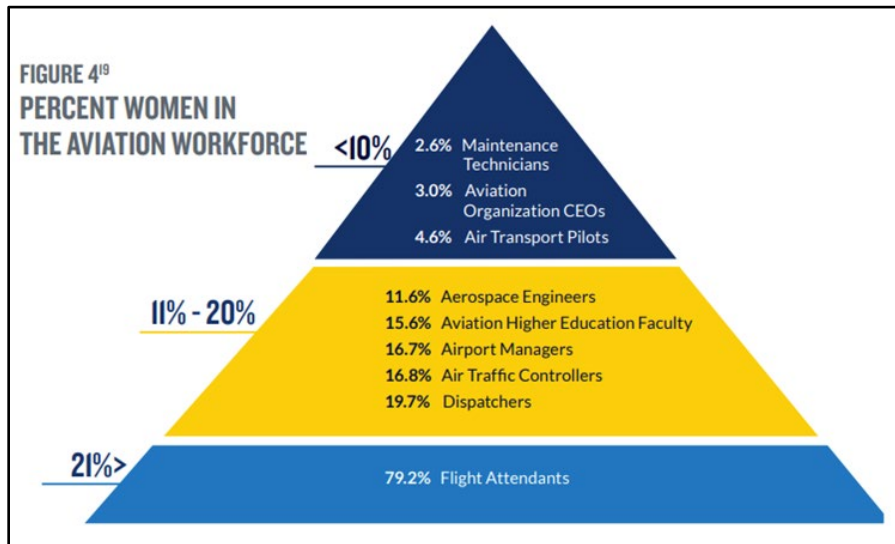
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airlines, only seven are led by women.<sup>8</sup> Women make up less than 10% of the total FAA-certificated pilots and only 5% of airline pilots. One of the largest gender gaps in the industry is in maintenance, where just under 3% of technicians are women. Further, in many areas, the participation rate of women has changed very little over the years. For example, the percentage of commercial pilots who are women has increased at a rate of about only 1% a decade, and for women in maintenance, the rate of change is even slower.

**WIAAB [Report](#) Figure – Workforce Timeline<sup>9</sup>**



**WIAAB [Report](#) Figure – Women in the Aviation Workforce<sup>10</sup>**



<sup>8</sup> Lewis Harper, “On International Women’s Day, female CEOs account for 7% of airline total,” Mar. 9, 2023 <https://www.flightglobal.com/strategy/on-international-womens-day-female-ceos-account-for-7-of-airline-total/147836.article>.

<sup>9</sup> “Breaking Barriers for Women in Aviation: Flight Plan for the Future,” supra note 1, pg. 25.

<sup>10</sup> *Id.*, pg. 24.

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To meet aviation’s workforce needs, the industry *must* expand its talent pipeline. Expanding aviation’s workforce pipeline is *not* about lowering standards; **it is about addressing the real and systemic barriers to talent.** Through its research, the Board found that a complex system of barriers impedes the recruitment, retention, and advancement of women in aviation.

These barriers begin with a lack of early awareness and ongoing engagement, which are essential to the recruitment of women into aviation. Original survey research of professional women not working in aviation found that 70% had *never considered working in aviation*, the most common reason being a lack of familiarity with the options available to them. Top factors negatively impacting both recruitment and retention are cost, family and work balance challenges, lack of women in leadership, and negative workplace culture—including bias and harassment. In a 2018 survey of Women in Aviation International (WAI) members, 71% of respondents reported that they had experienced sexual harassment in the aviation workplace or another professional aviation setting; 81% reported having witnessed it.<sup>11</sup> These numbers are disturbingly high and very real. And the impact of these barriers compounds over time. Later in a woman’s career, an imbalance of professional development and sponsorship opportunities impacts her advancement into leadership roles—reflected in the small number of women in executive positions and on industry boards.

The good news is that the Women in Aviation Advisory Board not only conducted extensive research into workforce barriers, but also identified concrete solutions. The barriers to women in aviation are not inherent, but rather the product of a system we have built. We can change this system, and if we do, we will make it better for *everyone*.

**The Women in Aviation Advisory Board [Report](#)’s fifty-five recommendations are a flight plan for Congress, the FAA, and industry. The recommendations address five key workforce issues: Culture, Recruitment, Retention, Advancement, and Data.**

WIAAB [Report](#) Figure – Retention<sup>12</sup>



<sup>11</sup> WAI 2018 Sexual harassment member survey.

<sup>12</sup> “Breaking Barriers for Women in Aviation: Flight Plan for the Future,” *supra* note 1, pg. 40.

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- **Culture:** Culture underlies most of the Board’s recommendations. Changing culture is a long-term commitment, and no single individual or entity is responsible for it. For this reason, the Board urges Congress to establish a permanent advisory committee to ensure sustained focus across current and future administrations, and coordination among organizations. The Board also recommends the creation of an industry-wide reporting program to redress gender bias, discrimination, and sexual harassment.
- **Recruitment:** The Board’s recruitment recommendations will increase essential early exposure to aviation through improved outreach and educational opportunities, such as a virtual resource center—a “one-stop-shop”—with information about career pathways, educational and scholarship resources, and engagement opportunities. Recruitment recommendations also serve to improve access through new funding avenues to remove significant cost barriers, such as Workforce Development Grants.
- **Retention:** The Board’s recommendations for retention will ensure that women not only remain in the talent pipeline, but are set up for long-term success. These recommendations center on creating more and improved family and work/life balance, and mentoring talent.
- **Advancement:** The Board’s advancement recommendations will propel talent into essential leadership roles by creating and cultivating professional development programs, as well as formal and informal sponsorship opportunities, with purposeful design for women.
- **Data:** The Board also makes recommendations that will help to identify and remove data gaps and track progress, including the effectiveness of the Board’s own recommendations.

For the U.S. aviation industry’s continued safety, sustainability, profitability, and ability to innovate, a massive talent pipeline is required. The Board’s work is not only a call to action, but a flight plan to a better future. Each one of our recommendations will make aviation better for all people—and in doing so, create a safer, stronger industry.

I, for one, am hopeful. In my over 30 years in aviation, I have never seen so much momentum to expand the aviation workforce. We are seeing vibrant and scalable initiatives to better reach underrepresented groups: from industry, like the United Aviate Academy, Women in Aviation Girls in Aviation Day, and Organization of Black Aerospace Professionals youth programs; from the FAA, like grants to schools working to inspire the next generation of aviation professionals; and from Congress, like legislation to improve funding of aviation exposure and education. Congressional support for the work of the FAA Women in Aviation Advisory Board, in collaboration with the FAA and industry and with support from a permanent advisory committee, will further propel aviation *forward*. It is time for Congress, as well as the FAA and industry, to implement our recommendations. Thank you for your time and your commitment to this industry.

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**WIAAB RECOMMENDATIONS, BY RECIPIENT AND REPORT REFERENCE NUMBER**

**CONGRESSIONAL RECOMMENDATIONS:**

Industry-Wide Reporting Program to Address Gender Bias, Discrimination, and Sexual Harassment #10  
Investigation into Inappropriate Medical Exam Actions #12  
Permanent Advisory Committee for Continued Focus on Cultural Change #14  
High Demand Occupation List #25  
Federal Financial Aid #28  
Federal Grant Program for Minority Serving Institutions #29  
Grant Funding for Female Faculty and Staff #31  
GI Bill Benefits #32  
Transportation Research Board Report #52  
Department of Labor Data Collection #53  
FAA Report to Congress #55

**CONGRESSIONAL AND DOT RECOMMENDATION:**

Aviation in Federal Benefit Enhancements #41

**CONGRESSIONAL AND INDUSTRY RECOMMENDATION:**

Industry Certification Program #3

**DOT RECOMMENDATIONS:**

Airport Recruitment Offices #24  
Department of Transportation Annual Report on Workforce Data and Pay Parity #50  
Department of Transportation Reporting Requirements #51

**DOT AND FAA RECOMMENDATIONS:**

Train the Workforce Trainers #17  
Transportation and Logistics Career Cluster #20  
Immersive Aviation Confidence Camps #22 (OR Department of Education)  
State’s Industry Recognized Certification List #26  
High School Cadet Program #33

**FAA RECOMMENDATIONS:**

Coordination of Non-profit Organizations #1  
Aviation Careers Awareness #4

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Safety Management Systems #9

Enhanced FAA Medical Process Information and Reporting Procedures for Inappropriate Medical Exam Actions #11

Virtual Resource Center #15 (IN collaboration with other entities)

Social Media and Influencer Network #16

Curriculum Development #18

Transition from Military to Aviation Opportunities #27

FAA Workforce Development Grant #30

Scholarship Program Toolkit for Aviation Industry to Create Their Own Programs #34

Nursing Mother’s Accommodations #40

Enhanced Airline Pilot Mentoring Programs #43

Support for Established Professional Development #44

Expand FAA U.S. Civil Airmen Statistics #48 Call for Further Research #54

**FAA AND INDUSTRY RECOMMENDATIONS:**

Visual Representation of Women #5

Words Matter #6

Uniforms That Fit for All #7

Leadership Commitment to Culture Change #8

High School to Post-Secondary Pathways #19

**INDUSTRY RECOMMENDATIONS:**

Annual Summit #2

Mental Health Services #13

Volunteer Role Models #21

Internships and Field Experiences #23

Mentoring App Program #35

Paid Parental and Family Leave #36

Joint Responsibility for Change #37

Schedule Flexibility and Accommodations #38

Childcare #39

Mentoring Programs for Women #42

Create Professional Development Programs #45

Communities of Support #46

Sponsorship #47

Industry Annual Public Reporting/Tracking of Data #49