

# BRIDGING THE GAP: IMPROVING DIVERSITY AND INCLUSION IN THE U.S. AVIATION WORKFORCE

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(117–22)

REMOTE HEARING  
BEFORE THE  
SUBCOMMITTEE ON  
AVIATION  
OF THE  
COMMITTEE ON  
TRANSPORTATION AND  
INFRASTRUCTURE  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED SEVENTEENTH CONGRESS  
FIRST SESSION

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JULY 20, 2021  
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Washington, DC 20515

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JULY 16, 2021

**SUMMARY OF SUBJECT MATTER**

TO: Members, Subcommittee on Aviation  
FROM: Staff, Subcommittee on Aviation  
RE: Subcommittee Hearing on “Bridging the Gap: Improving Diversity and Inclusion in the U.S. Aviation Workforce”

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**PURPOSE**

The Subcommittee on Aviation will meet on Tuesday, July 20, 2021, at 11:00 a.m. EDT in 2167 Rayburn House Office Building and virtually via Zoom for a hearing titled, “Bridging the Gap: Improving Diversity and Inclusion in the U.S. Aviation Workforce.” The hearing is an opportunity to learn from key stakeholders about the challenges with, and their recommendations for, developing a robust and diverse U.S. aviation workforce. Further, this hearing will examine future workforce needs and current efforts to recruit, retain and enhance the talent pipeline, including requirements under the FAA Reauthorization Act of 2018, and other related workforce priorities. The Subcommittee will receive testimony from representatives of the University of Nebraska at Omaha Aviation Institute, the Latino Pilots Association, JetBlue Airways, the Organization of Black Aerospace Professionals, and VIPER Transitions.

**I. BACKGROUND**

The COVID-19 pandemic had a devastating effect on the U.S. aviation industry. Demand for commercial air travel plummeted last year as coronavirus cases surged, with U.S. airlines carrying 557 million fewer passengers than in 2019.<sup>1</sup> The growth of aviation manufacturing was also hindered by the pandemic; by the end of 2020, the value of aircraft deliveries declined by nearly 15 percent.<sup>2</sup>

Although still not back to pre-pandemic levels on a consistent basis, air travel appears to be rebounding, as more Americans get vaccinated against the virus and public health restrictions begin to loosen. Last month, the Transportation Security Administration (TSA) screened an estimated two million passengers in one day for the first time since March 2020.<sup>3</sup> Further, the Bureau of Transportation Statistics

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<sup>1</sup> Bureau of Transportation Statistics, *Full Year 2020 and December 2020 U.S. Airline Traffic Data*, (March 2021), available at: <https://www.bts.gov/newsroom/full-year-2020-and-december-2020-us-airline-traffic-data>.

<sup>2</sup> General Aviation Manufacturers Association, *GAMA Announces 2020 Year-End Aircraft Billing and Shipment Numbers*, (Feb. 2021), available at <https://gama.aero/news-and-events/press-releases/gama-announces-2020-year-end-aircraft-billing-and-shipment-numbers-2/>.

<sup>3</sup> Ian Duncan, *TSA screens 2 million people for first time since coronavirus lockdowns began*, WASHINGTON POST (June 6, 2021), available at <https://www.washingtonpost.com/transportation/2021/06/12/tsa-screens-2-million-people-first-time-since-coronavirus-lockdowns-began/>.

reported that the major airlines carried 46.6 million passengers in April 2021, compared to 3 million in April 2020.<sup>4</sup>

As the nation works toward long-term economic recovery and proposed infrastructure investment may foster emerging technology and create jobs, Congress must ensure the U.S. aviation industry has a pool of workers that reflects the diversity of the nation, benefits all regions, and has the skills necessary to compete globally.

## II. STATE OF THE U.S. AVIATION WORKFORCE

### A. LACK OF DIVERSITY

The United States is a highly and increasingly diverse and multicultural country. Unfortunately, the U.S. aviation workforce does not reflect the diversity of the nation as a whole and overwhelmingly comprises substantially more men than women. For instance, studies show that women are underrepresented across the aviation industry, with the largest employment gaps seen in technical operations and leadership positions.<sup>5</sup> Currently, the percentage of female FAA-certificated airframe and powerplant (A&P) mechanics remains low at only 2.4 percent.<sup>6</sup> As of 2020, just seven percent of all U.S. commercial pilots and only 4.3 percent of all flight engineers were women.<sup>7</sup> A similar trend can be seen with communities of color in civil aviation. According to the U.S. Bureau of Labor Statistics, 94 percent of all U.S. aircraft pilots and flight engineers are white.<sup>8</sup> These significant discrepancies suggest that increased outreach to these underrepresented groups could expand the hiring pool and help meet future workforce needs in the U.S. aviation industry.

### B. PROJECTED WORKFORCE NEEDS

Hiring difficulties during times of high growth and low unemployment are not uncommon among industries that depend on a skilled workforce. After tens of thousands of workers elected to leave the airline industry or were furloughed during the COVID-19 pandemic, many employers are working to rehire major portions of their workforce as the industry moves towards recovery.<sup>9</sup> Even prior to the pandemic, the surging number of retirements among the baby boomer generation was expected to exacerbate the workforce needs.<sup>10</sup> The FAA predicts “an increasing share of the industry’s technical workforce is moving toward retirement.”<sup>11</sup> The Aviation Technician Education Council estimates that while 30 percent of the current workforce is at or near retirement age, new workers comprise only two percent of the workforce annually.<sup>12</sup> To meet the demand for new, skilled aviation workers, employers will need to expand the talent pool from which they traditionally hire or train potential workers. One way to expand this candidate pool is to recruit workers from historically underrepresented groups in the aviation industry.

<sup>4</sup>BTS, *U.S. Airlines April 2021 Passengers Increased 9% from March 2021 (Preliminary)*, (June 2021), available at <https://www.bts.gov/newsroom/us-airlines-april-2021-passengers-increased-9-march-2021-preliminary>.

<sup>5</sup>Rebecca Lutte, *Women in Aviation: A Workforce Report* (May 2019), available at: [https://www.researchgate.net/publication/333855943\\_Women\\_in\\_Aviation\\_A\\_Workforce\\_Report](https://www.researchgate.net/publication/333855943_Women_in_Aviation_A_Workforce_Report).

<sup>6</sup>Gov’t Accountability Office, GAO-20-206, *Aviation Maintenance: Additional Coordination and Data Could Advance FAA Efforts to Promote a Robust, Diverse Workforce* p.28 (2020).

<sup>7</sup>Current Statistics of Women in Aviation Careers in U.S., *Women in Aviation International*, available at <https://www.wai.org/resources/waistats>.

<sup>8</sup>U.S. Bureau of Labor Statistics, *Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity*, (Jan. 2021), available at <https://www.bls.gov/cps/cpsaat11.htm>.

<sup>9</sup>Kate Duffy, *Major US airlines are going on a hiring spree after slashing tens of thousands of jobs*, BUSINESS INSIDER (June 2021), available at <https://www.businessinsider.com/covid-pandemic-airlines-hiring-cut-thousands-jobs-travel-labor-shortage-2021-6>.

<sup>10</sup>Laura Schneider, *How Retiring Baby Boomers Affect the Job Market*, THE BALANCE CAREERS, (Nov. 29, 2019), available at <https://www.thebalancecareers.com/retiring-boomers-affect-job-market-2071932>.

<sup>11</sup>Looking Forward: The Future of America’s Aviation Maintenance and Manufacturing Workforce: Hearing Before the Subcomm. on Aviation, 116 Cong. (Feb. 2020) (Statement of Catherine Lang), available at <https://www.transportation.gov/testimony/looking-forward-future-america%E2%80%99s-aviation-maintenance-and-manufacturing-workforce>.

<sup>12</sup>Brianne Eby and Paul Lewis, *Aviation Workforce Challenges in the United States and the United Kingdom*, *Eno Center on Transportation* (March 2019) p. 23 available at [www.enotrans.org/wp-content/uploads/2019/03/3.26-US-UK-Aviation-Workforce\\_final.pdf](http://www.enotrans.org/wp-content/uploads/2019/03/3.26-US-UK-Aviation-Workforce_final.pdf).



### III. KEY CHALLENGES AFFECTING THE DIVERSITY OF THE U.S. AVIATION WORKFORCE

#### A. OUTREACH AND BRIDGING THE “GLAMOUR GAP”

One barrier to access for underrepresented communities to the aviation and aerospace fields is the lack of exposure to the industry, particularly among younger age groups. Continued outreach to these groups across U.S. aviation and aerospace can help to further develop this critical workforce.<sup>13</sup> A recent report studying women in aviation emphasized the need for additional outreach to promote careers as airline “pilots, maintenance technicians, aerospace engineers, dispatchers, cybersecurity experts, airport managers, air traffic controllers, and a continued focus on the need for women in aviation leadership positions.”<sup>14</sup>

Additionally, waning interest among younger generations to enter the aviation field, colloquially known as the “Glamour Gap,” contributes to the industry’s workforce shortage.<sup>15</sup> For instance, enrollment at FAA-certificated aircraft maintenance technician (AMT) schools has decreased by 2 percent in recent years and AMT school programs are currently only operating at 50 percent capacity.<sup>16</sup> Several employers and stakeholders point to the declining number of “shop” classes in high school and the perception that well-paying professions can be obtained only through four-year institutions as leading causes of the growing disinterest among young people in seeking jobs in the aviation maintenance and manufacturing fields.<sup>17</sup>

#### B. THE “SKILLS GAP”

Many employers in the aviation industry express concern over a potential labor shortage, due to an inadequate supply of qualified workers. For instance, according to a 2014 GAO report on the availability of aviation maintenance and engineering professionals, nearly 70 percent of employers interviewed by the GAO expressed some level of difficulty hiring workers with the desired experience levels.<sup>18</sup> Further, a 2018 industry report projected that the skills gap may leave an estimated 2.4 million manufacturing positions unfilled between 2018 and 2028, with a potential economic impact of \$2.5 trillion.<sup>19</sup>

This “skills gap” stems from several causes; one of which is the lack of skilled workers in positions requiring more than a high school diploma but less than a four-year college degree. A 2016 industry survey found that 39 percent of aerospace companies predicted an “extreme” impact on their business growth caused by the science, technology, engineering, and math (STEM) workforce shortage.<sup>20</sup> For instance, in 2019 a U.S. aviation maintenance and repair company pointed to this workforce challenge as the primary reason the company had nearly 400 openings at its five U.S. facilities and two Canadian facilities.<sup>21</sup>

#### C. BIAS

Another barrier to aviation careers for underrepresented communities are unconscious biases which often permeate the training and hiring processes. Last year, an Embry-Riddle Aeronautical University study found that participating “consumers and other pilots favored white males in all conditions, while females and minorities were viewed less favorably.”<sup>22</sup> The study also noted that such biases could deprive the aviation industry of the best job candidates.<sup>23</sup> Additionally, a 2018 report concluded that “documented biases have the ability to influence the attitudes toward women entering aviation and the overall training process” and can create “a feeling

<sup>13</sup> See *supra* note 5.

<sup>14</sup> *Id.*

<sup>15</sup> Jim Freaner, *Aerospace Skills Gap: Workforce Declines, As Talent Needs Increase*, AREA DEVELOPMENT, available at <https://www.areadevelopment.com/Aerospace/q3-2015-auto-aero-site-guide/Aerospace-Skills-Gap-Workforce-Declines-Needs-Increase-45711.shtml>.

<sup>16</sup> Eno Center, *supra* note 18 at 23.

<sup>17</sup> See *supra* note 13.

<sup>18</sup> GAO-14-237 at 23.

<sup>19</sup> Deloitte, *2018 Manufacturing Skills Gap Study*, available at <https://www2.deloitte.com/us/en/pages/manufacturing/articles/future-of-manufacturing-skills-gap-study.html>.

<sup>20</sup> Aerospace Industries Association, *What Every Candidate Should Know About the Aerospace Workforce and STEM*, (2016), available at [https://www.aia-aerospace.org/wp-content/uploads/2016/06/AIA\\_Campaign\\_Papers\\_Workforce.pdf](https://www.aia-aerospace.org/wp-content/uploads/2016/06/AIA_Campaign_Papers_Workforce.pdf).

<sup>21</sup> Rob Mark, *AAR White Paper Focuses on Maintenance Technician Shortage*, (Feb. 2019) FLYING MAG, available at <https://www.flyingmag.com/aar-maintenance-technician-shortage/>.

<sup>22</sup> Nadine K. Ragbir, et al., *An examination of consumer bias against female and minority commercial pilots*, TECHNOLOGY IN SOCIETY (Feb. 2021).

<sup>23</sup> *Id.*

of unwelcome for newcomers who don't fit the stereotypical 'pilot' mold."<sup>24</sup> At a recent industry conference, panelists agreed that companies should have dedicated plans to expand workforce diversity to help "move beyond the common perception of the industry as one favoring older, and predominantly white, males."<sup>25</sup>

Without effective strategies to address these underlying workforce challenges, the aviation industry's economic growth and technological advances could be hampered in the future.

#### IV. KEY INITIATIVES SUPPORTING THE U.S. AVIATION WORKFORCE

##### A. CONGRESSIONAL MANDATES AND INITIATIVES

The FAA Reauthorization Act of 2018 included several provisions targeted toward recruiting more young people and women to pursue careers in the aviation industry.

*Youth Access to American Jobs in Aviation Task Force.* Section 602 of the act directed the FAA to establish the Youth Access to American Jobs in Aviation Task Force. The task force is responsible for providing recommendations and strategies to the FAA that will facilitate and encourage high school students to enroll in high school career and technical courses that would prepare them for an aviation career or enroll in a course of study related to an aviation career, including aviation manufacturing, engineering, and maintenance.<sup>26</sup> In July 2020, the U.S. Department of Transportation (DOT) announced 20 appointees to the task force, representing "a diverse range of backgrounds and expertise in aviation and education."<sup>27</sup> Dr. Sharon DeVivo, President of Vaughn College of Aeronautics and Technology, serves as chair of the task force.<sup>28</sup>

*Women in Aviation Advisory Board.* Section 612 of the act directed the FAA to create the Women in Aviation Advisory Board, which is tasked with "promoting organizations and programs that are providing education, training, mentorship, outreach and recruitment of women in the aviation industry."<sup>29</sup> In May 2020, the DOT announced the appointment of 30 members to the advisory board.<sup>30</sup> Former U.S. Air Force Secretary Heather Wilson serves as chair of the board.

*Aviation Workforce Development Grants.* Section 625 of the act directed the DOT to establish two grant programs to "support the education and recruitment of aviation maintenance technical workers and the development of the aviation maintenance workforce" and "to support the education of future aircraft pilots and the development of the aircraft pilot workforce."<sup>31</sup> The first-of-its-kind programs are both authorized at \$5 million annually through fiscal year 2023. The programs—delegated to the FAA—will provide grants for educational programs, scholarships, apprenticeships and other outreach initiatives to expand educational opportunities in the field of aviation maintenance and to prepare the next generation of aircraft pilots, aerospace engineers, or unmanned aircraft systems operators.<sup>32</sup>

*Unmanned Aircraft Systems Collegiate Training Initiative (UAS-CTI).* Sections 631 and 632 of the act directed the FAA to establish a collegiate training initiative program relating to UAS by partnering with institutions of higher education to prepare students for careers in the UAS sector.<sup>33</sup> Additionally, the law directed the FAA to designate a consortia of public, two-year institutions of higher education as Community and Technical College Centers of Excellence in Small UAS Technology Training.<sup>34</sup> To comply with these requirements, the FAA launched the UAS Collegiate Training Initiative (UAS-CTI) program in April 2020. Under the program, "participating institutions will engage with the FAA, each other, general industry,

<sup>24</sup>Hart, William, *Isolation and Onboarding: Gender Bias in Aviation Training Documents* (2018). *Technical Communication Capstone Course*, Minnesota State University, Mankato.

<sup>25</sup>National Business Aviation Association, *Expanding Workforce Diversity Requires Moving Beyond Personal Biases*, (July 2020), <https://nbaa.org/about/diversity-equity-inclusion-dei/expanding-workforce-diversity-requires-moving-beyond-personal-biases>.

<sup>26</sup>P.L. 115–254, § 602 (2018).

<sup>27</sup>DOT, *U.S. Transportation Secretary Elaine L. Chao Makes Appointments to Youth Access to American Jobs in Aviation Task Force*, (July 2020), <https://www.transportation.gov/briefing-room/us-transportation-secretary-elaine-l-chao-makes-appointments-youth-access-american-0>.

<sup>28</sup>Dr. DeVivo testified at the Subcommittee's hearing titled "Looking Forward: The Future of America's Aviation Maintenance and Manufacturing Workforce" (February 2020) <https://transportation.house.gov/imo/media/doc/Testimony%20-%20Devivo.pdf>

<sup>29</sup>P.L. 115–254, § 612 (2018).

<sup>30</sup>DOT, *U.S. Transportation Secretary Elaine L. Chao Appoints Industry Leaders to Women in Aviation Advisory Board*, (May 2020), <https://www.transportation.gov/briefing-room/us-transportation-secretary-elaine-l-chao-appoints-industry-leaders-women-aviation>.

<sup>31</sup>P.L. 115–254, § 625 (2018).

<sup>32</sup>*Id.*

<sup>33</sup>P.L. 115–254, § 631, 632 (2018).

<sup>34</sup>*Id.*

local governments, law enforcement, and regional economic development entities to address labor force needs” to help provide students with the “skills needed to pursue a successful career in a UAS-related field.”<sup>35</sup> More than 70 schools from across the country have been selected by the FAA to participate in the UAS-CTI program.<sup>36</sup>

*Student Outreach Report.* Section 601 of the act directed the FAA to submit a report to Congress describing the agency’s outreach efforts to elementary and secondary students interested in STEM careers in order to prepare them for aviation- and aeronautical-related careers and mitigate the anticipated shortage of pilots and other aviation professionals.<sup>37</sup> The FAA completed the report and submitted it to Congress in September 2019.<sup>38</sup> In the report, the FAA highlighted a 20 percent increase in the number of outreach representatives and a 50 percent increase in the number of its outreach events.<sup>39</sup>

*FAA Cybersecurity Workforce Report.* Section 549 of the act required the National Academy of Sciences to study the FAA’s cybersecurity workforce and develop recommendations to “increase the size, quality, and diversity of such workforce, including cybersecurity researchers and specialists.”<sup>40</sup> Released in June 2021, the report found that “an effective cybersecurity workforce will need to be diverse across several axes” and should, among other strategies, increase engagement with underrepresented minorities, women, and encourage applicants from a range of geographic locations.<sup>41</sup>

*FAA Technical Workforce Report.* Section 569 of the act directed the FAA to submit a report to Congress describing the progress made toward implementing the agency’s action plan to attract, develop, and retain a talented workforce in the areas of systems engineering, architecture, systems integration, digital communications, and cybersecurity.<sup>42</sup> The FAA completed the report and submitted it to Congress in October 2020.<sup>43</sup> Among its recommendations, the report called on the FAA to focus on recruiting youth to build the agency’s pipeline of technical talent, including high school and middle school students.<sup>44</sup> In addition, the report highlighted the expansion of the agency’s Minority Serving Institutions (MSI) Intern Program. For FY2020, the FAA hosted 110 MSI summer interns, 30 of whom majored in computer science, cybersecurity, or engineering.<sup>45</sup>

#### B. FAA PROGRAMS AND INITIATIVES

*FAA Office of Aviation and Space Education.* The FAA’s STEM Aviation and Space Education (AVSED) program was created in 1961 to expose students to aviation and aerospace careers, help recruit new workers into these fields, and promote STEM education to students at all levels.<sup>46</sup> Through the program, the agency works collaboratively with government and private sector entities to promote aviation-related STEM skills and grow the pipeline of students interested in working in these fields.<sup>47</sup> AVSED has produced promotional materials, such as brochures and DVDs, that it shares with college recruiters and guidance counselors, distributes at career fairs, and publicizes virtual learning opportunities. The program also focuses on student populations in underserved communities, through its Adopt-a-School and Girls in Aviation initiatives, to help achieve a more diverse workforce.<sup>48</sup> For the past two years, AVSED has run the FAA Airport Design Challenge, during which teams of elementary, middle, and high schoolers participate in a five week program on air-

<sup>35</sup> FAA, *More Schools Join the Collegiate Training Initiative*, (Sept. 2020), <https://www.faa.gov/news/updates/?newsId=95838>.

<sup>36</sup> See: *Engaging with Academia: How the FAA is Helping Prepare Tomorrow’s UAS Workforce*, (April 2021), <https://medium.com/faa/engaging-with-academia-661aaa3551cb>.

<sup>37</sup> P.L. 115–254, § 601 (2018).

<sup>38</sup> FAA, *Section 601 Youth in Aviation Student Outreach Report*, [https://www.faa.gov/about/plans\\_reports/congress/media/Section\\_601\\_Youth\\_in\\_Aviation\\_Student\\_Outreach\\_Report.pdf](https://www.faa.gov/about/plans_reports/congress/media/Section_601_Youth_in_Aviation_Student_Outreach_Report.pdf).

<sup>39</sup> *Id.* at p. 2.

<sup>40</sup> P.L. 115–254, § 549 (2018).

<sup>41</sup> National Academies of Science, Engineering, and Medicine, *Looking Ahead at the Cybersecurity Workforce at the Federal Aviation Administration*, Pg. 2. (June 2021), <https://www.nap.edu/resource/26105/FAA%20Cybersecurity.pdf>

<sup>42</sup> P.L. 115–254, § 569 (2018).

<sup>43</sup> FAA, *Section 569 Report on Attracting, Developing, Training, and Retaining FAA’s Technical Workforce*, available at [https://www.faa.gov/about/plans\\_reports/congress/media/Report\\_Congress\\_FAA\\_Technical\\_Workforce\\_Sec569.pdf](https://www.faa.gov/about/plans_reports/congress/media/Report_Congress_FAA_Technical_Workforce_Sec569.pdf)

<sup>44</sup> *Id.* at p. 6–7.

<sup>45</sup> *Id.* at p. 10.

<sup>46</sup> FAA, *About STEM AVSED*, (Oct. 2019), <https://www.faa.gov/education/about/>.

<sup>47</sup> GAO–14–237 at 1.

<sup>48</sup> DOT, *Budget Estimates Fiscal Year 2022: Federal Aviation Administration* (2021), <https://www.transportation.gov/sites/dot.gov/files/2021-05/FAA-FY-2022-Congressional-Justification.pdf>.

port design while building a virtual airport model in Microsoft Minecraft.<sup>49</sup> AVSED is also involved in initiatives such as the Real World Design Challenge, a high school engineering competition, and the Build a Plane program, which provides schools with actual aircraft to be used as teaching tools.<sup>50</sup>

*FAA Aviation Workforce Steering Committee.* The FAA's Aviation Workforce Steering Committee (Steering Committee) was established in February 2019 to determine agency goals for addressing aviation workforce challenges, exploring options [for resolving those challenges], and facilitating cross agency strategic coordination.<sup>51</sup> The Steering Committee's charter emphasizes providing diverse populations with clear pathways into aviation careers to expand the talent pool from which both government and industry may recruit.<sup>52</sup> While the Steering Committee considers all aviation professions, its immediate challenge is to focus on the shortage of pilots and technicians.<sup>53</sup> Looking ahead, the Steering Committee plans "a special focus on diversity and inclusion and attracting women, minorities and persons with disabilities to the aviation and aerospace professions [which] helps ensure the government and the industry can recruit from a broader and more inclusive talent pool in the future."<sup>54</sup>

*FAA Office of Civil Rights National Outreach Program for Diversity and Inclusion.* The FAA Office of Civil Rights' National Outreach Program for Diversity and Inclusion includes several initiatives to ensure equal access to resources and programs that may foster future Federal employment and advancement opportunities.<sup>55</sup> For instance, through the Hispanic Education Program, the FAA partners with high schools, post-secondary academic institutions and other key stakeholders to increase recruitment, hiring, training to "address the under-representation of Hispanics/Latinos in the Federal government."<sup>56</sup> Additionally, the People with Disabilities Program works to actively recruit, promote, retain, and advance people with disabilities within the agency.<sup>57</sup>

### C. OTHER GOVERNMENT INITIATIVES

In addition to FAA-led efforts, there are several other government programs seeking to address the mounting need for aviation workers and improve diversity across the sector.

*Department of Transportation (DOT).* Since 2009, the DOT's Women & Girls In Transportation Initiative (WITI) has encouraged young women from colleges and universities across the country to pursue careers in the transportation and STEM fields. Through the department's Small Business Transportation Resource Centers, the initiative aims "to increase the participation of women in the transportation industry and prepare young women to become future leaders by creating ladders of opportunity and small business' economic competitiveness through careers, internships, strategic partnerships and education."<sup>58</sup>

*Department of Labor (DOL).* DOL also has programs directed towards diversifying the aviation workforce. The department's 2017 Diversity and Inclusion Strategic Plan highlighted the department's aim to "secure a high-performing workforce drawn from all segments of American society" and promote "diversity and inclusion as a key strategic priority, through continued leadership commitment, accountability, and total workforce engagement", among other goals.<sup>59</sup> The DOL's Registered Apprenticeship Program awards grants to provide employer-driven training opportunities that combine on-the-job learning with related classroom instruction.<sup>60</sup> For instance, from 2014 through 2018, DOL awarded nearly \$3.8 million in grants

<sup>49</sup> FAA, *Airport Design Challenge*, [https://www.faa.gov/education/virtual\\_learning/airport\\_design/](https://www.faa.gov/education/virtual_learning/airport_design/).

<sup>50</sup> GAO-14-237 at 30.

<sup>51</sup> FAA, *Section 601 Youth in Aviation Student Outreach Report*, Pg. 15, [https://www.faa.gov/about/plans\\_reports/congress/media/Section\\_601\\_Youth\\_in\\_Aviation\\_Student\\_Outreach\\_Report.pdf](https://www.faa.gov/about/plans_reports/congress/media/Section_601_Youth_in_Aviation_Student_Outreach_Report.pdf)

<sup>52</sup> GAO-20-206 at 19.

<sup>53</sup> *Id.*

<sup>54</sup> FAA, *Section 601 Youth in Aviation Student Outreach Report* at 17.

<sup>55</sup> FAA, *Office of Civil Rights—National Outreach Program for Diversity and Inclusion*, (Aug. 2020), [https://www.faa.gov/about/office\\_org/headquarters\\_offices/acr/outreach/](https://www.faa.gov/about/office_org/headquarters_offices/acr/outreach/).

<sup>56</sup> FAA, *National Outreach Program for Diversity and Inclusion: Hispanic Employment Program*, (Sept. 2020), [https://www.faa.gov/about/office\\_org/headquarters\\_offices/acr/outreach/hep/](https://www.faa.gov/about/office_org/headquarters_offices/acr/outreach/hep/)

<sup>57</sup> FAA, *National Outreach Program for Diversity and Inclusion: People with Disabilities Program*, (Aug. 2020), [https://www.faa.gov/about/office\\_org/headquarters\\_offices/acr/outreach/pwd/](https://www.faa.gov/about/office_org/headquarters_offices/acr/outreach/pwd/)

<sup>58</sup> DOT, *USDOT's Women & Girls in Transportation Initiative (WITI)*, (Sept. 2019), <https://www.transportation.gov/osdbu/women-and-girls>.

<sup>59</sup> DOL, *Commitment to a Diverse Workforce*, <https://www.dol.gov/general/jobs/commitment-to-a-diverse-workforce>.

<sup>60</sup> *Id.*

and contracts to promote these apprenticeships for aviation maintenance workers.<sup>61</sup> Further, the DOL's Workforce Recruitment Program for College Students with Disabilities works to connect college students and recent graduates, including veterans, with disabilities to career opportunities in in-demand sectors.<sup>62</sup>

*Department of Education (ED).* Further, over the course of the last decade, the Department of Education has also pursued several initiatives to promote aviation education and careers. For example, in October 2017, ED awarded more than \$4 million in new grants, through the High School Career and Technical Education (CTE) Teacher Pathway Initiative, to address the shortage of CTE programs.<sup>63</sup> The ED has also announced \$17.3 million for college internships, research projects, and other opportunities to connect STEM students, including Historically Black Colleges and Universities (HBCUs) and other MSIs, with the resources from the department's National Laboratories.<sup>64</sup> Across the aerospace industry, there is growing interest in and support for greater access to scholarships and student loan assistance for those attending technical colleges.

*Department of Defense (DOD).* The U.S. Air Force's Junior Reserve Officers' Training Corps (JROTC) Flight Academy also works to attract younger students to aviation and improve diversity in the field.<sup>65</sup> In 2018–2019, over 200 cadets graduated from the academy, of which 41 percent of new pilots are from underrepresented groups and 18 percent are women.<sup>66</sup> The DOD also administers the Credentialing Opportunities On-Line (COOL) program, which creates a pathway for service members to earn industry recognized professional certifications and licenses.<sup>67</sup> The program provided more than \$5 million toward aviation maintenance-related credentials from 2015 through 2018 for more than 2,500 service members.<sup>68</sup>

#### D. INDUSTRY INITIATIVES

Many aviation companies and aerospace trade groups are establishing their own training programs and outreach initiatives to further develop and maintain their workforce. Below are just a few examples of industry-led initiatives and partnerships.

- In April 2021, United Airlines announced plans to train 5,000 new pilots by 2030, at least half of whom will be women and people from underrepresented communities.<sup>69</sup> The airline also pledged \$1.2 million in scholarships to help address financial barriers to the airline pilot career path for students.<sup>70</sup>
- Since 2019, the Aeronautics Industry Association (AIA) has organized a nationwide rocketry contest, with nearly 5,000 middle and high school students participating annually.<sup>71</sup> To date, this initiative has funded \$120,000 in grants to schools in low-income communities and connected more than 80,000 students with rocketry and aerospace career mentors.<sup>72</sup> The trade group also plans to provide \$50,000 in grants to schools in underserved communities next year through this initiative.<sup>73</sup>

<sup>61</sup> GAO–20–206 at 16.

<sup>62</sup> DOL, *Workforce Recruitment Program*, <https://www.dol.gov/agencies/odep/program-areas/employers/workforce-recruitment-program>.

<sup>63</sup> High School Career and Technical Education (CTE) Teacher Pathway Initiative, *PCRN: High School CTE Teacher Pathway*, <https://cte.ed.gov/initiatives/high-school-cte-teacher-pathway>.

<sup>64</sup> See: *DOE Awards \$17.3 Million for Student and Faculty Research Opportunities and to Foster Workforce Diversity*, (May 2021), <https://www.energy.gov/articles/doe-awards-173-million-student-and-faculty-research-opportunities-and-foster-workforce>.

<sup>65</sup> FAA, *Pilot Shortage: Crisis and Opportunities* (June 2021), [https://www.faa.gov/regulations-policies/rulemaking/committees/documents/media/Updated June YIATF Meeting Packet.pdf](https://www.faa.gov/regulations-policies/rulemaking/committees/documents/media/Updated%20June%20YIATF%20Meeting%20Packet.pdf).

<sup>66</sup> *Id.*

<sup>67</sup> GAO–20–206 at 15.

<sup>68</sup> *Id.*

<sup>69</sup> Bob D'Angelo, *United Airlines sets new diversity goal for pilot training*, KIRO 7 News Seattle. (April 2021), available at <https://www.kiro7.com/news/trending/united-airlines-sets-new-diversity-goal-pilot-training/6EPFPMWTE5GZDBYPLPJZC4NGCI/>.

<sup>70</sup> *Id.*

<sup>71</sup> Aerospace Industries Association, *Diversity, Equity & Inclusion*, available at <https://www.aia-aerospace.org/diversity-equity-inclusion/>.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

- To hire 2,000 mechanics over the next decade, Delta Air Lines is providing \$350,000 in grants to nine aviation high schools around the country to help expand its workforce.<sup>74</sup>
- Last August, AAR, a Chicago-based aviation maintenance and repair company, partnered with the Corporation for Skilled Workforce to create a program at schools located near its repair stations to demonstrate how students can learn skills leading to multiple career paths at the company.<sup>75</sup> The learned skills developed within the program can then be used to pursue an A&P mechanic certificate.<sup>76</sup> Through this initiative, the company aims to diversify the aviation maintenance technician workforce and reduce future labor shortages.<sup>77</sup>
- Since its inception in 2018, the Leadership in Flight Training (LIFT) Academy in Indianapolis has worked to broaden diversity within the cockpit and maintenance hangars.<sup>78</sup> Earlier this month, the Leadership in Flight Training (LIFT) Academy in Indianapolis announced it will send its graduates to Cape Air to help broaden diversity and provide the airline with a talented pool of aviators to operate its daily passenger flights throughout the Midwest, Montana, Caribbean, and the Northeast.<sup>79</sup> The LIFT Academy, through its parent company Lynx Aviation, also invested in Hyannis Air Service to broaden its workforce development initiatives.<sup>80</sup>
- In 2017, the United Negro College Fund (UNCF) partnered with Alaska Airlines through their LIFT Miles program, to allow guests to contribute airline miles alongside the company to ensure travel does not hold young people back from pursuing their dreams of education.<sup>81</sup> To date, Alaska and its guests have contributed more than 13.4 million Alaska Airlines miles to fly students to HBCUs for college tours, career development events, and other UNCF programs.<sup>82</sup> With this renewed commitment, Alaska will donate one million miles annually to support students attending HBCUs.<sup>83</sup> In addition, Alaska has also established a scholarship through the UNCF to help students overcome the financial obstacles of getting a college education.<sup>84</sup>

#### WITNESSES

- Dr. Rebecca Lutte, Associate Professor, University of Nebraska at Omaha Aviation Institute
- Captain Claudia Zapata-Cardone, Executive Director of Community Relations and Outreach, Latino Pilots Association
- Ms. Icema D. Gibbs, Vice President of Corporate Social Responsibility and Diversity, Equity and Inclusion, JetBlue Airways
- Mr. Joel Webley, Chairman, Board of Directors, Organization of Black Aerospace Professionals
- Mr. Kyle J. Kaiser, President, VIPER Transitions

<sup>74</sup> Leslie Josephs, *College of \$70,000 a year? Aviation Industry scrambles for mechanics as retirements loom*, CNBC. (Sept. 2018), available at <https://www.cnbc.com/2018/09/03/airlines-search-for-young-mechanics-as-retirement-wave-looms.html>.

<sup>75</sup> Lindsay Bjerregaard, *AAR Plans For Expected Ramp-Up In Workforce Demand*, AVIATION WEEK. (Aug. 2020), available at <https://aviationweek.com/mro/workforce-training/aar-plans-expected-ramp-workforce-demand>.

<sup>76</sup> Rob Mark, *AAR White Paper Focuses on Maintenance Technician Shortage*, FLYING MAG. (Feb. 2019) available at <https://www.flyingmag.com/aar-maintenance-technician-shortage/>.

<sup>77</sup> See *AAR Partners With Corporation for Skilled Workforce and Lumina Foundation to Reduce Labor Shortage and Increase Diversity in the Aviation Industry*, AVIATION PROS (Aug. 2020), available at <https://www.aviationpros.com/aircraft/maintenance-providers/mro/press-release/21151640/aar-corp-aar-partners-with-corporation-for-skilled-workforce-and-lumina-foundation-to-reduce-labor-shortage-and-increase-diversity-in-the-aviation-industry>.

<sup>78</sup> Business Wire, *LIFT Academy Enters a Strategic Workforce Development Relationship with Cape Air, Providing an Aviation Career Pathway and Airline Flow Program*, (July 1, 2021), available at <https://www.businesswire.com/news/home/20210701005862/en/LIFT-Academy-Enters-a-Strategic-Workforce-Development-Relationship-with-Cape-Air-Providing-an-Aviation-Career-Pathway-and-Airline-Flow-Program>

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> Aaron Allen, *Alaska Airlines Renews Commitment to Education and Diversity with Unveiling of UNCF Inspired Aircraft*, THE SEATTLE MEDIUM (April 2021), available at <https://seattlemedium.com/alaska-airlines-renews-commitment-to-education-and-diversity-with-unveiling-of-uncf-inspired-aircraft/>.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

## **BRIDGING THE GAP: IMPROVING DIVERSITY AND INCLUSION IN THE U.S. AVIATION WORKFORCE**

**TUESDAY, JULY 20, 2021**

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON AVIATION,  
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,  
*Washington, DC.*

The subcommittee met, pursuant to notice, at 11:01 a.m., in room 2167 Rayburn House Office Building and via Zoom, Hon. Rick Larsen (Chairman of the subcommittee) presiding.

Mr. LARSEN. The subcommittee will come to order.

First, I ask unanimous consent that the chair be authorized to declare a recess at any time during today's hearing.

Without objection, so ordered.

I also ask unanimous consent that Members not on the subcommittee be permitted to sit with the subcommittee at today's hearing and ask questions.

Without objection, so ordered.

As a reminder to everyone, please keep your microphone muted unless speaking. Should I hear any inadvertent background noise, I will request that the Member please mute their microphone.

A reminder, as well: To insert a document into the record, please have your staff email it to DocumentsT&I@mail.house.gov.

I will now start with my opening statement.

Good morning and welcome to today's witnesses and everyone joining the Aviation Subcommittee's hearing titled "Bridging the Gap: Improving Diversity and Inclusion in the U.S. Aviation Workforce."

The topic of this hearing comes at a critical time for the U.S. aviation and aerospace industries. Over the last 18 months, these industries were hit particularly hard by the COVID-19 pandemic. Five hundred fifty-seven million fewer passengers flew on U.S. airlines in 2020 than in the previous year, as a for-instance.

The growth of aviation manufacturing was also hindered by the pandemic. By the end of 2020, the value of aircraft deliveries declined by nearly 15 percent.

So as the Nation reopens and Americans return to air travel, a discussion must be had regarding the status and needs of the aviation and aerospace workforce.

I acknowledge that I, myself, have more work to do to understand and address these barriers, such as systemic racism, that enables inequity and injustice to persist in the United States.

As subcommittee chair and as a Member of Congress, I have made highlighting the importance of an increasingly diverse country and what that means for the U.S. aviation and aerospace workforce, and developing an increasingly diverse workforce is a priority.

It is important that the economic and job opportunities available in these industries be available and accessible to all Americans.

However, in many cases, the U.S. transportation workforce does not reflect the diversity of the country. Unfortunately, the aerospace and aviation sectors are no exception. A recent survey of the industry found that women comprise 25 percent of the industry's workforce, while only 6 percent of respondents identified as a person of color and just less than 8 percent identified as Hispanic or Latino, according to an Aviation Week 2020 workforce study.

The aviation and aerospace sectors also expect a good chunk of their workforce to retire soon. The Aviation Technician Education Council estimates that 30 percent—30 percent—of the current workforce is at or near retirement age.

To meet the increasing demand for new and skilled aviation workers, employers must expand the talent pool from which they have traditionally drawn.

To fill existing and future workforce needs, several challenges must be met head on. Today's witnesses will help the subcommittee to better understand the need for diversity in the U.S. aviation and aerospace workforce and the challenges faced in their journeys to succeed in this industry.

I am pleased to welcome Dr. Rebecca K. Lutte, associate professor at the University of Nebraska at Omaha's Aviation Institute, to share her research findings on representation in aviation and challenges to improve diversity in the sector.

One such challenge is the basic lack of exposure to aviation and aerospace careers for young people, especially for minority communities and women. The Federal Government and industry must make a concerted effort to help promote these careers among these communities to better diversify the workforce.

I am pleased to as well welcome Captain Claudia Zapata-Cardone, executive director of community relations and outreach for the Latino Pilots Association.

Captain Zapata-Cardone, I look forward to hearing your story and your recommendations to enhance the talent pipeline.

We are also joined by Mr. Joel Webley, board chair of the Organization of Black Aerospace Professionals, or OBAP, an organization at the forefront of creating more pathways to these careers for historically underrepresented groups.

Mr. Webley, I am interested in learning more about your expertise in aviation and OBAP's various outreach programs.

In their efforts to grow the aviation workforce, employers are also faced with the skills gap. Employers have found there is a lack of skilled workers in positions requiring more than a high school diploma, but less than a 4-year college degree.

According to a 2018 industry report, the skills gap may leave an estimated 2.4 million manufacturing positions unfilled between now and 2028, resulting in a \$2.5 trillion loss in the economy.



One way to address the gap is to help Active Duty servicemembers and veterans to transition into well-paying careers in the aviation sector. Congress and this subcommittee owe it to veterans to help them find pathways to the skills necessary for employment in aviation and aerospace.

I am pleased to welcome Mr. Kyle Kaiser, president of VIPER Transitions, and to hear about his organization's critical work to help veterans enter this workforce and what Congress can do to support these efforts.

Underrepresented communities also face the challenge of bias when attempting to enter aviation careers. A 2020 study conducted by Embry-Riddle Aeronautical University found, quote, "consumers and other pilots favored White males in all conditions, while females and minorities were viewed less favorably." That is unfortunate.

The same study found such biases could deprive the aviation industry of the best job candidates.

Efforts undertaken by the aviation industry itself are critical to overcoming the challenges underrepresented groups face entering these jobs, which is why I am pleased to welcome Ms. Icema Gibbs, vice president of corporate social responsibility and diversity, equity, and inclusion for JetBlue Airways.

Ms. Gibbs, I look forward to hearing more about JetBlue's efforts to recruit more diverse talent, particularly in frontline operations and in leadership roles.

The FAA Reauthorization Act of 2018 included several provisions to improve the recruitment of young people and women to careers in the aviation industry. The Youth Access to American Jobs in Aviation Task Force is responsible for providing recommendations and strategies to the FAA to encourage high school students to enroll in courses and secure apprenticeships that prepare them for an aviation career.

Last year, the DOT announced 20 appointees to this task force representing a diverse range of backgrounds and expertise in aviation and education.

The Women in Aviation Advisory Board is also tasked with exploring opportunities for education, training, mentorship, outreach, and recruitment of women in the aviation industry.

The DOT announced the appointment of 30 members to this advisory board in May of last year.

The law also established the Aviation Workforce Development Grants to fund scholarships, apprenticeships, and other outreach initiatives to expand educational opportunities for the next generation of aviation maintenance technicians, aircraft pilots, aerospace engineers, and operators of unmanned aircraft systems.

So a question I have for today's witnesses generally is: Are these initiatives enough? Does Congress need to do more?

As the Nation works towards full economic recovery, the Federal Government and industry must and can work together to break down barriers and ensure careers in the aviation and aerospace industries are available and accessible to all Americans. Doing so will not only boost continued economic growth, but also help to ensure the long-term health of the industries themselves.

So I want to thank today's witnesses for coming, and I look forward to our discussion.

[Mr. Larsen's prepared statement follows:]

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**Prepared Statement of Hon. Rick Larsen, a Representative in Congress from the State of Washington, and Chair, Subcommittee on Aviation**

Good morning and welcome to today's witnesses joining the Aviation Subcommittee's hearing titled "Bridging the Gap: Improving Diversity and Inclusion in the U.S. Aviation Workforce."

The topic of this hearing comes at a critical moment in time for the U.S. aviation and aerospace industries.

Over the last 18 months, these industries were hit particularly hard by the COVID-19 pandemic.

For instance, 557 million fewer passengers flew on U.S. airlines in 2020 than in the previous year.

The growth of aviation manufacturing was also hindered by the pandemic; by the end of 2020, the value of aircraft deliveries declined by nearly 15 percent.

As the nation reopens and Americans return to air travel, a discussion must be had regarding the status and needs of the aviation and aerospace workforce.

As a white man, I acknowledge that I, too, have more work to do to understand and address the barriers, such as systemic racism, that enable inequity and injustice to persist in the United States.

As Subcommittee Chair and as a Member of Congress, I have made improving diversity in the U.S. aviation and aerospace workforce a priority.

It is important that the economic and job opportunities available in these industries be available and accessible to all Americans.

However, in many cases, the U.S. transportation workforce does not reflect the true diversity of the country.

Unfortunately, the aviation and aerospace sectors are no exception. A recent survey of the aerospace industry found that women comprise only 25 percent of the industry's workforce, while only six percent of respondents identified as a Person of Color and just less than eight percent identified as Hispanic or Latino.

The aviation and aerospace sectors also expect a good chunk of their workforce to retire soon.

The Aviation Technician Education Council estimates that 30 percent of the current workforce is at or near retirement age.

To meet the increasing demand for new and skilled aviation workers, employers must expand the talent pool from which they have traditionally drawn.

To fill existing and future workforce needs, several challenges must be met head on.

Today's witnesses will help this subcommittee to better understand the need for diversity in the U.S. aviation and aerospace workforce, and challenges faced in their journeys to succeed in this industry.

I am pleased to welcome Dr. Rebecca K. Lutte, Assistant Professor at the University of Nebraska at Omaha's Aviation Institute, to share her research findings on representation in aviation and challenges to improving diversity in the sector.

One such challenge is the basic lack of exposure to aviation and aerospace careers for young people, especially from minority communities and women.

The federal government and industry must make a concerted effort to help promote these careers among these communities to better diversify the workforce.

I am pleased to welcome Captain Claudia Zapata-Cardone, Executive Director of Community Relations and Outreach for the Latino Pilots Association. Captain Zapata-Cardone, I look forward to hearing your story and recommendations to enhance the talent pipeline.

We are also joined by Mr. Joel Webley, Board Chair of the Organization of Black Aerospace Professionals (OBAP), an organization at the forefront of creating more pathways to these careers for historically underrepresented groups. Mr. Webley, I am interested in learning more about your experience in aviation and OBAP's various outreach programs.

In their efforts to grow the aviation workforce, employers are also faced with the "skills gap."

Employers have found there is a lack of skilled workers in positions requiring more than a high school diploma, but less than a four-year college degree.

According to a 2018 industry report, this skills gap may leave an estimated 2.4 million manufacturing positions unfilled between now and 2028, resulting in a \$2.5 trillion loss in the economy.

One way to address this gap is to help active duty servicemembers and veterans to transition into well-paying careers in the aviation industry.

Congress and this Subcommittee owe it to veterans to help them find pathways to the skills necessary for employment in aviation and aerospace.

I am pleased to welcome Mr. Kyle Kaiser, President of VIPER Transitions, about his organization's critical work to help veterans enter this workforce and what Congress can do to support these efforts.

Underrepresented communities also face the challenge of bias when attempting to enter aviation careers.

A 2020 study by Embry-Riddle Aeronautical University found "consumers and other pilots favored white males in all conditions, while females and minorities were viewed less favorably."

The same study found such biases could deprive the aviation industry of the best job candidates.

Efforts undertaken by the aviation industry itself are critical to overcoming the challenges underrepresented groups face entering these jobs.

Which is why I am pleased to welcome Ms. Icema Gibbs, Vice President of Corporate Social Responsibility and Diversity, Equity and Inclusion for JetBlue Airways. Ms. Gibbs, I look forward to hearing more about JetBlue's efforts to recruit more diverse talent, particularly in frontline operations and leadership roles.

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Last year, the DOT announced 20 appointees to this task force representing "a diverse range of backgrounds and expertise in aviation and education."

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The law also established Aviation Workforce Development Grants to fund scholarships, apprenticeships and other outreach initiatives to expand educational opportunities for the next generation of aviation maintenance technicians, aircraft pilots, aerospace engineers and unmanned aircraft systems operators.

A question I have for today's witnesses is: Are these initiatives enough? Or does Congress need to do more?

As the nation works toward full economic recovery, government and industry must work together to break down barriers and ensure careers in the aviation and aerospace industries are available and accessible to all Americans.

Doing so will not only boost continued economic growth, but also help to ensure the long-term health of the industries themselves.

Thank you again to today's witnesses. I look forward to our discussion.

Mr. LARSEN. With that, I want to recognize the ranking member of the subcommittee, Mr. Graves of Louisiana, for his opening statement.

Mr. GRAVES OF LOUISIANA. Thank you, Mr. Chairman.

I want to thank you for holding this hearing today and thank all of the witnesses for joining us today.

Mr. Chairman, you can look at the statistics, and it is crystal clear that we can make significant improvements in diversity. I believe the number of pilots that are women in the United States comprises about 7 percent and for flight engineers it is even lower than that at 4.3 percent.

We can make improvements in diversifying and better including communities of color in flight mechanics, and our pilots, engineers, and others. There is no doubt.

But, Mr. Chairman, I think taking a step back, which is what we ought to be doing right now, we are seeing huge shortages in work-

force across the United States. The aviation industry is certainly no exception to that.

We have stepped in and done programs like the Payroll Support Program, trying to ensure that when we saw these extraordinary drops in passengers, as I recall, a 95-percent reduction in commercial passenger travel in April of last year—obviously it is impossible to maintain a workforce with those sorts of numbers.

But now, I know when I flew in yesterday, National Airport alone was probably the busiest I have seen it since the pandemic, but we have got to work to help to make sure that all industries have workforce.

And recently in the Atlanta airport when I was there, only two of the businesses on the entire concourse were actually open because of workforce shortages. I think that some of the statistics are clear that looking at the States that have stepped in early and cut off the supplemental unemployment assistance, those States have seen an increase in employment.

And I think that we certainly need to work across all industries, but focusing on the aviation industry, there is no doubt with the surge back in travel that there have been some extraordinary challenges in meeting the demands.

In the aviation industry, there were shortages even before COVID, and we knew that there were increased retirements that you saw, that there were not as many folks coming into the workforce.

And you are seeing an exploding industry, whether it is the aerospace—I know the chairman was telling me before the hearing that he was thinking about spending some of his excess \$28 million on a trip to space—and we are seeing an explosion there in that industry, as well as unmanned systems drones and other technologies that are causing a surge in demand for aviation, for aerospace workforce.

In the 2018 authorization bill, as the chairman noted, we did create grant programs. We created a task force, trying to improve employment, improve diversity in the task force as well.

And I am very proud in my home State and in our district in Louisiana, right on the campus of the Baton Rouge Airport, they are opening up the Helix Aviation Academy, which is going to start its first sixth grade class this year and then go on to seventh and eighth grade as well, trying to play our role at home in trying to meet the future demands of the workforce.

Mr. Chairman, I think it is important that as we work forward that we are informing people about the opportunities that are there.

There have been studies showing that there were misconceptions in the future of the occupation of the career, the opportunities that are there, and I think that we have got to do a better job helping to inform the public through some of the programs we created through the 2018 bill, the workforce training bills, to ensure that the public understands, that students understand about the huge opportunities that are there.

It is important because the United States, we expect to remain the global leaders in aerospace and in aviation, and if we have workforce shortages, we are not going to be able to maintain that

edge and have the professionals and the expertise that we have had in the past.

We also need to develop a workforce for new and emerging careers, including drone pilots, cybersecurity professionals, and commercial space transportation engineers.

We need to partner with labor, industry, and academia to address these issues which will be critical to ensuring that we maintain our leadership.

Mr. Chair, I look forward to hearing from the witnesses today, and before we break, I do want to ask unanimous consent that the statement by Mark Baker from the Aircraft Owners and Pilots Association be included in the record.

Mr. LARSEN. So ordered.

[The information follows:]

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**Prepared Statement of Mark Baker, President and Chief Executive Officer, Aircraft Owners and Pilots Association, Submitted for the Record by Hon. Garret Graves**

Chairman Larsen, Ranking Member Graves, Members of the Subcommittee, thank you for the opportunity to provide the Aircraft Owners and Pilots Association's (AOPA) perspective on "Bridging the Gap: Improving Diversity and Inclusion in the U.S. Aviation Workforce".

AOPA is the world's largest aviation membership organization representing the general aviation interests of more than 300,000 aircraft owners and pilots across the country. Our members collectively operate over 85% of all general aviation (GA) aircraft in the United States and represent two-thirds of all pilots, making AOPA the largest civil aviation organization in the world.

AOPA was founded in 1939 and for over eighty years we have stayed true to our mission by protecting and defending freedom to fly, ensuring that safety remains our north star, and helping guide this uniquely American experience so we can pass it along, better than we received it, to the next generation of aviators. Getting the next generation of Americans, especially young people from diverse backgrounds, interested in aviation and aerospace is vital to our industry's future.

There are so many positive things happening within aviation to address our workforce challenges and improve diversity, but unfortunately the left hand often doesn't know what the right hand is doing. Why are commercial carriers pulling away pilots from the military? Why is the Defense Department paying large bonuses to military pilots to keep them? Why are we 2,000 fighter pilots short today? Why do more than 70% of student-pilots not complete training? Why is there a significant shortage with skilled aviation technicians?

One of the biggest challenges facing our industry is ensuring that the United States has a well-qualified, well-trained and diverse workforce to meet the demands that are present today and will remain well into the future.

**WORKFORCE CHALLENGES AND CONGRESSIONAL ACTION:**

Boeing's 2020–2039 Pilot and Technician Outlook estimated a need for more than 760,000 new pilots worldwide of which more than 200,000 are needed in North America over the next 20 years. The report also mentioned that 730,000 new aviation technicians will be needed around the world. A Boeing executive summary reiterates that "meeting the projected long-term demand" for aviation positions "will require a collective effort across the global aviation industry" as "tens of thousands of pilots, technicians and cabin crew members reach retirement age over the next decade." The company says educational outreach and career pathway programs "will be essential to inspiring and recruiting the next generation."

We applaud this Committee for including two aviation workforce development grant programs (aircraft pilots and aviation maintenance technical workers) in the 2018 FAA Reauthorization law. This is an outstanding provision intended to introduce high school students and others to science, technology, engineering, math (STEM) aviation education and opportunities, as well as training in aviation and aerospace skills.

Most people that aspire to become aviators start in general aviation, so it is important that we collaborate on efforts to ensure that this pipeline remains open to all. The aircraft pilot grant program supports the creation and delivery of curriculum designed to provide high school students with meaningful science, technology, engineering, math and aviation education and encouraging our nation's youth to become the next generation of commercial, general aviation, drone or military pilots.

The aviation technical workforce grant program includes scholarships, apprenticeships, establishing new training programs, purchasing equipment for schools, and supporting career transition for members of the armed forces.

These two programs are each authorized at \$5 million per year through fiscal year (FY) 2023, and Congress appropriated full funding for these programs in both FY20 and FY21. We are pleased to see the Fiscal Year 2022 Departments of Transportation, Housing and Urban Development, and Related Agencies Appropriations Bill approved by the Appropriations Committee last week recommends full funding for these grant programs in FY22.

We appreciate the leadership of Chairman Peter DeFazio, Ranking Member Sam Graves, Aviation Subcommittee Chairman Rick Larsen, and Subcommittee Ranking Member Garret Graves, as well as the Members on the Committee who have expressed their support for full funding of these aviation workforce grant programs.

While the FAA was slow to establish both programs, the agency is currently reviewing applications and anticipates awarding grants by the end of this calendar year.

#### AOPA INITIATIVES TO ADDRESS THE NEXT GENERATION OF PILOTS AND IMPROVE DIVERSITY:

AOPA has also taken a leadership role in developing our future aviation workforce by getting young people interested in aviation through programs such as the AOPA Foundation High School Initiative.

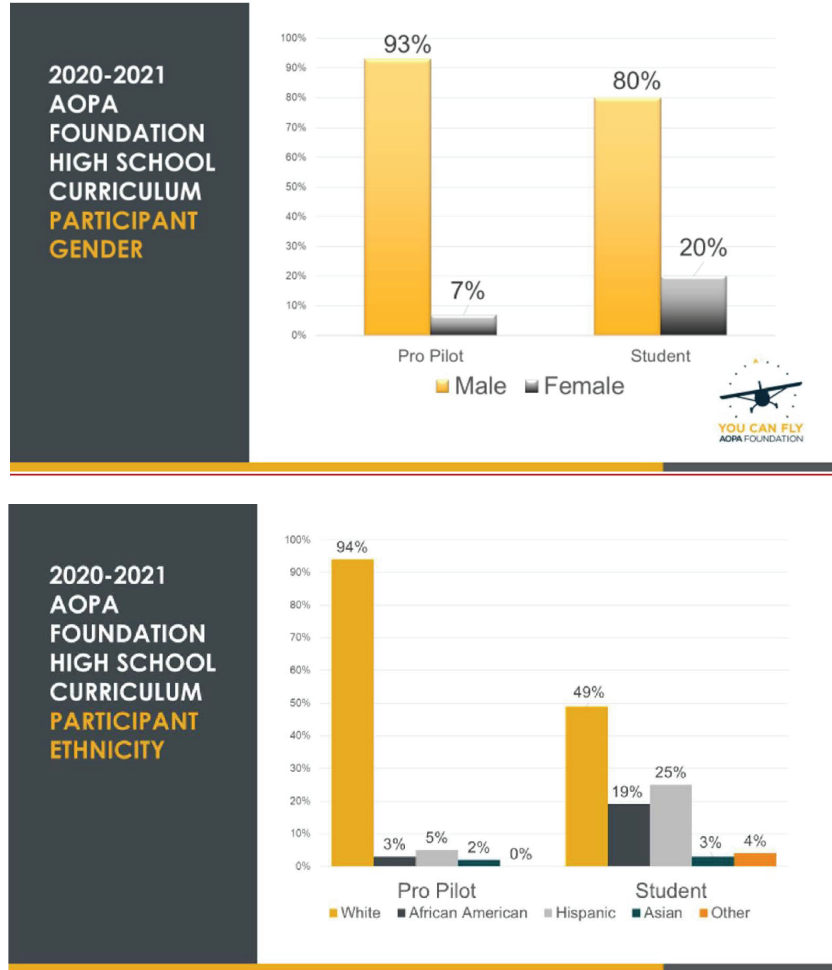
By providing high-quality STEM-based aviation education to high school students nationwide, AOPA is opening the door to aviation careers for thousands of teens from diverse backgrounds.

The courses are designed to capture the imagination and give students from diverse backgrounds the tools to pursue advanced education and careers in aviation fields. Working with professional instructional designers, AOPA is currently offering three years of a four-year high school aviation STEM program that falls along two tracks—pilot and unmanned aircraft systems (UAS). The fourth year of the pilot track program completed field testing in June and will be available to schools nationwide for the 2021–2022 school year. The fourth year of the UAS program is currently in development.

AOPA's High School Initiative program conforms to Common Core math and science standards, Next Generation Science Standards, FAA Airmen Certification Standards and keeping with career and technical education best practices, will lead to a certification or industry-accepted test, such as the FAA Private Pilot knowledge test or a Part 107 small UAS (drone) pilot certification.

For the 2020–2021 school year, our curriculum was being used by more than 8,000 students in more than 200 schools in 36 states. For the 2021–2022 school year, interest continues to grow. More than 350 schools in 41 states have expressed interest in using the program for the 2021–2022 school year.

We are seeing a dramatic improvement in gender demographics and ethnic diversity when comparing students using the curriculum during the 2020–2021 school year to the current professional pilot population as indicated in the charts below.



In addition, schools using our curriculum include rural, urban, and suburban schools of all sizes, including many schools in economically disadvantaged communities. For the 2020–2021 school year, more than 22% of participating schools were considered high poverty by the Department of Education, with 75–100% of students eligible for free and reduced priced meals. In addition, 56% of participating schools were Title 1 eligible.

The interest in AOPA's curriculum from high schools across the country has been overwhelming and we look forward to working with the Committee to ensure that high schools who want to teach students about aviation and all that it offers actually have that opportunity.

#### NATIONAL CENTER FOR THE ADVANCEMENT OF AVIATION ACT:

There is no mistaking that good programs exist within the aviation industry trying to address the workforce challenges, such as the AOPA High School Initiative or governmental organizations such as the two aviation workforce development programs. What has been lacking is the necessary coordination and communication between the various sectors to ensure that we have a more cohesive approach to workforce issues and to ensure our aviation and aerospace workforce in the United States remains competitive.

In order to meet bold challenges, we need bold initiatives. This will be a formidable challenge and one we must confront together—both industry and government.

Mr. Chairman, the bipartisan and bicameral National Center for the Advancement of Aviation Act (H.R. 3482/S.1752) introduced in the House by you, Congressman Carson (D-Ind) and Congressman Don Young (R-Alaska) and in the Senate by Senators Inhofe (R-Okla.) and Duckworth (Illinois) is that bold initiative.

We strongly believe standing up a federally chartered 501(c)(3) not-for-profit national aviation center will facilitate cooperation, collaboration, and coordination across all sectors of aviation: civil, commercial, and military—which is so desperately needed.

A national aviation center would bring the industry together by fostering programs that create a diverse and skilled aviation workforce, ensuring the deployment of STEM aviation educational opportunities for high school students, leveraging the sharing of new and emerging flight training methods, and conducting safety and economic data trend analysis.

A National Center for the Advancement of Aviation would do more to grow, develop, and promote aviation and bring the needed and long overdue collaboration across our collective industry, while also allowing the FAA to focus on its core mission: air traffic, safety regulations, and addressing aircraft and airman certification issues.

This national aviation center can unite our collective efforts to ensure that we have a more diverse industry. If we are to create a pipeline of qualified and well-trained talent, then we must look far and wide, and include those individuals who may not have been on our radar in the past. We need more women and minorities in our industry at all levels and in all positions. We need more professionals from underserved corners of society. It's not only the best thing to do, but the right thing to do. As shown by AOPA's High School Initiative program demographics, if students are simply provided access to these opportunities, they can help build a better and more diverse aviation workforce.

The NCAA would be a private entity and no general fund taxpayer dollars would be used to support it. The bill calls for funding the initiative by using a small percentage (5%) of the interest accrued annually on the taxes and fees collected from those who use the system and are deposited into the aviation trust fund.

Despite the impact in 2020 from the COVID pandemic, taxes and fees deposited into the aviation trust fund totaled more than \$18 billion dollars each year. As people begin to fly again, we'll see this number get back to normal and maybe even exceed what we've seen in the past. According to the Congressional Budget Office, in 2019, the interest on revenues deposited into the aviation trust fund totaled more than \$346 million dollars. In the scheme of things, using just 5% of that interest, along with industry support, is a small investment to ensure efficiencies and effectiveness are realized for an industry which supports more than 11 million jobs and contributes more than \$1.6 trillion per year to the national economy.

The NCAA bill has support from virtually the entire aviation industry including general aviation, airlines, airports, manufacturers, unions, schools, and other entities involved in all segments of aviation and aerospace. More than 180 organizations, representing hundreds of thousands of Americans, have already expressed support for this bill.

As of today, HR 3482 includes a number of bipartisan cosponsors including several from the Transportation and Infrastructure Committee: Allred, Auchincloss, Bost, Brownley, Carson, Cohen, Fitzpatrick, Guest, Eddie Bernice Johnson, Hank Johnson, Kahele, Katko, Larsen, Mace, Norton, Pappas, Payne, Stauber, and Young. We appreciate their support and encourage all Members of the Committee to cosponsor this needed legislation.

#### CONCLUSION:

Private and governmental organizations working together to address the development and sustainability of the aviation workforce and leveraging the knowledge of organizations and federal agencies are all vital to protect and grow the aviation industry.

This is exactly what the NCAA will do, and we believe a national center will not only address our future workforce challenges but will also "Bridge the Gap and Improve Diversity and Inclusion in the U.S. Aviation Workforce."

Mr. GRAVES OF LOUISIANA. Thank you.

Mr. LARSEN. Do you yield back?

Mr. GRAVES OF LOUISIANA. Yes.



[Mr. Graves of Louisiana's prepared statement follows:]

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**Prepared Statement of Hon. Garret Graves, a Representative in Congress from the State of Louisiana, and Ranking Member, Subcommittee on Aviation**

Thank you, Mr. Chairman, I want to thank you for holding this hearing today, and I thank all the witnesses for joining us today.

Mr. Chairman, you can look at the statistics and it is crystal clear that we can make significant improvements in diversity. I believe the number of pilots that are women in the United States comprises about 7 percent and for flight engineers, it is even lower than that at 4.3 percent. We can make improvements in diversifying and better including communities of color in aviation professions, including flight mechanics, pilots, engineers, and others.

But Mr. Chairman, I think we need to take a step back and look at the huge shortages in our workforce across the United States. The aviation industry is certainly no exception to that. We have stepped in, like with the payroll support program, trying to ensure that we addressed issues when we saw extraordinary pandemic-related drops in commercial passenger travel. Obviously, it is impossible to maintain a workforce with those drops in numbers. I know when I flew to Washington, DC yesterday, DCA Reagan National Airport was probably the busiest I have seen since the pandemic. Recently in Atlanta, I was there and only two businesses in the entire concourse were open due to workforce shortages.

I think some of the statistics are clear that states that stepped in early and cut off the supplemental unemployment assistance have seen an increase in employment. We have to work to make sure that all industries have a workforce pipeline, especially the aviation industry. There is no doubt, with the surge back in travel, that there have been some extraordinary challenges in meeting the passenger demands.

In the aviation industry, there were workforce shortages before COVID-19, due to increasing retirements, fewer folks joining the workforce, and air travel demand growing. Whether aerospace, unmanned aircraft systems, or other technologies, there remains a surge in demand for aviation and aerospace workforce.

In the FAA Reauthorization Act of 2018, as the Chairman noted, we did create grant programs and task forces to improve employment levels and workforce diversity. I am very proud that my home state and our district in Louisiana—right on the campus of the Baton Rouge Airport—are opening the Helix Aviation Academy, which is going to start its first 6th grade class this year, which will then go on to the 7th and 8th grade as well. We are trying to play our role at home in trying to meet the future demands of the workforce.

Mr. Chairman, I think it is important that we inform people about the opportunities that are there. There have been studies showing there are misconceptions about the future of careers and opportunities there. We have to do a better job of informing the public through some of the programs we created with the 2018 FAA Reauthorization Act and the workforce training programs, to ensure the public and students understand the huge opportunities out there.

It is important because the United States expects to remain the global leader in aerospace and aviation, and if we have workforce shortages, we are not going to be able to maintain that edge and have the professionals and expertise we have had in the past.

We also need to develop a workforce for new and emerging careers, including drone pilots, cybersecurity professionals, and commercial space transportation engineers.

We need to partner with labor, industry, and academia to address these issues which will be critical to ensuring that we maintain our leadership.

Mr. Chairman, I look forward to hearing from the witnesses today.

Mr. LARSEN. I would note for the record the ranking member's comments about my desire to fly were apocryphal at best, and folks can look up the word "apocryphal" for the definition.

With that, I will now recognize the chair of the full committee, Representative DeFazio of Oregon.

You are recognized.

Mr. DEFazio. Thanks, Mr. Chairman. Thanks for holding this hearing.

I think it is perhaps the first time the committee has addressed this issue through a full hearing, just like last year for the first time we heard from the exploited and underpaid service workers at the airports.

I mean, these are things that need to be exposed, and they need to be resolved, and they can be resolved.

You mentioned a number of the provisions in the 2018 FAA authorization, which should help. We are seeing some progress on the industry side, more by some airlines than others, but we want to certainly encourage that.

The numbers are miserable. Over 50 percent of the population is female; 7 percent are commercial pilots and 2.4 percent are aircraft mechanics. Thirteen percent of the population is Black; 3.4 percent are commercial pilots. Eighteen percent of the population is Latino/Hispanic; 5 percent are commercial pilots. Asians are 6 percent of the population; 2 percent are commercial pilots.

We need to meaningfully deal with these issues, and as was noted by both speakers, we need more talented people in this industry. We need them both onboard as pilots, but we also need people on the ground as mechanics; great-paying jobs that do not require as significant of an investment in education as becoming a pilot.

We have noted before that there is a substantial barrier to becoming a pilot, and that is the extraordinary cost of the education and the training that is necessary.

There are some who say, "Well, maybe we should roll back the 1,500-hour rule to lessen the cost." And I do not believe that is prudent, and I would not support that.

I fought for many years, starting in the 1990s, on the hours of training for commercial pilots and noted for many years it took many more hours to become a hairdresser in Oregon, 600, as opposed to I think it was 250 or 350 for a second seat on the plane. And we saw the horrible results in Colgan Air, and we finally got those changes done.

Finding ways to reduce these barriers to induce young people—for mechanics, a lot of young people are not aware about what a great trade it would be and how they will be earning way more shortly after they finish their apprenticeships than their friends who go on to a 4-year college with many degrees.

So there are great opportunities out there. I will not repeat the things in the 2018 bill that the chairman talked about. I am looking forward to hearing from the witnesses on their ideas for solutions today.

Thank you, Mr. Chairman.

[Mr. DeFazio's prepared statement follows:]

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**Prepared Statement of Hon. Peter A. DeFazio, a Representative in Congress from the State of Oregon, and Chair, Committee on Transportation and Infrastructure**

Thank you, Chair Larsen, for calling today's hearing on the need to improve the diversity of the aviation industry's workforce.

Unfortunately, we're still a long way from attaining true equality for all in this country. And while the federal government and many industries in the private sector have improved the diversity of their respective worker bases, the aviation industry has not. When you look at the data, you have the sense that the aviation industry is still taking the first step to achieve a workforce that reflects the racial, ethnic, and gender identification composition of the country as a whole.

More than half of the U.S. population—50.8 percent—is female, according to the latest Census data. Yet only 2.4 percent of aircraft mechanics and just 7 percent of commercial pilots are women.

On the subject of pilots, we have two witnesses today representing the Latino Pilots Association and the Organization of Black Aerospace Professionals. So let's look at the pilot profession specifically.

More than 13 percent of the U.S. population is Black. Yet only 3.4 percent of commercial pilots are Black.

More than 18 percent of the population is Latino or Hispanic. Percentage of Latino or Hispanic commercial pilots: 5.

Six percent of the population is Asian. Two percent of commercial pilots are.

Kids who are growing up in socioeconomically disadvantaged families—of all races and ethnicities—also face an undeniable financial barrier, especially to professions like pilots. If you graduate from high school and decide to pursue a four-year aviation-related degree at a private university and obtain your progressive pilot licenses at the same time, you might well rack up \$150,000 to \$250,000 in debt. That's not an appealing proposition for anyone, especially one entering a profession where starting pay has historically been as low as \$18,000 per year—although most regional carriers have done the right thing and increased pilots' starting pay to more sustainable levels in recent years.

This committee does not have jurisdiction over matters like student loans, but I will say this: There is no universe in which I would advocate for rolling back the stringent pilot training rules enacted in 2010 to solve a problem—pilot supply—that doesn't relate to safety, even one as serious as the problem we're discussing today. There are other ways to address that issue, and if anyone suggests we should chip away at safety rules regarding training to address a workforce issue, they're sorely mistaken and will find no reception with me for those views.

Although the representation of minority groups within the pilot and other aviation professions have improved over the years, the disparity couldn't be more apparent. Nonetheless, Congress, the Executive Branch, and the industry itself has recognized the problem, and work to address it is underway.

For example:

- Pursuant to Congressional mandates that we included in the 2018 FAA reauthorization bill, the FAA and DOT have created two expert panels: one to improve youth access to aviation through high school technical programs, and the other to promote organizations that recruit and mentor women in new aviation industry jobs.
- In the same legislation, we authorized two programs in which the FAA will provide grants, totaling \$10 million per year in the aggregate, to support the training and recruitment of new mechanics and pilots.
- Three FAA offices and steering committees provide additional support for the recruitment and training of a future aviation workforce that reflects the diversity of the country.
- In April 2021, one of the biggest four U.S. carriers committed to ensuring that at least half of an anticipated 5,000 pilot candidates will be women and people from underrepresented communities. The airline also pledged \$1.2 million in scholarships to help address financial barriers to the airline pilot career path for students.
- Another of the Big 4 carriers is providing \$350,000 in grants to nine aviation high schools around the country, many of which serve racially and socioeconomically diverse students, as part of an effort to hire 2,000 new mechanics over the next decade.
- Since 2019, an aerospace industry trade group has funded \$120,000 in grants to schools in low-income communities and connected more than 80,000 students with rocketry and aerospace career mentors. Further grants totaling \$50,000 are expected to be disbursed to schools in underserved communities next year through this initiative.
- Last August, an aviation maintenance and repair company created a program at schools located near its repair stations to demonstrate how students can learn skills leading to multiple career paths at the company, hopefully with the outcome of diversifying the aviation maintenance workforce.

But this is clearly not enough. The aviation industry and the FAA, with respect to its own workforce, must embrace a “diversity culture” with the same commitment that led to the top-down adoption of strong safety cultures that reduced the rate of fatal U.S. air carrier accidents from two, sometimes four, per year in the 1990s to just two in the last 12 years. Diversity must be a value embraced and lived every day by everyone, starting at the top with CEOs and other leadership.

I look forward to hearing from our witnesses about what this committee can do to energize further commitment to diversity among private-sector aviation employers, as well as ensure that the FAA’s attention to the public interest in a diverse aviation workforce is not redirected.

Mr. LARSEN. Thank you, Mr. Chair.

And I now will go to the witnesses on today’s panel. I am going to introduce each one as they testify.

First will be Dr. Rebecca Lutte, associate professor, Aviation Institute, University of Nebraska at Omaha. You are recognized for 5 minutes.

And without objection our witnesses’ full statements will be included in the record.

Dr. Lutte, you are recognized for 5 minutes.

**TESTIMONY OF REBECCA LUTTE, Ph.D., CFII, MEI, ASSOCIATE PROFESSOR, AVIATION INSTITUTE, UNIVERSITY OF NEBRASKA AT OMAHA; CLAUDIA ZAPATA-CARDONE, EXECUTIVE DIRECTOR OF COMMUNITY RELATIONS AND OUTREACH, LATINO PILOTS ASSOCIATION; ICEMA D. GIBBS, VICE PRESIDENT OF CORPORATE SOCIAL RESPONSIBILITY AND DIVERSITY, EQUITY, AND INCLUSION, JETBLUE AIRWAYS; JOEL WEBLEY, CHAIRMAN, BOARD OF DIRECTORS, ORGANIZATION OF BLACK AEROSPACE PROFESSIONALS; AND KYLE J. KAISER, PRESIDENT, VIPER TRANSITIONS**

Ms. LUTTE. Thank you.

Chairman Larsen, Ranking Member Graves, and members of the subcommittee, thank you for the opportunity to address the subcommittee to discuss developing a diverse aviation workforce.

I am an associate professor at the University of Nebraska at Omaha Aviation Institute and serve on the FAA’s Women in Aviation Advisory Board. I am here speaking for myself as an aviation professional with research experience in aviation workforce and diversity.

My primary area of research is women in aviation.

It is essential for the future of the aviation industry that we have broad representation within our workforce. A diverse representation of thought results in enhanced safety, innovation, and profitability.

In addition, to meet the workforce needs of the future, we simply must target a wider talent pool. The goal is to recruit and retain the highest level of talent for the future of the industry.

Many groups remain significantly underrepresented in aviation. Overall women make up less than 20 percent of the aviation workforce in most occupations. The largest gender gaps continue to be in the areas of senior leadership positions, professional pilots, and maintenance technicians.

Only approximately 5 percent of airline pilots are women.

Women in maintenance represent one of the greatest gender gaps in the industry at 2.5 percent.

Further, the workforce in many aviation occupations lacks ethnic and racial diversity. For example, BLS data indicate the pilot population is 94 percent White, 3.4 percent Black or African American, 5 percent Hispanic or Latino, and 2.2 percent Asian.

It is especially important to note that many of these numbers have changed very little over many years, and this brings me to my first recommendation.

We must have better data on the numbers of women and underrepresented groups within aviation. What gets measured gets done. Establishing a comprehensive system of tracking data and reporting on trends is the only way to verify the diversity investments and efforts are working.

As a minimum, the FAA should expand the data published for airman certification to include race and ethnicity.

To increase the number of women in aviation, we need to address the barriers. Research has shown that barriers include a need for increased emphasis on youth outreach; lack of women in leadership positions; the high cost of entry, particularly for flight training; difficulties in balancing the demands of family and work; and negative culture to include gender bias and sexual harassment.

Recommendations to address these barriers include formal mentorship and sponsorship programs, increased access to financial aid for students, and family-friendly policies, such as paid family leave.

The last barrier to discuss is perhaps the hardest to tackle. The evidence is clear that culture is a deterrent that hinders the ability to recruit, advance, and retain women in aviation.

Changing culture requires a change to the overall system. That includes looking at artifacts of culture like language, uniform, and representation in images.

And in addition, to change the environment, underrepresented groups must be part of decisionmaking and considered for leadership positions.

And lastly, there needs to be more effective education and awareness of the existence of bias and harassment and methods to address it.

I have talked about the significant gap of underrepresented groups in aviation, some of the barriers, and some recommendations, but let me end on an encouraging note.

In my over 30 years in aviation, I have never seen so much momentum behind efforts to broaden representation in our industry. We have seen strong initiatives from industry, like the United Aviate Academy. We have best practices for aviation outreach to underrepresented groups, such as Women in Aviation's Girls in Aviation Day, and the many youth programs at the Organization of Black Aerospace Professionals.

And perhaps one of the best indicators is the FAA's Women in Aviation Advisory Board. The final report of this board is targeted for release in the first quarter of 2022. It represents many hours of work by industry leaders to identify bold recommendations to meet the goal of creating broader representation for the future success of aviation.

I encourage you to carefully review that report when completed.

I will leave you with the following thought. Every system is perfectly designed to give us the results that we get. If we want increased representation in our aviation workforce, it is time to change the system.

Thank you for your time.

[Ms. Lutte's prepared statement follows:]

**Prepared Statement of Rebecca Lutte, Ph.D., CFII, MEI, Associate Professor, Aviation Institute, University of Nebraska at Omaha**

Chairman Larsen, Ranking Member Graves, and members of the Subcommittee, thank you for the opportunity to address the Subcommittee to discuss developing a diverse aviation workforce.

My name is Becky Lutte, PhD, CFII, MEI. I am an Associate Professor at the Aviation Institute at the University of Nebraska at Omaha. I also serve on the FAA's Women in Aviation Advisory Board. I am here speaking for myself as an aviation professional with research experience in aviation workforce and diversity. My primary area of research is women in aviation.

It is essential for the future of the aviation industry that we have broad representation within our workforce. A diverse representation of thought results in enhanced safety, innovation, and profitability. In addition, to meet the workforce needs for the future we simply must target a wider talent pool. The Boeing forecast<sup>1</sup> predicts a need for 763,000 new civilian pilots, 739,000 new maintenance technicians, and 903,000 new cabin crew members worldwide over the next 20 years. Workforce demand remains a concern today, even given the impact of the pandemic on the industry. As noted by CAE, the fundamental factors impacting pilot demand prior to the pandemic have not changed. Those factors include an aging workforce and anticipated growth including an additional 11,000 corporate and business aircraft worldwide in the next 10 years<sup>2</sup> and over 43,000 new commercial aircraft worldwide over the next 20 years<sup>3</sup>. The goal remains the same, to recruit and retain the highest level of talent for the future of the industry.

DATA ON UNDERREPRESENTED GROUPS IN AVIATION

Many groups remain significantly underrepresented in aviation. Overall women make up less than 20% of the workforce in most aviation occupations (see Table 1). The largest gender gaps continue to be in the areas of senior leadership positions, professional pilots, and maintenance technicians. Only approximately 5% of airline pilots are women. Women in maintenance represent one of the greatest gender gaps in the entire industry at 2.5%. By comparison, women represent 26% of people working in STEM fields globally.<sup>4</sup>

TABLE 1: WOMEN IN THE AVIATION WORKFORCE<sup>5</sup>

	Aviation Occupation	% Women
< 10%	Maintenance technicians .....	2.5%
	Airline executives (CEO, COO) .....	3.0%
	Air Transport Pilots .....	4.6%
	Total Pilots .....	7.9%

<sup>1</sup> Boeing Pilot and Technician Outlook 2020–2039. <https://www.boeing.com/commercial/market/pilot-technician-outlook/>

<sup>2</sup> CAE Pilot Demand Outlook 2020. <https://www.cae.com/cae-pilot-demand-outlook-2020/>

<sup>3</sup> Boeing Commercial Market Outlook 2020–2039. <https://www.boeing.com/commercial/market/commercial-market-outlook/>

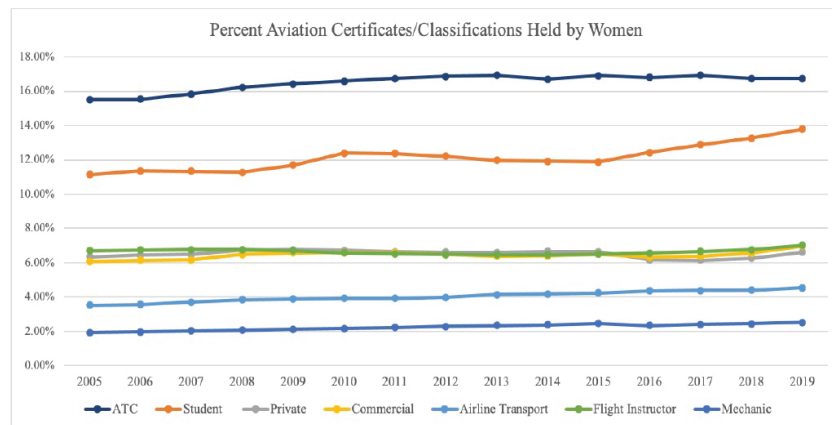
<sup>4</sup> Korn Ferry. (2020). IAWA Soaring through the glass ceiling. <https://www.kornferry.com/content/dam/kornferry/docs/pdfs/aviation-glass-ceiling.pdf>

<sup>5</sup> Lutte, R. Women in Aviation Workforce Report 2021 edition (anticipated publication Fall 2021).

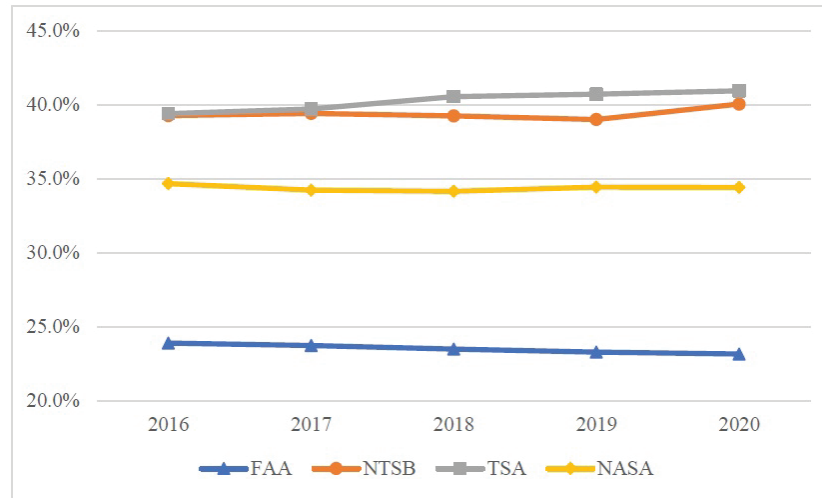
	Aviation Occupation	% Women
10%–20%	Aerospace engineers .....	11.6%
	Aviation higher education faculty .....	15.6%
	Airport managers .....	16.7%
	Air traffic controllers .....	16.8%
	Aerospace and defense CEOs (US) .....	19%
	Dispatchers .....	19.4%
21% >	Flight attendants .....	79.2%
	Travel agents .....	79.5%

It is especially important to note that in many occupation areas, the number of women in aviation has changed very little over the years. As Figure 1 shows, many classifications of women in aviation have changed by only about a percentage point or less in the last 15 years. As the table shows, the percentage of women student pilots for 2019 was 13.8%. By comparison, the percentage of women private pilots was 6.63% with an increase over the last 15 years of only .28%. The concern is the lack of converting women student pilots to private pilots and the implications for the future pipeline. An additional indication of women in the aviation workforce is provided in Figure 2. Again, you can see relatively little change in the percentage of women employed in aviation related government organizations.

FIGURE 1: WOMEN IN AVIATION WORKFORCE TIMELINE <sup>6</sup>



<sup>6</sup>Lutte, R. Women in Aviation Workforce Report 2021 edition (anticipated publication Fall 2021).

FIGURE 2: WOMEN IN AVIATION GOVERNMENT WORKFORCE <sup>7</sup>

Further, the workforce in many aviation occupations lacks ethnic and racial diversity. Table 2 provides additional data on underrepresented groups in aviation. This data is developed from the Bureau of Labor Statistics (BLS) Current Population Survey (CPS) data but is only available for a limited number of occupational areas in aviation. Figure 3 also provides an example of timeline data broken down by race and ethnicity for the occupational area of pilots and flight engineers as noted in the BLS CPS. You can see greater variation in this graph, but it still shows consistent underrepresentation with relatively small overall changes. A more accurate indicator could be gained if FAA airman certification data were also listed by race and ethnicity.

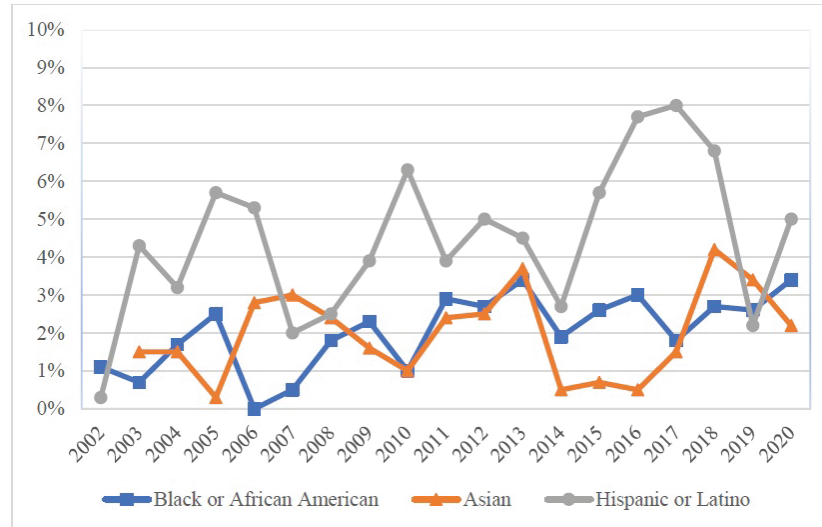
TABLE 2: AVIATION WORKFORCE: UNDERREPRESENTED GROUPS

Occupation	Total Employed	% White	% Black or African American	% Asian	% Hispanic or Latino
Pilots .....	155,000	94%	3.4%	2.2%	5%
Maintenance Technicians .....	153,000	84.3%	10.8%	3.2%	23%
Aerospace Engineers .....	129,000	83.3%	6.8%	9.1%	10.5%
Flight Attendants .....	81,000	65%	19.3%	10.6%	10.3%

<sup>7</sup>Lutte, R. Women in Aviation Workforce Report 2021 edition (anticipated publication Fall 2021).



FIGURE 3: AIRCRAFT PILOTS AND FLIGHT ENGINEERS WORKFORCE TIMELINE



This brings me to my first recommendation. We simply don't have great data on the number of women and underrepresented groups within aviation. What gets measured gets done. Establishing a comprehensive system of tracking data and reporting on trends is the only way to verify that diversity investments and efforts are working. While the FAA publishes airman certification data, which is a great source of information, the data is currently provided for gender but cannot be broken down by race or ethnicity. We need a good indication of not only women in aviation but women who also belong to additional underrepresented groups. As an example, we don't have good data on black women pilots or maintenance technicians from the FAA certification database. However, Sisters of the Skies reports that the number of professional black women pilots are less than  $\frac{1}{2}$  of 1% of total professional pilots.<sup>8</sup>

Industry should publish data on their workforce broken down by gender, race and ethnicity, and occupation level so that we better understand the number of members of underrepresented groups employed and in leadership positions. One best practice example of this is Boeing's recent move to publicly display on their website their workforce data along with a message from leadership acknowledging the efforts to do more.<sup>9</sup> As stated in a recent Harvard Business Review article, if a company doesn't track representation, the company isn't serious about gender equity.<sup>10</sup>

#### WOMEN IN AVIATION: BARRIERS TO RECRUITMENT AND RETENTION AND RECOMMENDATIONS TO ADDRESS THEM

To increase the number of women in aviation we need to address barriers. Research has shown that the barriers include:

- need for additional outreach
- lack of women in leadership positions
- need for leadership commitment to diversity and inclusion
- cost of entry, particularly for flight training
- family and work balance
- navigating the workplace culture including gender bias and sexual harassment

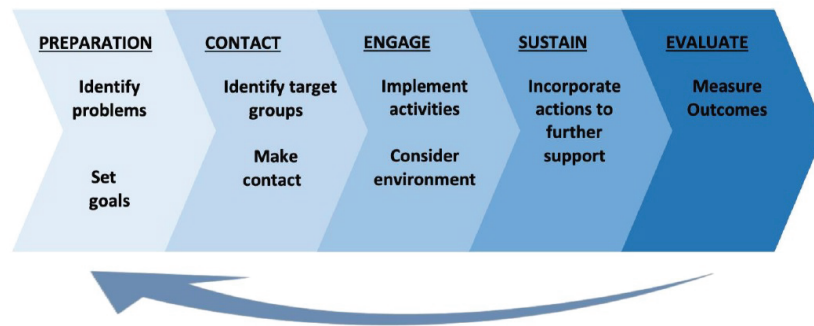
<sup>8</sup> Sisters of the Skies. <https://www.sistersoftheskies.org/>

<sup>9</sup> Boeing 2021 Global Equity, Diversity, & Inclusion Report. <https://www.boeing.com/principles/diversity-and-inclusion/annual-report/>

<sup>10</sup> Kersey, A. Women at Work. Harvard Business Review. [https://m.a.email.hbr.org/rest/head/mirrorPage/@Cc\\_7lkxsfMcI-wgTzP5zqwKkVfnCNi4tZO6ipfi\\_p2PqTN8NTWQkfvVIZnSG8yupg520tJsp3ymhp3FrwUmqPG7UrMiQgtsQAW20D-x\\_gVL\\_11Yu.html?deliveryName=DM138446](https://m.a.email.hbr.org/rest/head/mirrorPage/@Cc_7lkxsfMcI-wgTzP5zqwKkVfnCNi4tZO6ipfi_p2PqTN8NTWQkfvVIZnSG8yupg520tJsp3ymhp3FrwUmqPG7UrMiQgtsQAW20D-x_gVL_11Yu.html?deliveryName=DM138446)

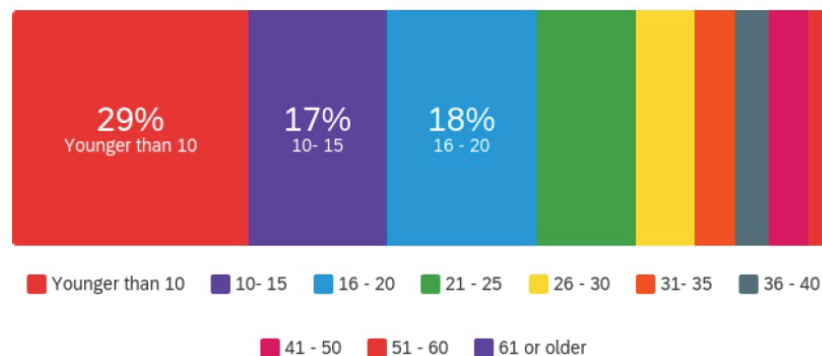
As an industry we need to continue efforts for youth outreach to recruit the next generation of aviation professionals. Key elements for successful outreach programs include preparation and preplanning, identifying target groups and initiating contact, implementing the activity, providing next steps to sustain the momentum, and conducting an evaluation. These steps are depicted in Figure 4. Particularly for underrepresented groups, outreach should also include a “see it, be it” element. It is essential that youth outreach include broad representation of aviation professionals so that the next generation will see people that they identify with who are in aviation occupations.

FIGURE 4: MODEL OF AVIATION OUTREACH <sup>11</sup>



Another key element is targeting the right age group. A survey by the Experimental Aircraft Association (EAA), revealed that women in aviation were first introduced to aviation most often at the age group of younger than 10 (Figure 5). A total of 64% were introduced to aviation at the age of 20 or younger. Clearly youth outreach at an early age is essential. Some excellent examples of youth outreach include the EAA Young Eagles program and the AOPA aviation high school STEM curriculum. Standout examples of youth outreach targeting underrepresented groups include Women in Aviation Girls in Aviation Day and the many youth programs at the Organization of Black Aerospace Professionals (OBAP) including their latest Girls Launch program.

FIGURE 5: SURVEY OF WOMEN IN AVIATION: AGE FIRST BECAME INTERESTED IN AVIATION <sup>12</sup>



<sup>11</sup> Lutte, R. (2018). Aviation outreach model and gap analysis: Examining solutions to address workforce shortages. Collegiate Aviation Review International. <https://ojs.library.okstate.edu/osu/index.php/CARI/article/view/7428>

<sup>12</sup> EAA. Women Soar Survey.

In the International Aviation Women's Association (IAWA) Soaring Through the Glass Ceiling study, the two most important enablers for the advancement of women in aviation were identified as having more women role models in leadership and ensuring a strong and visible commitment to diversity and inclusion from leadership.<sup>13</sup> To address the lack of women in leadership positions the industry needs additional formal mentorship and sponsorship programs. This will provide an opportunity to identify top talent to promote more members of underrepresented groups into leadership positions.

Cost of entry to the profession has been shown to be an additional barrier. As an example, for someone pursuing a professional flight degree at a university program, the flight training costs can increase the total cost to the student by anywhere from \$50,000 to \$80,000 depending on the program. Recommendations to address this challenge include increasing access to financial aid for students so that it not only covers the current costs of tuition and fees but also covers the additional costs associated with aviation specific training such as flight or maintenance training. Scholarships assist in addressing the cost barrier. Organizations such as Women in Aviation International (WAI) and OBAP provide essential scholarship opportunities. This year WAI will award over \$450,000 in scholarships and the organization has provided a total of over \$14.5 million in scholarships.

A clear challenge for women in aviation has been family and work balance. In a survey of women in aviation, 38% of the women surveyed indicated that they had considered leaving the aviation industry.<sup>14</sup> The top reason given for considering leaving was poor family and work balance, followed by negative culture. The industry needs family friendly policies, such as paid parental leave, to address these challenges.

The last barrier to discuss is perhaps the hardest to tackle. The evidence is clear that negative workplace culture, to include gender bias and sexual harassment, is a deterrent to the ability to recruit and retain women in aviation. This is supported by multiple studies. For example, in an open-ended survey question of women in aviation, when women were asked about the greatest challenge/barrier experienced in their careers, the most often given response was related to a negative workplace culture.<sup>15</sup> In the IAWA Soaring Through the Glass Ceiling study, 40% of women surveyed felt their voices were not heard and 2/3 felt like they were treated differently because of their gender.<sup>16</sup> This is also consistent with the broader field of tech. According to a study by Accenture on women in tech, poor company culture was the number one cause for women leaving their jobs.<sup>17</sup> In order to change culture, we need to change the system. That includes looking at artifacts of culture such as language, uniforms, and representation (images) in materials. A recommended guide to changing language in aviation has been provided in the FAA Drone Advisory Committee ebook (June 23, 2021).<sup>18</sup> In addition to the artifacts of culture, to change the environment we need more members of underrepresented groups in decision making and leadership positions. And lastly, there needs to be more effective education and awareness of the existence of bias and harassment and methods to address it. Changing culture also requires clear and visible commitment from leadership within the industry that all will be respected, and anything less will not be tolerated.

I've talked about the significant gap of underrepresented groups in aviation, some of the barriers, and some suggested recommendations. Let me end on an encouraging note. In my over 30 years in aviation, I have never seen so much momentum behind efforts to broaden representation in our industry. We have seen strong initiatives from industry like the United Aviate Academy program. We have best practices for aviation outreach to underrepresented groups such as Women in Aviation Girls in Aviation Day, and the many youth programs at the Organization of Black

<sup>13</sup> Korn Ferry. (2020). IAWA Soaring through the glass ceiling. <https://www.kornferry.com/content/dam/kornferry/docs/pdfs/aviation-glass-ceiling.pdf>

<sup>14</sup> Lutte, R. Women in Aviation Survey results. [https://www.researchgate.net/publication/342397027\\_WAI\\_Conference\\_2020\\_Lutte\\_Presentation\\_of\\_Women\\_in\\_Aviation\\_Survey\\_Results](https://www.researchgate.net/publication/342397027_WAI_Conference_2020_Lutte_Presentation_of_Women_in_Aviation_Survey_Results)

<sup>15</sup> Lutte, R. Women in Aviation Survey results. [https://www.researchgate.net/publication/342397027\\_WAI\\_Conference\\_2020\\_Lutte\\_Presentation\\_of\\_Women\\_in\\_Aviation\\_Survey\\_Results](https://www.researchgate.net/publication/342397027_WAI_Conference_2020_Lutte_Presentation_of_Women_in_Aviation_Survey_Results)

<sup>16</sup> Korn Ferry. (2020). IAWA Soaring through the glass ceiling. <https://www.kornferry.com/content/dam/kornferry/docs/pdfs/aviation-glass-ceiling.pdf>

<sup>17</sup> Accenture. (2020) Resetting tech culture: 5 strategies to keep women in tech. [https://www.accenture.com/\\_acnmedia/PDF-134/Accenture-A4-GWC-Report-Final1.pdf#zoom=50](https://www.accenture.com/_acnmedia/PDF-134/Accenture-A4-GWC-Report-Final1.pdf#zoom=50)

<sup>18</sup> FAA Drone Advisory Committee Public eBook June 23, 2021. [https://www.faa.gov/uas/programs\\_partnerships/drone\\_advisory\\_committee/media/DAC\\_Public\\_eBook\\_06\\_23\\_2021.pdf](https://www.faa.gov/uas/programs_partnerships/drone_advisory_committee/media/DAC_Public_eBook_06_23_2021.pdf)

Aerospace Professionals. Perhaps one of the best indicators is the FAA Women in Aviation Advisory Board. The final report of this board is targeted for release in the first quarter of 2022. It represents many hours of work by industry leaders to identify bold recommendations to meet the goal of creating broader representation for the future success of aviation. I encourage you to carefully review the report when completed. I'll leave you with the following thought, every system is perfectly designed to give us the results that we get. If we want increased representation in our aviation workforce, it's time to change the system. Thank you for your time.

Mr. LARSEN. Thank you, Dr. Lutte.

I now recognize Captain Claudia Zapata-Cardone, the executive director of community relations and outreach, Latino Pilots Association.

You are recognized for 5 minutes.

Ms. ZAPATA-CARDONE. Good morning. Thank you, Chair Larsen, Ranking Member Graves, and members of the subcommittee. It is an honor to appear before you today.

My name is Claudia Zapata-Cardone, and I am a proud Latina pilot, a daughter of Colombian immigrants, and a union member.

I am proud to fly for United Airlines as a captain on the Airbus 320.

As someone who had a dream, I am grateful for the opportunity to discuss with you today the importance of breaking down barriers and creating opportunities for all those who dream of flying because that is what we need to do if we want to guarantee a strong, robust, and highly trained pilot workforce, while also maintaining the safest air transportation system in the world.

When I was growing up, my father worked at the airport, and we would bring him dinner almost every night. I remember thinking how magical it must be to fly an airplane.

My parents faced a lot of hardships along the way, each parent often working two jobs in order to support our family, but they were determined to chase their American dream.

Looking at those airplanes every night, I did not think that being a pilot was an option because I had never seen a pilot that looked like me, but the older I got, the more determined I was, and because of the work ethic instilled in me by my parents, I rolled up my sleeves and began the process that ultimately led me here today.

I feel like I have achieved something beyond what my parents could have ever imagined, which is why I am committed to creating a more diverse and inclusive aviation workforce, while also ensuring that the United States continues to remain the global leader in aviation safety.

Currently I serve as executive director for community relations with the Latino Pilots Association. In addition, I am a proud, dues-paying member of the Air Line Pilots Association, the world's largest pilot union.

Together, our outreach efforts are connecting with Latinx students from around the country to educate and demonstrate the amazing benefits of being an airline pilot. It is important that more people who look like me are able to access this profession and that we tap into the currently underrepresented pool of potential airline pilots to ensure a healthy and robust pipeline in the future.

LPA and ALPA are committed to changing what the pilot community looks like while maintaining current safety standards.

There are several steps policymakers can take to ensure we have an adequate supply of pilots, break down barriers, and help foster a more diverse and inclusive aviation workforce that reflects the communities and customers our industry serves.

Chair Larsen, thank you for your leadership in sponsoring the bipartisan Promoting Service in Transportation Act to help attract the next generation of transportation professionals while creating a more diverse workforce.

And the subcommittee's inclusion of the Women in Aviation provision as part of the FAA reauthorization in 2018 is producing meaningful benefits to expand opportunities for women in our field.

Other ways Congress can help this mission is to align Federal funding support for the education required to become an airline pilot with that of other highly skilled professions. Authorizing and increasing Federal educational aid programs, such as the Pell grant program, would help provide financial assistance to students following 2- and 4-year degree programs at post-secondary higher education institutions in order to cover the cost of aviation training.

Additionally, we should expand opportunities for those who fought for our country to use their GI bill to help cover the cost of 2- and 4-year flight training degree programs.

Congress could consider student loan cancellation programs that would allow airline pilots to work for a specific period in exchange for loan forgiveness.

And finally, we should review Government guidelines to increase the number and amounts of subsidized loans available to students for flight training and ensure students who receive unsubsidized loans do not accrue interest on the loans while in school.

Currently there are severe economic disincentives for pilots considering employment at regional airlines, which serve as a main avenue for individuals to enter the profession. It is important that we improve this entry point to the piloting career while maintaining the first officer qualification requirements that have helped make U.S. air transportation the safest mode of transportation in the world.

I believe we can and must do more as a Nation to open the doors of opportunity for those currently underrepresented in the piloting profession and maintain the highest safety standards in the world.

Thank you.

[Ms. Zapata-Cardone's prepared statement follows:]

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**Prepared Statement of Claudia Zapata-Cardone, Executive Director of  
Community Relations and Outreach, Latino Pilots Association**

On behalf of the Latino Pilots Association (LPA), I want to thank you, Chairman Larsen, Ranking Member Graves, and members of the subcommittee for inviting me to appear before you today. My name is Claudia Zapata-Cardone and I am a proud Latina pilot, daughter of Colombian immigrants, and a union member. I am also an Airbus A320 captain flying for United Airlines. As someone who had a dream, I am grateful for the opportunity to discuss with you today the importance of breaking down barriers and creating opportunities for all those who dream of flying. Because that's what we need to do if we want to guarantee a continued strong, robust, and highly trained pilot workforce while also maintaining the safest air transportation system in the world.

When I was growing up, my father worked at the airport and we would bring him dinner almost every night. I remember thinking how magical it must be to fly an airplane. My parents faced a lot of hardships along the way, often working two jobs in order to support our family, but they were determined to chase their American dream.

Looking at those airplanes every night, I didn't think that being a pilot was an option because I had never seen a pilot who looked like me. But the older I got, the more determined I was. And because of the work ethic instilled in me by my parents, I rolled up my sleeves and began the process that ultimately led me here today.

I feel like I've achieved something beyond what my parents could have ever imagined, which is why I am committed to creating a more diverse and inclusive aviation workforce, while also ensuring that the United States continues to remain the global leader in aviation safety. Currently, I serve as executive director for Community Relations with the LPA. And, I am a proud, dues-paying member of the Air Line Pilots Association, the world's largest pilot union. Together, our outreach efforts are connecting with Latinx students from around the country to educate and demonstrate the amazing benefits of being an airline pilot.

It is important that more people who look and sound like me are able to access this profession. It's important that we tap into the currently underrepresented pool of potential airline pilots to ensure a healthy and robust pilot pipeline in the future. LPA and ALPA are one hundred percent committed to changing what the pilot community looks like while maintaining current safety standards.

According to 2020 data from the Bureau of Labor Statistics<sup>1</sup>, the racial makeup of our country's pilots is 92% white and 91% male. Last year's figures show less than 3% of U.S. commercial pilots are African Americans, fewer than 7% are Hispanic or Latinx, and a little more than 4% are Asian. Together, we can change this.

There are several steps policy makers can take to ensure we have an adequate supply of pilots, that we break down barriers, and we help foster a more diverse and inclusive aviation workforce that reflects the communities and customers our industry serves. Chairman Larsen, thank you for your leadership in sponsoring the bipartisan Promoting Service in Transportation Act to help spread the gospel about careers in transportation to create a more diverse workforce. And this subcommittee's inclusion of the Women In Aviation provision as part of the FAA reauthorization in 2018 is producing meaningful benefits to expand opportunities for women in our field.

Other ways Congress can help this collective mission is to align federal funding support for the education required to become an airline pilot with that of other highly skilled professions.

- Authorizing and increasing federal educational aid programs such as the Pell Grant Program would help provide financial assistance to students following two- and four-year degree programs at post-secondary higher education institutions in order to cover the costs of aviation flight training.
- Additionally, we should expand opportunities for those who fought for our country to use their GI Bill to help cover the cost of two- and four-year flight training degree programs.
- Congress could also consider student loan cancellation programs that would allow airline pilots to work for a specific period in exchange for loan forgiveness.
- And we should review government guidelines to increase the number and amounts of subsidized loans available to students for flight training and ensure students who receive unsubsidized loans do not accrue interest on the loans while in school.

Currently, there are severe economic disincentives for pilots considering employment at regional airlines, which serve as a main avenue for individuals to enter the profession. It's important that we improve this career entry point while maintaining the first officer qualification requirements that have helped make U.S. air transportation the safest mode of transportation in the world.

I believe we can—and must—do more as a nation to open the doors of opportunity for those currently underrepresented in the piloting profession.

Thank you for your continued oversight on this very important topic.

Mr. LARSEN. Thank you very much.

<sup>1</sup> <https://www.bls.gov/cps/cpsaat11.htm>

And now I want to turn to Ms. Icema Gibbs, the vice president of corporate social responsibility and diversity, equity, and inclusion at JetBlue.

Ms. Gibbs, you are recognized for 5 minutes.

Ms. GIBBS. Thank you. Good morning, Chairman Larsen, Ranking Member Graves, and members of the Subcommittee on Aviation. My name is Icema Gibbs, and I am the vice president of corporate social responsibility and diversity, equity, and inclusion for JetBlue.

I am excited to speak to you today about JetBlue's efforts to improve diversity and our recent changes in our recruiting programs, and really, I want to talk about how the aviation community can come together to become more inclusive and more equitable.

As a founding member of JetBlue, I have been with the airline since the very beginning, before we even had planes. This is very personal to me. For almost 22 years, I can honestly say I have often been the only person of color in the room and quite often the only woman at the table.

With your help, we have an opportunity to diversify the aviation workforce to better reflect the U.S. population, our customer base, and the communities we serve.

Two parallel paths will help us in this industry: one, increasing representation and, two, building awareness for aviation careers as early as possible.

One direct way we are able to affect our hiring pipeline is making sure that we are inclusive in that process. Over the past year as we paused hiring during the pandemic, our talent and acquisition team used their time to produce a new interviewing method. It is called Blue Select.

As we reimaged our diversity, equity, and inclusion strategy, we realized we had been using the same interviewing methods for decades. While continuing to focus on our culture, we completely rebuilt the process to reduce unconscious bias and increase diversity in the process.

We are addressing inequities and helping to correct the biases where they exist. We are tackling diversity recruiting in three specific areas: focusing on frontline careers, such as pilots and technicians; creating upward mobility in our support centers; and developing a more diverse slate of officers and directors.

Our goal is to create equity for all and reflect the diverse communities and cultures we serve in all aspects of our airlines. We are prioritizing an investment in our crewmembers who are already passionate about our business and have a stake in our culture and our success.

While we are a diverse organization overall, frontline crewmembers specifically, that dwindles as we progress to each level. Our greatest opportunity for improvement is within the officer and director ranks where racial and ethnic composition have remained stagnant.

Internally, we have developed new pathways to help more frontline crewmembers transition from operational to corporate services roles. These more prescribed pathways will enable a more diverse slate of candidates to be in the talent pool who ideally will grow into leadership roles.

We are creating an inclusive environment where all crewmembers can envision themselves in leadership roles because they actually see people who look like them already in these positions.

And we are holding ourselves accountable. We are trying to double the race and ethnic minority representation of officers and directors from 12.5 percent today to 25 percent and increase representation of women in officer and director levels from 32 percent to 40 percent, and we are trying to do this all by 2025.

Our Gateway suite of programs launched in 2008 helped to ensure pilots find their path at JetBlue and now includes an additional path for internal crewmembers interested in transitioning to careers as technicians.

With our internal programs, we are hoping to alleviate two common barriers: financing and the risk of leaving a permanent job while training full time. We provide a conditional job offer based on the successful completion of these programs.

Our goal is for cost not to be an obstacle for those who are selected into these programs.

Moreover, our Tech Ops apprentice program is an opportunity for well-paying jobs for those who have already completed their training and exams to earn an airframe and powerplant certificate. It is a 12-month training program where apprentices can gain hands-on experience and mentoring while working in the operation.

Upon successful completion, apprentices are offered positions as technicians.

We also work with Aviation High School, which is right in our backyard, right down the street here in Queens, and that school has prepared high school students for becoming aircraft mechanics.

The caveat is Aviation High School is only one of five high schools in the Nation that offer these types of programs.

So, in closing, JetBlue's diversity, equity, and inclusion centers around growth and creating a more inclusive workspace that drives better decisionmaking and innovation.

Thank you.

[Ms. Gibbs' prepared statement follows:]

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**Prepared Statement of Icema D. Gibbs, Vice President of Corporate Social Responsibility and Diversity, Equity, and Inclusion, JetBlue Airways**

OPENING

- Good morning Chairman Larsen, Ranking Member Graves and members of the Subcommittee on Aviation.
- My name is Icema Gibbs, and I'm Vice President Corporate Social Responsibility and Diversity, Equity and Inclusion at JetBlue Airways.
- I am excited to speak today about JetBlue's efforts to improve diversity, our recruiting efforts and how the aviation industry can work together to become more inclusive and equitable.
- As a founding Crewmember of JetBlue, I have been with the airline since the very beginning, before we even had planes.
- This is very personal to me. Over the past 22 years, quite honestly I have often been the only person of color in the room, and many times one of the only women at the table.
- With your help, we have an opportunity to diversify the aviation workforce to better reflect the U.S. population, our customer base and the communities we serve.



- Two parallel paths will help us get there as an industry—(1) increasing representation, and (2) building awareness for aviation careers as early as possible.
- For example, if children see pilots who look like them, then they can dream of becoming a pilot.
- Truth is, aviation is not as well known or as common a career as say law, medicine or education.
- Even small successes with the aviation workforce take time and dedication. After all, it takes a great deal of training to become an airline pilot, and years of training to become an Aircraft Technician, not to mention steep financial commitments.
- One of most proactive ways we can fuel our pipeline is through public-private partnerships and educational initiatives to encourage students to pursue STEM paths as early as possible.
- These programs help expose historically marginalized and underrepresented communities to new career paths and the many possibilities within aviation, early on.

#### SETTING THE STAGE

- *Women in Aviation*—During the last two decades, the number of women involved in the aviation industry has steadily increased and women can be found in nearly every aviation occupation today. However, the numbers are small by comparison.
- *Women pilots, for example, represent only 8.6% of all pilots, and just 4.6% of commercial airline pilots*, per the FAA. These numbers have not noticeably changed in decades.
- *Black People in Aviation*—Only 3.4% of all aircraft pilots are Black per the Bureau of Labor Statistics, even though Black Americans make up 13.4% of the U.S. population.
- *Aircraft Technicians*
  - 5.4% of aircraft technicians are women, per *Women in Aviation*
  - 10.8% are Black
  - 3.2% are Asian
  - 23% are Hispanic or Latinx, per the Bureau of Labor Statistics
- It is clear that these numbers do not align with the overall U.S. population. What's holding our industry back from doing more outreach and trying to be more inclusive? When we don't, by the time many become aware of careers in aviation, it is often too late or financial resources are a barrier.
- At JetBlue, we are starting from within. Our internal programs create access and exposure to well-paying jobs and encourage people from diverse educational and socio-economic backgrounds, providing access to higher paying jobs.
- This is one way that we're making these jobs more accessible to a greater talent pool, which will help us shore up our pilot and technician ranks as we potentially face a challenge with supply in the coming years.

#### OUR HIRING PROCESS

- One direct way we are able to affect our pipeline is through our hiring process. Over the past year, as we paused hiring during the pandemic, our Talent Acquisition team used the time to create a new method of interviewing called *BlueSelect*.
- At JetBlue, we have always prioritized hiring new crewmembers who add to our Company's Culture because we know it's our crewmembers who make the difference and deliver the award-winning JetBlue experience to customers every day.
- As we reimagined our diversity, equity and inclusion strategy, we realized we had been using the same interviewing method for decades. While continuing to focus on culture add, we completely rebuilt this process to reduce unconscious biases, and increase diversity in the process.
- We're addressing inequities and helping to correct biases where they exist, starting from within.
- We are tackling diversity recruiting in three specific areas:
  - focusing on frontline careers such as Pilots and Technicians,
  - creating upward mobility within our Support Centers (Corporate offices), and
  - developing a more diverse slate of Officers and Directors
- Our goal is to create equity for all and reflect the diverse communities and cultures we serve in all aspects of our airline.
- We're prioritizing an investment in our Crewmembers who are already passionate about our business and have a stake in our culture and success.

## LEADERSHIP DEVELOPMENT/CORPORATE SERVICES ROLES

- While we are a diverse organization overall, our frontline crewmember population is quite diverse but that dwindles at each progressive level.
- Our greatest opportunity for improvement is within the Officer and Director ranks where the racial/ethnic composition has remained stagnant.
- Internally, we developed new pathways to help more frontline crewmembers transition from operational to corporate services roles. These more prescribed paths enable a more diverse slate of candidates to be in the talent pool who ideally grow into leadership roles.
- We're creating an inclusive environment where all crewmembers can envision themselves in leadership roles, because they see people that look like them and with shared experiences already in these positions.
- We are holding ourselves accountable to meet our commitments including:
  - Doubling race and ethnic minority representation at the Officer and Director level, from 12.5 percent today to 25 percent by the end of 2025
  - Increasing representation of women at the Officer and Director level, from 32 percent today to 40 percent by the end of 2025.

## OUR GATEWAY PATHWAY PROGRAMS

- Our Gateway suite of programs launched in 2008 to help aspiring pilots find their path to JetBlue, and now includes an additional path for internal crewmembers interested in transitioning to careers as Technicians.
- We're building a diverse pipeline within JetBlue to fly and maintain our aircraft. Our programs open up access for both internal and external candidates.
- Our Gateway programs are making careers in our flight decks and hangars accessible to an even broader array of qualified candidates.
- With our internal programs, we are helping to alleviate two common barriers—financing and the risks of leaving a permanent job while in training full-time. We provide a conditional job offer based on successful completion of these programs.
- Our goal is for cost to not to be an obstacle to those selected to join the program.
- *Gateway College* is our newest path and helps to lessen obstacles to certain careers in aviation, and adds a level of certainty to the process. Gateway College provides a defined and accessible career path for crewmembers to transition into Pilot and Technician roles, with the goal of expanding access to a broader internal talent pipeline. Both flight and tech ops programs include a rigorous selection process, training/education with a partner school, and then an opportunity to build time/experience before joining JetBlue as a Pilot or Technician.
- We worked hard to provide some peace of mind by allowing crewmembers to take a leave of absence for part of the program, and offer access to affordable financing options.
- The overall cost for this program will include tuition, training and learning materials. Federal loans, grants and GI Bill funding are available for eligible candidates, and additional funding options will be available to cover any remaining costs of the program.
- *Gateway Select* is our most diverse pathway. This launched in 2017 for external candidates with no flying experience, but who had the aptitude for a career with JetBlue.
- The first class of First Officers to come from the Gateway Select path began with JetBlue in May 2021.
- Gateway Select's training curriculum takes the best from selection programs used by the U.S. military, provides a comprehensive training program, and applies the safety standards and federal requirements for current pilots.
- The program provides participants with the opportunity to become JetBlue pilots after completing a rigorous four-year training program which encompasses classroom learning, extensive real-world flying experience and instruction in full-flight simulators
- Our *University Gateway Pathway* launched in 2008, and is currently the airline's longest-running pathway program for aviation college students. Our partner schools are of the highest quality and have all met specific criteria to be chosen for our program, one element of which is that the program is accredited by the Aviation Accreditation Board International (AABI).
- Our *Tech Ops Apprentice Program* is an opportunity for well-paying jobs for those who have already completed their training and exams to earn the airframe & powerplant (A&P) certificate. In some cases, the program is even available to those right out of high school who have completed this qualification.

- It's a 12-month training program where apprentices gain hands-on experience in our operation and with our various fleets as well as individual training and mentoring.
- Apprentices receive an equivalent of 2–3 years of industry experience, which will truly gear them up for success.
- Upon successful completion, apprentices are promoted to Technicians.
- This speaks directly to our *Partnership with Vocational Schools such as Aviation High School* right in our backyard of Queens, NY. Aviation High School is a direct feeder into JetBlue.
- It combines career and technical education (CTE) training with rigorous academics in a spirited environment. Students have the opportunity to graduate with a Federal Aviation Administration (FAA) certificate in either airframe or powerplant maintenance in addition to a high school diploma, making them eligible for well-paying jobs, or prepared to move onto college right after high school.
- The caveat, Aviation High School is one of only five high schools across the nation that offer this sort of CTE program.
- This is a direct feeder to our industry's pipeline. If more of these schools were prevalent throughout the country, this alone would be a significant source for diverse candidates. This model should be replicated.

#### FUELING THE PIPELINE AS EARLY AS POSSIBLE

- We are also investing in the future of our industry and forthcoming recruiting with our company-sponsored Foundation.
- The COVID–19 pandemic has severely affected funding for non-profits and education programs.
- The JetBlue Foundation issued a round of rapid response grants to help several STEM and aviation-focused organizations with immediate needs, and support to continue their critical work reaching students, many from underrepresented backgrounds, continue to pursue their STEM paths.
- It's truly a joint effort, and we already collaborate with two great organizations—the *Latino Pilots Association* and the *Organization of Black Aerospace Professionals*.
  - We provide a special grant to the *Latino Pilots Association*, a non-profit, volunteer organization focused on giving back to the Latinx community, to assist with job placement support and access to financial resources for members who were furloughed due to the pandemic.
  - We also have a long-standing relationship with the *Organization of Black Aerospace Professionals (OBAP)*. Each summer, the JetBlue Foundation helps bring several OBAP Aviation Career Education (ACE) summer programs to life, introducing aviation careers to students ages 14–18.

#### CLOSING

- In closing, inclusion and equity improve retention and increase opportunities for well-rounded candidates.
- JetBlue's DEI strategy centers on growth, and a more inclusive workplace that drives better decision-making and innovation.
- We are mobilizing our senior leadership team to help us in creating a more equitable workplace. To ensure our success, some metrics will be tied to compensation and goals for JetBlue's Officers and Directors.
- Progress in this area may seem slow, but it will take time, dedication and resources.
- As an industry, we must work together now, to fuel tomorrow's pipeline.
- Thank you for the opportunity to share JetBlue's views today. I am happy to answer any questions.

Mr. LARSEN. Thank you very much, Ms. Gibbs.

I now turn to Mr. Joel Webley, the chairman of the board of directors of the Organization of Black Aerospace Professionals.

Mr. Webley, you are recognized for 5 minutes.

Mr. WEBLEY. Chairman Larsen, Ranking Member Graves and members of the subcommittee, my name is Joel Webley. I'm chairman of the board of directors for the Organization of Black Aerospace Professionals, and I am honored to appear before you today

on behalf of the more than 2,600 professional members that we represent.

As an organization steeped in 45 years of advocacy and service, OBAP is proud to stand on a foundation that focuses on creating career opportunities in aerospace and aviation for underrepresented communities.

At the core of all we do lies the mission to introduce, educate, and empower Black Americans and other underrepresented communities to create pathways to success through youth programs, young professional mentorship, and career development.

Each year we reach tens of thousands of youth program participants and thousands of aerospace professionals removing barriers to entry and providing access to information that will begin the shift to change the tide of diversity in our industry.

We believe with the support of partners at all levels, we will influence change.

Today the aviation industry is grappling with how best to improve inclusion and diversity. According to the Bureau of Labor Statistics, 93 percent of pilots are White males, and further, less than 5 percent of CEOs and less than 13 percent of top executives are women within the global airline industry.

This year, inclusion is top of mind for many CEOs with a reported 77 percent having a diversity and inclusion strategy or intending to put one in place. The aviation industry strives to address skills gaps for the overall population to become more diverse.

Cultivating diversity and the culture of inclusion is likely to remain a key tenet for a successful organization in the coming years.

Benefits of diversity. Although practicing inclusion and bolstering diversity are good ethical practices, the aviation industry also stands to benefit for boosting its diversity in the following areas: new ideas and perspectives, talent gaps.

New ideas and different perspectives are more likely to build a more well-rounded and diverse workforce. A 2016 Harvard Business Review article states that diverse teams focus on facts, process facts more clearly, and are more innovative.

A more diverse team can lead to a strong defense against groupthink and stale ideas.

Improving the bottom line. According to the Center for Talent Innovation, the companies that can reap a diversity dividend unlock better understanding, underserved demographics, and new areas for service altogether.

Further, McKinsey and Company found in 2019 that companies in the top quartile for diversity outperformed those companies in the fourth quartile by 36 percent in terms of profitability.

How to increase diversity. Aviation organizations and Government can establish many different practices to grow diversity, including measurement. As Dr. Lutte pointed out, many businesses and agencies have made commitments to improve diversity, but there is a large gap in the available data to give decisionmakers a clear picture of where they currently are, as well as updated information on how to understand the effectiveness of diversity initiatives.

As an industry, it is critical that we measure what matters and have a common data set from which to compare progress and make

adjustments. More granular data from organizations such as the Bureau of Labor Statistics, Department of Transportation, Department of Education, and other nongovernmental entities would be extremely helpful.

Other initiatives include promoting the attachment of performance incentives to diversity goals and metrics throughout the industry; introduction of increased mentoring programs; and partnering with schools, for example, minorities are often underrepresented in STEM subjects when obtaining their education.

By working with schools to bring more female, Black, and other minority speakers to campuses, the industry can inspire more underrepresented groups to pursue an education that equips them for the field and ultimately to join the field.

Partnering with special organizations, such as OBAP, organizations can also provide mentorship and training to groups that are underrepresented in aviation, encouraging the next generation to join the industry.

Similarly, organizations such as the Sisters of the Skies, Professional Asian Pilots Association, the Latino Pilots Association, National Gay Pilots Association, and others provide scholarships, mentorships, opportunities, professional conferences, and networking opportunities to help their members.

OBAP truly excels in creating programming that provides tangible value to youth considering aviation careers and to early career professionals looking to take the next step.

It is our sincere hope that the aim of this committee is to create more resource opportunities so that we can continue our important work into the future with Government and other partners.

Thank you for your time, and I welcome any questions.

[Mr. Webley's prepared statement follows:]

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**Prepared Statement of Joel Webley, Chairman, Board of Directors,  
Organization of Black Aerospace Professionals**

CHALLENGES WITHIN THE INDUSTRY

Underrepresented/minority populations are not participating in Aerospace careers commensurate with their white counterparts, particularly in engineering (Illumoka, Milanovic; Grant, 2017), and the aircraft pilot workforce (Ison, Herron, Weiland, 2016). A lack of access to quality career and work opportunities has numerous negative consequences on individuals and thereby their families and communities. According to Ton,

*“Low-wage workers live in a vicious cycle that prevents them from moving up. Many work multiple jobs. The associated stress undermines mental and physical health. Indeed, that stress lowers cognitive functioning, creating a “bandwidth tax” equal to a loss of 13 IQ points. Performance suffers as it is harder to keep up good attendance, focus on the job, be productive, and do your best for customers or coworkers. Unsurprisingly, these workers find it hard to climb the ladder of opportunity that this country has historically provided.” (Ton, 2020).*

Furthermore, a lack of diversity in the aerospace industry only stands to weaken the United States' position of pre-eminence within the field (Geis, J. P., II, Garretson, P. A., 2015). By failing to promote STEM and related disciplines to underrepresented populations.

## OBAP's MISSION

As congress examines the range of solutions to both diversify and support critical staffing needs within the aerospace industry, OBAP has spent 45 years as a partner focused on supporting target populations to those ends.

While there may be varying approaches to the tackling the challenges associated with a lack of diversity within the industry, OBAP approaches the problem by designing interventions based on the following theory of change:

“An individual who is equipped with the skills to identify and begin a career in the aerospace industry, will have better opportunities to improve the quality of life for themselves, their families, and communities.”

At OBAP, we believe that a career in the aerospace industry creates a pathway that can help to significantly reduce the likelihood of individuals experiencing these effects. In a supporting relationship, increasing diversity within an industry has the effect of serving communities and being socially responsible by maintaining a workforce that is reflective of the American society, increasing innovation through a diversity of ideas challenging the status quo, and increasing the return on investment of human capital by reaching out broadly to all communities where talent exists (U.S. Office of Personnel Management, 2020). Our goal is to ensure that individuals in target populations are equipped with the skills to successfully pursue a career in the aerospace industry.

The Aerospace industry continues to grow and provide career opportunities for candidates with the requisite skill sets. Additionally, these careers offer wages that consistently exceed that of national averages (United States Department of Labor, 2020). OBAP endeavors to facilitate aerospace career opportunities to underrepresented populations by providing targeted educational, professional development, and mentoring programs.

Our goals can be summarized as follows:

- To motivate youth to become educationally prepared for life
- To increase the number of underrepresented minorities and women professionals in aerospace and related industry careers
- To advocate for the concerns of our membership and constituencies
- To be at the forefront of crucial conversations that include minorities and women, or lack thereof, in executive leadership positions or on governing boards

Our programmatic model affirms and supports:

- Exposure to aerospace careers can help initiate an individual's desire to pursue a career in the Aerospace industry.
- Aerospace careers require average to above average specialized skills and preparation, which necessitates economic, academic, social, and career support resources.
- Mentoring programs have a net positive impact on personal attitudes, motivation, behaviors, relationships, health, and career outcomes.

## SOLUTIONS

In our opinion, solution sets can be traced to three key areas. By targeting programs to address each of these areas, our nation can better meet the need to fill jobs with competitive professionals who reflect the diversity across the nation.

*Build Awareness*—At OBAP, we activate a network of over 2500 aerospace professionals to participate in school visits on a national level. We inform students about aerospace career tracks, and more importantly illustrate successful pathways.

Awareness building is still a critical first step in addressing the supply problem within workforce development. If target groups are not aware of possible career paths at an age early enough to properly prepare, they will miss key opportunities. The 2021 FAA Workforce Development grant program is a good example of the type of support schools and non-profit organizations need to carry forward this work. Without adequate funding, we stand at risk of large populations within the nation never considering a career in aerospace. Other initiatives such as the Women in Aviation Advisory Board, et. al. are crucial stepping stones to understanding the challenges associated with building awareness of diversity challenges.

*Support Competitive Skill Building*—We've built several programs intended to address each learning phase from Elementary through College and beyond, to provide exposure to aerospace concepts, opportunities to build skills, and connect with mentors to help guide the way.

Once people become aware of career pathways within the industry, attention must shift to ensuring they are equipped with skills that make them competitive employees and leaders. Again, Congress making available funding for students to get the best training available is of paramount importance. As the cost of tuition and

training within our post secondary education system continues to soar, many students will be “priced out” of these career opportunities. This broadly affects under-represented people, as their socio-economic situations tend to result in lower incomes and access to funds.

*Provide Advocacy and Access*—We work hard to form relationships with industry partners to ensure our voice is heard on behalf of our members. Through our partnerships we have opportunities to steer the conversation, and reinforce the positive effects of diversity.

Congress can assist through encouraging and supporting employers and contractors who make diversity a key component to their recruitment and hiring practices. No one, including OBAP, is an advocate of lowering standards. On the contrary we believe by casting a wider net with the intention of seeking out candidates with a broad range of experiences and backgrounds is the best approach to ensuring our industry thrives. Programs and resources that help employers cast this “wide net” can help ensure we see more diversity in the candidates interviewed for positions.

#### SOURCES

Geis, J. P., II, Garretson, P. A. (2015). *An Aerospace Nation* (4th ed., Vol. 9, Winter 2015, pp. 2–17, Rep.). Maxwell AFB, AL: Air University Press. Retrieved September 14, 2020, from <https://www.jstor.org/stable/pdf/26271275.pdf>

Illumoka, A., Milanovic, I. Grant, N. (2017). An Effective Industry-Based Mentoring Approach for the Recruitment of Women and Minorities. *Journal of STEM Education*, 18(3), 13–19. Retrieved September 14, 2020, from <https://www.jstem.org/jstem/index.php/JSTEM/article/view/2102>

Ison, D. C., Herron, R., Weiland, L. (2016). Two Decades of Progress for Minorities in Aviation. *Journal of Aviation Technology and Engineering*, 6(1). doi:10.7771/2159-6670.1141

Ton, Z. (2020, August 17). Equality in the U.S. Starts with Better Jobs. Retrieved September 14, 2020, from <https://hbr.org/2020/08/equality-in-the-u-s-starts-with-better-jobs>

U.S. Office of Personnel Management. (2020). Frequently Asked Questions. Retrieved September 14, 2020, from <https://www.opm.gov/faqs/QA.aspx?fid=72bcd219-0b9f-4de8-b366-4817028fbc6e>

United States Department of Labor. (2020, March 31). May 2019 National Occupational Employment and Wage Estimates. Retrieved September 14, 2020, from [https://www.bls.gov/oes/current/oes\\_nat.htm](https://www.bls.gov/oes/current/oes_nat.htm)

Mr. LARSEN. Thank you, Mr. Webley. We appreciate your testimony.

I will turn to Mr. Kyle Kaiser, president of VIPER Transitions. Mr. Kaiser, you are recognized for 5 minutes.

Mr. KAISER. Chairman Larsen, Ranking Member Graves, and the subcommittee, thank you very much for the opportunity to give testimony here today.

Unlike a lot of the colleagues that I am now being able to associate with, I do not herald from aviation. I am an electrician by trade. I am a veteran of both Iraq and Afghanistan: airborne, Infantry, sniper.

Transitioning out of the military was not easy. Finding your next career path is not easy. Aviation was not ever on my radar. I was an infantryman; what I knew about planes is that I could jump out of them and get where I needed to go quickly.

So what brought me here to where we are at now? I've already given a little bit of background about who I am and what I have done; an important thing to remember is we all have something that grounds us, something that keeps us connected.

The reason we started the organization VIPER Transitions is to end veteran suicide. We believe we can do this by eliminating some of the lead causes: unemployment, underemployment, substance

abuse, homelessness, and honestly repairing our fractured support system.

The support system I had during the military and after, it can be pointed to one person, my amazing wife Kathleen. Without her help and her backing, I do not know where I would be. It is quite possible I could be one of the statistics of the 22 a day that we lose to suicide.

When you start looking at statistics, I really was not sure where to go with my testimony on whether or not I should bring a bunch of statistics and data. So I chose to go a little bit different route. I prefer to be more somewhat informal and direct.

Veterans have a hard time getting employment when you get out of the military. When you start talking inclusion and demographics, the military covers everybody in our country. I served with people from all ethnicities, religious beliefs, backgrounds from all across the Nation and other countries. They used the military to become citizens of the United States.

And we need to do more when it comes to transitioning servicemembers into good-paying jobs.

Ranking Member Graves mentioned industry, academia, and labor. I am proud to say that VIPER has the support in aviation from all three of those groups. Namely, AAR, AMFA, and AIM have all come to back VIPER and our program.

In August we are going to be launching our first cohort to address aviation maintenance. We designed a program, it's 12 weeks long. We will put veterans and military spouses into the program, and they will get their training if they need to step into current aviation.

Whether they choose to fulfill the requirements of the FAA through part 147 schooling afterwards, or go straight to work for an employer, they are on a route and a pathway set up to succeed.

And I cannot speak enough on what that does for the mental health of our veterans. I understand this is not a mental health subcommittee, but it does all tie together.

When you are in the military, everybody knows who you are by what is on your chest and on your sleeve. They know if you have been deployed. They know if you have seen combat. They know what schools you have gone to.

When you get out, you are just a name and a number. "Thank you for your service" does not pay the bills, and far too often veterans are told, "Thank you for your service. The application line is there. We will get to you if we get to you."

And when you do get the interview, you get one of two normal comments. Either you are overqualified, which, as an infantryman, I very rarely got, or you are underqualified: "Sorry. We need somebody with more experience."

I would recommend that we encourage industry partners to expand apprenticeship opportunities. Apprenticeship opportunities recognized by the Department of Labor provide a great resource for veterans and everybody who has served our country.

You can use your GI bill to offset the cost of starting out at a lower wage, and that provides a huge boost to a family's income, to be able to afford to start a new career over from the beginning.



I never looked at aviation because those opportunities did not exist. One of the most common phrases I get from veterans that are already out when they hear about the work we are doing is, "Wow, I wish they had that when I got out."

And that is the truth of the matter, is that the transition and the system we have set up to bring people into careers leaving the military needs work.

The aviation industry has the opportunity to not only create programs, to boost the numbers of veterans choosing to get into aerospace, but to back groups that do that.

You mentioned Embry-Riddle; they have a fantastic SkillBridge program. VIPER Transitions is also a SkillBridge program that targets all veterans from every branch, every occupation, including their spouses.

"Thank you for your service" is not enough. We need to do more. Thank you for your time.

[Mr. Kaiser's prepared statement follows:]

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#### **Prepared Statement of Kyle J. Kaiser, President, VIPER Transitions**

VIPER Transitions creates pathways for transitioning service members and military spouses into the workforce. The military presents a diversified pool of Americans looking for their next career. Those who serve our country come from every demographic of American society and answered our country's call to serve. It is up to us to ensure they have access to quality careers after their service. By including veterans in efforts to support a more robust workforce, we include people of every religion, ethnicity, economic, and social background. VIPER believes veterans represent a group of potential workers often left out of discussions of inclusion and advancement. It is our duty to ensure they are represented in these discussions. Below is why this discussion is necessary:

#### **A COMPREHENSIVE SOLUTION TO ENDING VETERAN SUICIDE**

##### *The Epidemic*

Veteran Suicide is a complicated issue. Every Veteran is unique and faces distinct challenges making the solution to ending Veteran suicide more complicated. At Veteran Internships Providing Employment Readiness (VIPER) we believe we can establish a comprehensive program with the capability of surmounting this challenge. Looking at some of the causes we as veterans have face ourselves, Post-Traumatic Stress/military trauma, career transition, unemployment, and/or underemployment we begin to find a common thread: a veteran's sense of self-worth. VIPER believes poor self-worth/identity is the main factor influencing veteran suicide. We focus on a comprehensive method of connecting existing programs, organizations, and resources needed to address this factor. We believe that our unique approach is suited to adequately address the needs of our veterans and our nation.

##### *Veteran Identity*

Believing the leading factor to Veteran suicide is tied to the Veteran's perceived self-worth or self-identity is not a new concept. People usually identify themselves according to the role they play in society. When Veterans are referred to as heroes, patriots, defenders of freedom, the backbone of the country, and other such praises it is hard to be anything else. When Veterans separate from the military there is a large space to fill and the struggle becomes very real. During this struggle it is more likely someone will turn to alcohol, drugs, compulsive shopping, or possibly gambling, just to feel alive again. It is during this struggle that other mental health issues can take over.

Military service may expose an individual to different traumatic experiences. These experiences, often referred to as Post-Traumatic Stress or PTS, happens to

“people who have experienced or witnessed a traumatic event”<sup>1</sup>. PTS can play a significant role in Veteran self-identity. A successful military force must be able to perform in the worst conditions imaginable. To be effective in combat, training must take place to try and “harden” the mind and numb emotion. This training is necessary to accomplish the military’s mission. Veterans are continuously exposed to an environment that trains them to keep going no matter what. When Veterans suffer from PTS it is common for them to view it as a weakness and they begin to question who they are. This questioning can lead to a path of self-destruction even while still being able to “perform” their job duties. While this already complicated mental war rages in the minds of every Veteran, it becomes more compounded during the transition process.

Many military occupations do not translate directly to civilian careers. While there are many programs available to Veterans actively serving in the military that can help them achieve degrees and certifications, the mission always comes first. With most units being on active deployment cycles it is not as practical, or as easy, for those serving to utilize such programs. As Veterans look to the next phase of their lives after leaving the service, they are regularly told they are not “qualified” for the career they desire. During the hunt to find a gainful, fulfilling career, Veterans are missing the keys they need to achieve success. They are often told to go to this website, use this military skills translator, write a resume (but don’t use military terms civilians won’t understand), network, go to job fairs, and the list goes on. This is deception. As Veterans we did all these things expecting that the advice and counseling, we received would lead to mission success. As active duty members we relied on the accuracy and truth of information in situations as it could be the difference between life and death. And we had learned to trust in that information. The difference being that while transitioning out we do all these things and many of us will exit the service without a job in place. “One in four veterans say they had a civilian job lined up after they left the military”<sup>2</sup>. Meaning with an average of 200,000 Veterans transitioning out of the military each year, approximately 150,000 exit unemployed. The fear of being “unqualified,” and incapable of achieving victory, is now manifested in unemployment, underemployment, and possibly homelessness.

#### *The Connection Gap*

There are many organizations addressing the issues facing America’s Veterans. From the Department of Veterans Affairs to local volunteers, there are groups established to address different Veteran needs. Each organization hones its focus on the issues they have chosen to affect. One may focus on mental health and provide free mental health screenings, another on disability benefits and assisting Veterans in filing claims, another on housing assistance and finding a place for Veterans to live. All admirably doing what they can to help Veterans, and yet *we still lose 16 to 22 Veterans a day to suicide*.

With so many organizations offering to help Veterans, it can be hard to determine which organization to talk to. Veterans are aware of most of the larger organizations and with technology today, a quick online search makes finding the information easily attainable. The issue is not the organizations, the services they provide, or the marketing tools they use. The issue again lies in the perception of self.

Esprit De Corps and regimented training to believe you can accomplish anything are good things to have experienced and there are many important lessons to take with you throughout life. Learning to recognize where healthy pride and ambition crossover to become a destructive ego and an unteachable attitude is where Veterans struggle. Making the right connection before a Veteran is in crisis makes all the difference.

#### *The Bridge*

We know that while Veterans are struggling to find their identity in the civilian world, many employers are struggling to find quality employees. According to our research as many as 7 out of 10 employers reported talent shortages in 2019<sup>3</sup>. An aging workforce and the need for technical skills and training make finding the

<sup>1</sup>What is Post Traumatic Stress Disorder. (n.d.) American Psychiatric Association. Retrieved August 20, 2020 from <https://www.psychiatry.org/patients-families/ptsd/what-is-ptsd>

<sup>2</sup>Kim Parker, Ruth Igielnik, Amanda Barroso, Anthony Cilluffo. (2019, September 9). The American Veteran Experience and the Post-9/11 Generation. Pew Research Center. <https://www.pewsocialtrends.org/2019/09/09/the-transition-to-post-military-employment/>

<sup>3</sup>Cox, J. (2020, February 19). It’s never been this hard for companies to find qualified workers. CNBC. <https://www.cnbc.com/2020/02/19/its-never-been-this-hard-for-companies-to-find-qualified-workers.html>

right applicant for employment difficult. Historically, Veterans have been told to go to college and get a good job. There are issues with this narrative.

College graduates with a bachelor's degree entering the workforce will earn around \$51,000 a year<sup>4</sup>. Not a horrible starting pay for someone in their early twenties with no debt. When you research military pay you will see modest pay rates. An E-4 (Enlisted level 4) earns around \$32,000 annually. Looking at the numbers, college may be a good option. The issue for Veterans is that they have grown accustomed to a standard of living much higher than that. It is poor practice to only consider income and not all the other factors affecting quality of life. Veterans enjoy free medical care for themselves and their families. They have access to free physical fitness centers, recreational centers, cost of living allowances, housing allowances and more. An E-4 with 4 years of service, a family of 4, stationed in Alaska, earns \$58,000 a year<sup>5</sup>.

Many Veterans go to college because they have families to provide for. Leaving a \$58,000 a year job to pursue a new career by going through college can lead to additional stress. The university structure is sometimes difficult for a Veteran to adapt to. Making less money, acquiring more debt, on top of the normal stressors added by attending college, become too much for most to handle. Veterans drop out of college over 80% of the time<sup>6</sup>. Veterans from 3 to 12 months post-transition from the service, are almost 3 times more likely to commit suicide than those on active duty<sup>7</sup>. Failure to succeed in school leads to more self-doubt.

In 2015, 54% of Veterans attending college were enrolled in associate degree or certificate programs<sup>8</sup>. The average salary for someone with an associate degree is \$41,496<sup>9</sup>. This scenario leaves the Veteran with used GI Bill benefits, more debt, and no clear-cut path to a career.

The U.S. Bureau of Labor Statistics projects that the construction and extraction job market alone will grow 10% from 2018 to 2028<sup>10</sup>. While the projected growth is good for those already skilled in a trade, there is a shortage of workers entering these types of fields. The current narrative that attending college is the best way for you to succeed needs to change. College needs to be looked at to advance your career, not get it started.

#### *Skills Not Degrees*

"There are qualities ... that have a tendency to be completely overlooked when people are sifting through résumés or LinkedIn profiles. And yet, increasingly, we find that these are the kinds of people that make the biggest difference within our organization.

"Increasingly I hear this mantra: *Skills, not degrees.*"

—LinkedIn CEO Jeff Weiner

VIPER answers the problems facing America's Veterans, employers, and the future economy. Creating a system focused on answering the needs of Veterans with the needs of industry we accomplish and successfully address core issues facing all involved. Focusing on giving Veterans tangible skills that lead directly to quality employment assists Veterans by: Identifying future career options, securing a career that allows Veterans to better manage stress levels associated with transition, bridging the information gap between Veterans and available resources by utilizing original programs, creating a community of support that creates a positive environment that Veterans thrive in.

VIPER peer mentors offer advice based on their own real-world experiences and how they have succeeded since the military. Each Veteran entering the program is able to explore the careers they express interest in. Veteran and mentor conversations are more in depth than just a typical job description. Our mentors are volun-

<sup>4</sup>Miller, S. (2019, August 22). Starting pay has not changed much despite tight job market for college graduates. SHRM. <https://www.shrm.org/resourcesandtools/hr-topics/compensation/pages/average-starting-salary-for-recent-college-grads.aspx>

<sup>5</sup>Regular Military Compensation Calculator. (n.d.) Department of Defense. Retrieved August 20, 2020 from <https://militarypay.defense.gov/Calculators/RMC-Calculator/>

<sup>6</sup>Wood, D. (2012, October 25) Veteran's College Drop-Out Rate Soars. Huffpost. [https://www.huffpost.com/entry/veterans-college-drop-out\\_n\\_2016926?guccounter=1](https://www.huffpost.com/entry/veterans-college-drop-out_n_2016926?guccounter=1)

<sup>7</sup>Rapaport, L. (2016, October 27). Veterans may face higher risk of suicide during first year home. Reuters. <https://www.reuters.com/article/us-health-veterans-suicide/veterans-may-face-higher-risk-of-suicide-during-first-year-home-idUSKCN12R2MT>

<sup>8</sup>Factsheets, Veterans in higher education. (2019, November 9). PNPI Retrieved August 18, 2020 from <https://pnpi.org/veterans-in-higher-education/>

<sup>9</sup>Josephson, A. (2018, May 15) The Average Salary by Educational Level. Smartasset. <https://smartasset.com/retirement/the-average-salary-by-education-level>

<sup>10</sup>Construction and Extraction Occupations. (n.d.) U.S. Bureau of Labor Statistics. Retrieved from <https://www.bls.gov/ooh/construction-and-extraction/home.htm>

teers straight from the industry they work in. Working men and women who want to support Veterans as they transition to the next phase of their life. This gives the Veteran invaluable insight from the “boots on the ground.” This is actionable intel that the Veteran can be reassured is accurate and will lead to success. Promises are not made, opportunities are presented. The Veteran is informed as to the importance of their commitment to succeed and are given clear direction to accomplish their next mission . . . In order to execute a mission successfully there must be a clear objective. Having a job is not an adequate objective for VIPER applicants. The applicant must identify the career they desire and give solid reasons as to their desire for this career. In order to ensure the Veteran’s objective is clear, they must be able to openly discuss their concerns. A classroom full of peers can feel more like a trial than a forum for open, honest discussion.

#### *Other Bridges*

*Fish to End 22* is a VIPER program with two main focuses: 1) To bring awareness to the public about Veteran suicide while fishing in high profile tournaments. 2) Taking Veterans on a fishing charters to discuss career options.

While fishing in tournaments the Fish to End 22 team hosts informational booths at the main locations of the event. This brings Veteran suicide to the attention of the public and Fish to End 22’s second mission.

Veterans that participate in Fish to End 22 experience a day of high-quality fishing while engaging with mentors and organizations that work with VIPER. These “day trips” are fun, energetic and create a great environment for Veterans to ask questions about their futures and learn about the resources available to them.

*Operation Combat Pike* takes the Veterans on one to three day trips fishing for invasive Pike. These trips take them to a place where mentors and Veterans have the time, space, and privacy to have candid conversations regarding their future. While on this excursion Veterans are asked to use some of the skills they learned in the military. Once on site we ask them to assist in coordinating outings, organizing themselves into groups based on their interests, and maintaining the facilities used. This gives Veterans an opportunity to see themselves performing outside of their uniform reinforcing a positive self-identity.

While participating in *Operation Combat Pike*, the Veteran can fish while talking to mentors about opportunities. VIPER’s mentors explain the details involved in succeeding in their career. They also reinforce using available resources when needed. We then tie the experiences from *Operation Combat Pike* to the attitude needed to succeed.

Veteran organizations working with VIPER attend these trips as mentors, advisors and champions for Veterans giving these organizations an opportunity to have an in-depth conversation with the Veterans regarding the resources they have to offer, resources that may be lifesaving.

During Fish to End 22 and *Operation Combat Pike* outings, we ensure the Veteran is connected to available resources while highlighting the attributes the Veteran already has. Bringing to light the quality traits they already have and showing them how they can adapt those traits in order to pursue a successful life as a civilian. We reinforce that the “will to win” or “never quit” attitude is the greatest asset every Veteran has at their disposal. However, proper attitude and desire will not equal success.

Success comes when the Veteran’s attitude and desire meets opportunity.

#### *Past Present Future*

The American Dream is founded off the principal belief in the attainability of success. Veterans have fought for that dream since the country began. VIPER honors America’s military heritage by utilizing historical artifacts to train the workforce of tomorrow. *Operation Combat Pike* uses vintage aircraft to fly Veterans to their destinations. These aircraft represent more than unique transportation—these aircraft honor past Veterans. These working tributes place an importance on the current generation ensuring the success of the future generations of Veterans, just as the past Veterans ensured today. The connection of Veterans spanning generations is important in maintaining esprit de corps after military service. Connecting the current generation to their heritage reinforces the message that no one is alone.

Beyond the nostalgia of connecting multiple generations of Veterans, the utilized aircraft’s service and maintenance is a unique training platform allowing Veterans going through one of the programs in the basics of aviation. The restoration and maintaining of these artifacts present an opportunity to train multiple skills. From grease and ball bearings, rivets in sheet metal, to electronic control systems, VIPER students are exposed to a unique learning environment. Artifacts that are not ac-

tively utilized by VIPER programs are sold or donated to museums to further ensure the Veterans heritage is honored.

#### *Transition Redefined*

After engaging Veterans and assisting them in identifying their career path, VIPER redefines transition. Historically, internships have been open to Veterans in the hope that participating employers *MAY* hire them. This *IS NOT* good enough. All the companies who work with VIPER are required to sign an agreement with the VIPER program applicant that guarantees details of employment, including placement in the company. Details like number of hours to be worked in a regular work week, wages earned at their position, healthcare coverage, retirement plans, and required training needed to hold the position. Once the agreement is signed, the VIPER applicant attends training to gain the necessary credentials for the position, in accordance with the contract, which they are to attain prior to placement. This method of direct entry into a career, based on the needs of the Veteran/Military Spouse and the employer, is unique. This model allows the VIPER applicant and their future employer to both know what is expected of each other. The security found in this process promotes healthy self-identity and allows veterans and their families to plan for their futures.

#### *Military Service Is a Family Affair*

VIPER understands and appreciates the sacrifices made by our military families. To show our respect and gratitude for those sacrifices, all VIPER programs are open to military spouses. Our ability to connect them with supportive companies allows us to positively affect the issue of military spouse unemployment. Military spouses have an unemployment rate “nearly twice the rate for the overall US population between 18 and 65”<sup>11</sup>. Opening opportunities to military spouses supports a sense of security in the home of the military family. This added security helps alleviate the stress put on Veterans concerned about the wellbeing of their family. This makes for a more focused, more confident Service Member.

Approximately 56% of Active Duty service members, and 48% of Reserve and National Guard members are married<sup>12</sup>. Making sure the military family is taken care of is pivotal to mission success. The military has many programs in place to assist the military family, but high unemployment rates remain a problem. Bringing VIPER to military spouses will have a direct impact on household security. The spouses of service members will enter quality careers and earn training and certificates that allow them to be more easily employed. Large companies can transfer the employee, if the need arises, as the family moves to new duty station locations. For those entering apprenticeship programs, the ability to transfer their training and learned skills is made simple. When the family receives orders to move to a new duty station, the apprentice can transfer their program participation to the training center nearest their new location. No career change, no retaking classes because the local university does not accept all the earned credit, no wondering “what do I do now?” Just smooth, successful, career growth.

#### *Solution to the Epidemic*

VIPER redefines transition and the successful integration of Veterans into society by focusing on ways to create an environment that allows Veterans to thrive. Acknowledging the strengths and weaknesses apparent in our system allows us to address issues. *22 Veteran lives lost a day to suicide* is too high a price to pay to preserve a failing system. Instead of demanding Veterans change who they are to fit the system, we need to change the system to better address the challenges they face. There is no ultimate solution for ending Veteran suicide. The most we can do is proactively address the factors leading to the crisis.

A clear path to guaranteed placement in a career with benefits, connecting veterans with available resources, supporting the military family, and a strong community network are key ways to address the factors that have created the Veteran suicide epidemic. It is time to come together to support a comprehensive program that addresses the issue at its source. VIPER focuses on the factors behind the problem and presents a solution. Together we can stop veteran suicide one employment opportunity at a time.

Not every Veteran who goes through our program is in crisis, but every person we bring in potentially prevents one.

<sup>11</sup> Military Spouses in the Labor Market. (2018, May). The Council of Economic Advisers. Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2018/05/Military-Spouses-in-the-Labor-Market.pdf>

<sup>12</sup> See 8.

Mr. LARSEN. Thank you, Mr. Kaiser.

Now we are going to go to questions, 5 minutes each, from Members. I am going to do something unusual for the chair. I am going to recognize Representative Williams of Georgia for 5 minutes.

Ms. WILLIAMS OF GEORGIA. Thank you, Mr. Chairman.

This is absolutely unusual. As the freshman member of this committee, I just knew that I was going to be 2 hours into this hearing. So I appreciate the opportunity.

So thank you, Ranking Member Graves as well as Chair Larsen, for holding this important hearing and thank you to all of the witnesses for testifying before the subcommittee today.

And I especially want to take a moment to welcome Captain Zapata-Cardone, who is a constituent of my district down in Atlanta.

My district is home to the Nation's busiest airport, but right now the aviation industry does not look like my district. For instance, over half of my constituents are Black, but Black individuals comprise only 3.4 percent of all aircraft pilots and flight engineers.

Yes, we have a lot of work to do to make sure that our aviation workforce represents the diversity of the congressional district and the Nation that it serves.

As a Congresswoman from an incredibly diverse district, I know that diversity is what makes America strong. Diversifying our aviation workforce is the right thing to do, but it also presents an economic opportunity. As the aviation industry rebounds from the pandemic and works toward long-term recovery, the industry is going to need talent to fill its job openings.

Diversifying its hiring pool will give the industry an opportunity to meet its workforce needs. Captain Zapata-Cardone, it is important that members of traditionally marginalized communities have access to the aviation profession.

Given that our country's pilots are 92 percent White and 91 percent male, and we have a lot of work to do to make sure the aviation workforce is reflective of the diversity of our Nation, in your testimony you mention that there are currently economic disincentives for pilots considering employment at regional airlines.

Can you please elaborate on what those are?

Ms. ZAPATA-CARDONE. Thank you for the question.

Yes, going into the regional industry is a way to build your experience, and traditionally it has been the lowest paying job.

Basically when you were going in as a first officer at a regional airline—and I am just going to use my example—when I was finally hired at a regional airline back in 2010, my first full year I made approximately \$21,000 as an airline pilot.

That is a huge economic disincentive. While the pay has increased due to market demand, it is still not enough. Pilots that are entering the regional industry, as Dr. Rebecca Lutte noted, there is a huge barrier there, especially for women if women want to start families, for family leave.

Quality of life issues are still an issue for the regional industry, and that is something that needs to improve in order to bring more people into the piloting profession.

As I said, my first year, not making that much money, it was very difficult to not only pay rent and just live, but you also have to think about the financial barriers of the student loans that were

taken out in order to continue in flight training, and that was a huge barrier.

So those are things that need to be addressed and improved in order to have that robust pipeline.

Ms. WILLIAMS OF GEORGIA. Thank you.

And, Dr. Lutte, it is apparent that there is a lack of women serving in leadership roles in the aviation industry. In your testimony, you mentioned that mentorship and sponsorship programs could support the advancement of women in aviation.

Can you give us examples of what such a program would look like in the aviation sector?

Ms. LUTTE. Thank you very much for that question.

We do know that women in leadership positions—really members of unrepresented groups, for that matter, in leadership positions—we need greater numbers and more representation there.

So mentorship and sponsorship programs—particularly formal mentorship and sponsorship programs—within aviation organizations will allow us to identify top talent, make sure that that top talent is informed of the opportunities that are available to them, make sure that we have professional development for members of underrepresented groups, and just ensure that they are getting that sponsorship from those in leadership positions to make sure that they are getting the opportunity to make that leap and make that gap.

Certainly, my colleague from JetBlue can probably speak more to what they have in place at their particular airline, but I think it is important and valuable that we do have that in, again, a formal program to identify that top talent, make sure that they are getting the opportunities, and getting that attempt to increase the numbers of underrepresented groups in those key decisionmaking roles.

Ms. WILLIAMS OF GEORGIA. Thank you.

And, Ms. Gibbs, I am unfortunately going to run out of time. So I am going to ask that you submit your answer for the record.

In your testimony, you identified an opportunity to increase diversity within the officer and director ranks where the racial composition has remained stagnant, and you mentioned that JetBlue has developed some new pathways to help crewmembers to grow in leadership ways.

So if you could submit more details about that to those pathways for the record, I would appreciate it.

Ms. GIBBS. Absolutely.

Ms. WILLIAMS OF GEORGIA. Thank you, Mr. Chairman.

Mr. LARSEN. Thank you, Representative Williams.

The Chair now recognizes Representative Graves of Louisiana for 5 minutes.

Mr. GRAVES OF LOUISIANA. Thank you, Mr. Chairman.

I want to thank all of the witnesses for the testimony.

Mr. Kaiser, thank you for your service, and I wanted to ask you a question about some of the training programs that you are implementing now.

I understand from your testimony that you are starting an aviation maintenance program. Can you talk a little bit about sort of the expectations from the various training programs for Active

Duty servicemembers and veterans and their spouses, kind of the results of the programs, and what we can expect?

Mr. KAISER. Yes, sir. So our program, the aviation maintenance program that we are getting ready to launch here in August, is a little different from most transition programs. In order for somebody to come through our program, they have to be guaranteed placement either in a part 147 school or with an employer.

We do not like guesswork when it comes to transition and what you are going to do with your next career. We think there should be a pathway set up to get that taken care of.

As far as the program is concerned, it is a 12-week program. It is going to cover general aviation. You won't be an A&P. I'll go ahead and clear that up. I liken it to a pre-apprenticeship.

We are going to give you the skills you need to start your journey.

Does that answer your question, sir?

Mr. GRAVES OF LOUISIANA. It does. It does. Thanks.

Do you believe that this is something that can be replicated or for some reason you think it is unique to your area of the way that you are administering the program?

Mr. KAISER. I believe our program is unique. However, it is definitely something that can and should be replicated, in my opinion, across the board.

I look at industry screening for manpower and needs, and it is no secret that aviation is not much different than the other industries I work with as far as retirement. People are leaving. They are not going to be around anymore. What are we going to do to fill that void?

And there are 200,000 servicemembers getting out of the military annually.

Mr. GRAVES OF LOUISIANA. Can you speak to how you think that your efforts or these efforts will contribute to diversity in the workforce?

Mr. KAISER. Yes. So in the military I served with every ethnicity I could think of and religious belief without any issue. When you are getting into the military, all of those people or all of those demographics are still there.

The Representative, Congresswoman from Georgia, that is near and dear to my heart, Fort Benning, infantry school, airborne school, sniper school, all took place in Georgia.

What are the statistics of African Americans serving in the military in Georgia? Those are things that we can look at and as programs are developed, we should keep in mind when you are looking at veterans in the different areas.

Now, in Alaska, we work with a lot of groups for Alaska Native veterans, working to get the Alaska Native veterans who have served, in their careers here and abroad. So there is no shortage of the opportunity when looking at the military to target and support veterans' groups.

Mr. GRAVES OF LOUISIANA. Thank you.

Dr. Lutte, thank you for your testimony. You mentioned that there has been a challenge, I think, in absorbing or, excuse me, I guess the transition of female aviation students into the private pi-



lots, and I just wanted to make sure I followed sort of what you were trying to convey to us.

Are these being absorbed by the commercial aviation space or what is the reason for that lack of conversion?

Ms. LUTTE. So it is an important, I think, data point to look at because our student pilot representation for women is a little over 13 percent. When you look at private pilots, it is about 6 percent.

And the number of women who are private pilots has only increased by less than one-half of 1 percent over 15 years. So why is that important? It is important because it is a pipeline indication of coming into the profession.

And it is important in terms of how do we do a better job at converting that 13 percent. First of all, let's get that higher, but that 13 percent of student pilots into private pilots.

And there are several barriers, I think, that we can look at in that area, including cost, some factors for the training environment, that sense of isolation, the need for community of support, and some other areas.

But that was the point of including that particular data point.

Mr. GRAVES OF LOUISIANA. Thank you. I appreciate the clarification.

The last question, Ms. Gibbs. Could you just shed a little bit of light on JetBlue's new method of interviewing, Blue Select?

Ms. GIBBS. Sure. Blue Select is an initiative that we put forth to ensure that we have an opportunity to reduce bias in the interview process, and oftentimes bias is not intentional, but it is prevalent.

And so our Blue Select program is a competency-based interview/selection process that allows us to really home in on the skills that we are looking at and not allow for a lot of opportunity for you to insert your particular bias because everybody is seeking the same information from the candidates.

And that is our Blue Select program.

Mr. GRAVES OF LOUISIANA. All right. Thank you. I appreciate your sharing that.

Mr. Chairman, I yield back.

Mr. LARSEN. Thank you.

I now recognize myself for 5 minutes.

I will first go with Dr. Lutte. Can you be more specific about the use of data and what you think we can do to help develop the data?

You said the number one thing is: We have to develop this data. So what data, and how do we use it?

Ms. LUTTE. Thank you for that question.

One of the key areas, again, is coming back to that what gets measured gets done. So we need a better baseline of information of where we are at in terms of women and underrepresented groups.

It is a challenge to come up with the data points in this area. So you have to go to a variety of sources.

We need better information, for example, on race and ethnicity included in the FAA airman certification data. We can get better indications from industry of what the representation is.

There is a great example by Boeing, for example, who recently published their diversity data online, and that is helpful to get a better sense of the industry.

But in terms of Government, again, FAA data, some good data sources from the DOT can be potentially expanded, but the other one I am going to call for—shocking, I know, as a university person—is funded research in this area, and not just data on what the numbers are, but data and information about how well we are doing with our outreach and recruitment efforts, and looking not just at outputs but outcomes so that we know that the effort we are taking, the money that we are spending is going to the right place.

So better FAA data, better funding for evaluation efforts on outreach, recruitment, retention.

Mr. LARSEN. Thank you.

Ms. Gibbs, JetBlue—the Gateway programs—is one, but just the overall approach that you outlined in your testimony, how did that emerge at JetBlue?

Why did you decide at JetBlue that you needed to up your game on this kind of outreach?

Ms. GIBBS. We have long since noticed that there was a need to diversify our pilot work group, and we were very aware of the cost obstacles for becoming a pilot, and so we started the Gateway program in 2008 to help pilots find a pathway into JetBlue.

And we worked with these pilots consistently to mentor them and ensure that they had all the support that they needed. We have heard quite often that there is an isolation factor, and so we provided support and mentorship for pilots through this program.

We have expanded the Gateway program for internal crewmembers, and we are really happy to announce that we have 22 crewmembers who have recently gone through all of the rigor to enter into the pilot program.

Safety is our number one value, and we are putting forth those 22 people in two separate classes and helping them, really mentoring them to become pilots.

But these are JetBlue crewmembers, and so how better to show your commitment to our industry by taking people who are already here and already committed to the company and offering them an opportunity to become pilots?

And so we have flight attendants and people from so many different backgrounds who will enter into this program and become pilots.

And then the second program that we have created most recently is to encourage crewmembers to become technicians, and so we are just starting to take applications and recommendations there, and we will be launching that program and having those crewmembers get on their way and their pathway for that program as well.

So those are the two main Gateway programs that we are doing for both pilots and technicians, and then we have a program to bring crewmembers from the operation into our support centers. Our support centers are our corporate offices, and how do we help them become part of the pipeline to eventually and hopefully become leaders within the organization.

It all frames around bringing in diversity through all of those methods.

Mr. LARSEN. Thank you.

Mr. Webley, we heard something about mentoring from the previous two witnesses. I don't know if there is a formal role that Congress plays to expand mentoring, but do you have ideas about mentoring and expansion of mentoring programs?

Mr. WEBLEY. Yes. I think what Congress might be able to do is leverage some of the existing platforms and, I guess, structures. For example, United States Air Force has a formal mentoring program that they used internally. The FAA probably has their own mentoring program internally that they use for whether it be moving people into executive roles and things of that nature.

And I think maybe a model that could be followed is the same way the FAA has provided sort of best practices in a structure for what is called the Aviation Career Education program, ACE, which is like summer aviation camps for students.

The FAA can provide sort of a baseline package that any organization could pick up and get started with their own mentoring program, whether it be a nonprofit, whether it be a company, like I said, sort of establishing maybe a center of excellence to provide the baseline information.

Mr. LARSEN. Thank you. Thank you.

I now recognize Representative Balderson from Ohio for 5 minutes.

Mr. BALDERSON. Thank you, Mr. Chairman.

My question is for Mr. Kaiser, and, Mr. Kaiser, thank you for being here today, and I would also like to thank you for the work VIPER does every day to help veterans transition into meaningful careers, and this is something that is talked about everywhere I go in the congressional district and even in my past years in the State legislature.

But I am very concerned about a potential shortage of qualified maintenance technicians in aviation. I hear this a lot. With your organization's expertise and experience in workforce placement, how many veterans do you believe would be qualified to work in these roles in civilian aviation?

That is my first question, and then does VIPER Transitions believe transitioning veterans to these roles could make up a sizable portion of this shortage?

Mr. KAISER. To the first question, Mr. Congressman, I could not tell you how many would actually qualify.

That's part of the reason VIPER Transitions got set up is to get people qualifications to have the job that they are going to be hired for.

As far as impact on people coming into the industry, I absolutely believe it will have a massive impact. There are 200,000 veterans that get out of the military every year, and 150,000 of them do not have a career lined up or even a job, for that matter.

So if you present this type of opportunity to a veteran or a military spouse, and it is imperative that we do not forget the spouses when we are talking about the military transitions. Serving is not just on the servicemember. It drags your family along for the ride as well.

So I believe given the sheer number of people exiting the military every year, a more robust system for recruitment and training to bring into these careers is absolutely going to have a substantial impact.

Like I said, our programs are designed for any military occupational specialty, any MOS. We care about what you did in the military, but not as far as your next career is concerned. We want to set you up for success on a pathway that you want to get into, and so that is what our programs are designed to do.

Mr. BALDERSON. OK. Well, if my office or myself can assist you with getting some data on that, we would love to work with you on that.

Look. As I said, we go around the district a lot, and it is something that is talked about every single day when we go out.

My followup question to you would be in your testimony you note that many employers are struggling to find workers. We have talked about this. This is a concern I hear daily.

Can you discuss how VIPER locates and identifies businesses who desperately need skilled and reliable workers and how you work together to ensure the available positions will be a good fit for our veterans?

Mr. KAISER. Yes. So as far as finding companies, it has all been networking. I mentioned a few of our partners, AAR and AMFA and AIM, as well as ARSA. I have worked with them and, in fact, did a presentation at their conference.

And that is how we have really been getting introduced to employers, and then then we meet with employers: What workers do you need? What classification do you need? What are you looking for?

And then we design a program to fit their needs. In this case the aviation maintenance program is what we design. We need maintainers. So let's create a program that could take somebody like myself, who is an infantryman, and turn me into a maintainer in the civilian world.

And that is what we have done, and I think when you look at how you address that training, that is really where everything needs to go. We cannot continue to look for where—you cannot get blood out of a turnip. You have got to keep expanding your pool where you are going to meet your needs, and that is what we are trying to do with the military.

Mr. BALDERSON. OK. My followup is with employers. Obviously, they have to be a part of this process. What do employers need to do to make these positions as enticing as possible for transitioning servicemembers and ensure that these jobs provide meaningful work and long-term career for our veterans?

So that would be my last followup question if you could answer that please.

Mr. KAISER. Yes, sir. So the biggest thing that I have seen help veterans choose a career path is having an apprenticeship program, a DOL-registered apprenticeship program where they can use their GI bill to offset the cost of starting out as an apprentice at a lower wage.

Those folks that we target, E1 through E6, not that we do not work with everybody; our first electrician class had a major in it.

When you are targeting E1 through E6, usually they are younger. They have got a young family, mortgage, car payments, credit cards, all of the same bills that every other person is going to have.

So when you have the opportunity to offset your cost of living with the GI bill while you are on the job training, that is huge. That would be probably the single biggest piece of advice I would give an employer.

Mr. BALDERSON. OK. Well, thank you very much.

My time is up, Mr. Chairman. I yield back. Thank you.

Mr. KAHELE [presiding]. Thank you.

The Chair now recognizes Mr. Carson for 5 minutes.

Mr. CARSON. Thank you, Chairman.

To Dr. [sic] Webley and Ms. Gibbs, I really appreciate your testimony today. I am curious. What do you think would be the most impactful way to increase the number of Black and Brown professionals in aviation?

Is this led by industry or is there more action from the FAA and DOT to better implement programs already in place?

What new efforts should we even reconsider? What can our subcommittee do to advance diversity in aviation?

Mr. WEBLEY. Just to clarify, Congressman, you said Dr. Webley. I am not a doctor. So I just wanted to verify you are addressing me.

Mr. CARSON. That is all right. That is all right. People call me Dr. Dre, but that is OK. Accepted, you know?

Mr. WEBLEY. No, no worries. I just wanted to make sure it was not for Dr. Lutte over there, the question.

But since I am talking, I will go ahead. So there are three pillars that we focus on, and I think Government, you know, whether it be the FAA or DOE, any of the agencies that this stuff falls under their purview. The three pillars that we focus on and where there is always room to partner is awareness. Number one, a lot of underrepresented people are underrepresented in these career fields because they do not even know that they are an option.

So any resources that we can direct into schools to provide additional funding for awareness for career exposure, career program, whether it is vo-tech-type programs in the high school level that expose students to what Mr. Kaiser was talking about, opportunities that are out there in the trades and whatnot. Any of that is going to be helpful.

The second pillar is skill development. Once people become aware of these career opportunities, at OBAP we work hard to try and make sure that they build skills that are going to make them competitive to actually be able to land these careers.

We are not interested in lowering standards by any means. So all of our efforts go to making sure that whether it is our members or whether it is the students that we interact with, that we are developing programs that raise them up to competitive levels in terms of their skills.

So any kind of resources that can be directed to that, whether it is making education more affordable, whether it is leveraging the massive network of community colleges that we have across the country that can provide quality education at an affordable rate, any of those types of programs are very useful.

And then the third one is access and advocacy, exactly what is happening right here. By giving organizations such as OBAP and VIPER Transitions and Latino Pilots Association, et cetera, a seat at the table so that we can share our ideas and have them be considered by folks like yourself that make decisions, that is incredibly important.

So I pass it off to the next person.

Mr. CARSON. That's good.

Ms. GIBBS. I concur with those observations. Access and opportunity are two of the greatest ways that we can increase Brown and Black representation in aviation.

We sponsor several programs for young students so that they can start early. If you see a Black pilot, you realize you can become a Black pilot. If you see a Brown technician, you realize you can become a technician. So you have to have that access and exposure.

A seat at the table is incredibly important because being in the industry, we can offer suggestions for ways that Government can come to the intersection of private-public partnerships, and how do we then expose young people to the industry, the industry that I love so much and I have been part of for so long.

So there are ways that we can become a little bit more intentional in the work that we are doing in order to increase representation for technical positions.

And then how do we continue to push forward opportunities so that minorities and women and diversity increases in the boardroom as well? Everybody wants a seat at the table, and as we are looking to have a seat, sometimes you have to bring your own folding chair and plop it down at the end.

And so we are really trying to make sure that we offer access and opportunity so that we can not only increase diversity with our executives, but also make sure that we have a diverse workforce and start to diversify pilots and technicians as well.

Mr. CARSON. That is great. Thank you.

Thank you, Chairman. I yield back.

Mr. KAHELE. All right. Thank you.

The Chair now recognizes the Representative from Tennessee, Member Burchett, for 5 minutes.

Mr. BURCHETT. Aloha, Mr. Chairman. Thank you, brother.

Thank you all for being here.

Ms. Gibbs, I appreciate your interest in addressing the aviation industries—wait.

First, Mr. Chairman, I wanted to submit for the record an article, "Key Lawmaker Quizzes Airlines on Delays, Worker Shortages," without any objection, if I could submit that.

VOICE. I do not object.

Mr. BURCHETT [laughing]. Thank you, Mr. Cohen.

[The information follows:]

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**Article entitled, “Key Lawmaker Quizzes Airlines on Delays, Worker Shortages,” Associated Press, July 17, 2021, Submitted for the Record by Hon. Tim Burchett**

**KEY LAWMAKER QUIZZES AIRLINES ON DELAYS, WORKER SHORTAGES**

*Senator Cantwell says she is troubled by reports that highlight the role of worker shortages in a surge of delayed and canceled flights.*

Associated Press

Published: 1:10 PM EDT July 17, 2021/Updated: 1:10 PM EDT July 17, 2021

WASHINGTON—A key senator is asking six U.S. airlines to explain the high rates of delayed and canceled flights this summer, and she’s asking whether there are labor shortages despite the airlines getting billions in federal aid to keep workers on the job.

Sen. Maria Cantwell, D-Wash., who chairs the Senate Commerce Committee, sent letters Friday to the CEOs of American, Southwest, Delta, JetBlue, Republic and Allegiant. She wrote that she is concerned by reports that have highlighted the role of worker shortages in a surge of delayed and canceled flights.

In identical letters to the CEOs, Cantwell said each airline did a poor job of managing its workforce and, at worst, “failed to meet the intent of tax payer funding and prepare for the surge in travel that we are now witnessing.” Since March 2020, when the pandemic began to crush air travel, Congress has approved \$54 billion to keep airline workers employed. As a condition of the aid, airlines have been prohibited from furloughing workers, but they persuaded tens of thousands of employees to take voluntary buyouts, early retirement or long-term leave to cut costs.

Now the airlines are trying to bolster their staffs. This week, American cited rising passenger numbers [<https://apnews.com/article/lifestyle-business-health-travel-coronavirus-pandemic-aa7a7fe1f82591e95cf349c28970f67e>] in saying it will recall 3,300 flight attendants from long-term leave and hire 800 more before the end of the year. Delta said it will hire between up to 5,000 workers this year to reduce long hold times for customers who call the airline and to deal with workers shortages at contractors such as food caterers and airplane cleaners.

Airlines and their unions lobbied for federal aid, which has been extended twice and is scheduled to end Sept. 30. Trade group Airlines for America said that without the money, “the impacts of the pandemic would have been far more devastating to our industry and our workforce, and our return to the skies would have been dramatically slowed.”



*Credit: AP. In this Tuesday, May 25, 2021, file photo, travelers watch a JetBlue Airways aircraft taxi away from a gate at Ronald Reagan Washington National Airport ahead of Memorial Day weekend, in Arlington, Va. (AP Photo/Patrick Semansky, File)*

Government figures show that about 35,000 airline jobs were lost [<https://www.bts.gov/newsroom/may-airline-industry-employment-04-april>] last fall, when

the aid briefly expired. The jobs were restored when Congress extended the payroll relief.

Southwest, one of the hardest hit by delays, said Friday it used the federal money to keep flying to all the airports it served before the pandemic. It blamed recent delays on summer thunderstorms and technology “challenges” last month that led to an unusually high number of delays and flight cancellations.

The number of people flying in the U.S. bottomed out at less than 100,000 a day in April 2020. It has increased from about 700,000 a day in early February to about 2 million a day in July, although that is still down 20% from the same month in 2019, before the pandemic.

Mr. BURCHETT. Mr. Webley—no, I am sorry. Ms. Gibbs, Ms. Gibbs.

While I appreciate your interest in addressing the aviation industry’s long-term workforce needs, what is JetBlue doing specifically right now to address the industry’s current needs and get the workforce back to pre-pandemic levels?

Ms. GIBBS. We are hiring. I mean, that is one of the things that we are doing. We are doing a lot of hiring across the country to ensure that we have all of the proper people in place to service customers and welcome them back with a smile.

Internally, we are doing several things to increase not only—I mentioned our Gateway program, which is helping to create the next generation of pilots and create a diverse workforce there; our Gateway program for technicians, also creating the next group of aircraft mechanics and creating a diverse workforce there.

We are looking internally to make sure that we have an opportunity to specifically promote and encourage our crewmembers who might have come here to work on the ramp or become a flight attendant, to show them the vast opportunities that exist within aviation and to support them so that they can meet those challenges and meet their goals.

And so we are really working hard to hire across the country, like I said, including making sure that we are looking at all sorts of resources and opportunities to bring diversity in, including having people on the recruiting team to specifically look for diverse talent.

So those are some things that JetBlue is doing to increase the workforce here and welcome the flying public back because we really want them to fly again.

Mr. BURCHETT. OK. Thank you, ma’am.

Mr. Webley, do you have any recommendations for how we can bridge the skills gap and combat the perception that well-paying professions are only available to people with 4-year college degrees? [Pause.]

Mr. BURCHETT. Mr. Webley.

Mr. WEBLEY. I had to unmute myself there. Sorry about that.

Mr. BURCHETT. All right.

Mr. WEBLEY. Yes. As I mentioned earlier, I think by leveraging the very large network in the country of community colleges is probably one of the best ways that we can do that, for two reasons, really three reasons.

Number one, a significant amount of community colleges offer programs that develop skill sets that are directly translatable to the industry, including pilots. There are 2-year community college



programs that essentially prepare you for a professional career as a pilot.

So the second one is the affordability of community colleges. You have the chance to take on 2 years of training, walk away with a skill, and then make a decision. Is that enough or do I want to continue on to a 4-year program?

You can do that and have options with a 2-year program.

And then the third one is that community colleges geographically are so spread out around the country. There are so many more of them. Students can go to those programs, yet still remain within their own support networks, whether that be their parents, whether that be around family members that can help them with cost of living, maintaining part-time jobs, et cetera, et cetera.

So those are three things that I think can be done.

Mr. BURCHETT. Great. Thank you.

Mr. Kaiser, how can we better attract veterans to work within the aviation sector?

And are there any notable barriers to entry for veterans looking to join the civilian aviation workforce?

And, for the record, Mr. Chairman, my mama flew an airplane during the Second World War. She is a friend of then-Senator Cohen in the State legislature, now Representative Cohen, and she was exceptional, and as the war was waning she was encouraged to go elsewhere because they just did not need women pilots apparently.

So if you could answer those questions very quickly, I would appreciate it.

Mr. KAISER. Yes, sir. I believe that the biggest barrier has been hit on a few times: exposure. They don't know that the opportunity is available. They don't know where to find it, and they don't know how to get the training. They don't know who to apply to.

I think companies need to do a better job of recruiting and letting them know that those opportunities are present. So that would be your biggest barrier, is getting it in front of them and showing them the numbers.

Mr. BURCHETT. Thank you.

Thank you, Mr. Chairman. I yield back my time.

Mr. KAHELE. All right, mahalo, Mr. Burchett.

The Chair would now like to recognize Member Brown for 5 minutes.

Mr. BROWN. Thank you, Mr. Chairman.

And I certainly want to thank Chair Larsen for convening this hearing on "Bridging the Gap: Improving Diversity and Inclusion in the U.S. Aviation Workforce."

Mr. Larsen and I serve together on the House Armed Services Committee, and we know that there in the military aviation context, we have not only a shortage of pilots and maintenance and navigators, but certainly a lack of diversity in those military occupational specialties as well.

So I really do appreciate holding this hearing today.

It is critical that we continue to work together to develop a robust and diverse aviation workforce. Unfortunately, the aviation workforce in the United States does not reflect the diversity of the Nation as a whole. A lot of factors contribute to that.

According to the U.S. Bureau of Labor Statistics, 94 percent of all U.S. aircraft pilots and flight engineers are White. We have heard this in our testimony today. These significant discrepancies suggest that increased outreach to underrepresented groups could expand the hiring pool and help meet future workforce needs in the aviation industry.

Mr. Webley, a question for you. In your written testimony you said exposure to aerospace careers can help initiate an individual's desire to pursue a career in the aerospace industry.

So what are the greatest obstacles for the Organization of Black Aerospace Professionals in exposing underrepresented communities to the aerospace industry?

And what are some of the best practices the airline industry still needs to adopt that they haven't yet adopted in order for us to increase diversity in the workforce?

Mr. WEBLEY. Thank you, sir.

I would say actually the biggest barrier to the exposure piece is the mobilization of people to actually connect with the students. We have gone to great lengths, for example, at OBAP to develop a system that allows educators to come to us, request a speaker that can come to their school, match that request with our pool of speakers, check their availability, and do the logistics of actually finding a person to go to that school.

That process seems like it would be simple, but there are thousands and thousands of schools across the country that, frankly, maybe are not aware of organizations like OBAP or other non-profits that are out there.

So, in short, as I said, it is really the logistics of connecting the educator, making sure the educator, number one, knows that there are organizations out there that are willing to do this, and then going through the logistics of connecting people to be able to actually fulfill those needs of educators that want to have professionals in their schools.

So any kind of backend systems that might be able to help out with meeting that requirement, whether it be an FAA website where educators can go and register, make requests, and then send those requests out to different nonprofits that are operating in those areas, anything like that might be a way to approach it.

Mr. BROWN. Well, thank you.

I certainly look forward to continuing to work with you and your organization to see what we might be able to do in Congress to encourage and support that.

On the Armed Services Committee, and I reference the Armed Services Committee because, as you all know on the panel, one in every three pilots in commercial aviation has military experience. It used to be 80 percent back in the 1960s, and while I am always careful because I do not want to lose too many military pilots to the commercial industry, I also know that many of your pilots fly in the Air Force and Naval Reserves or in the Air National Guard.

So, there is a real sort of synergy there between developing more diversity in military aviation and how that can benefit the work.

And one of the things that we are working on in the House Armed Services Committee is a closer relationship between the Air Force particularly, and historically Black colleges and universities.

We have also directed the Secretary of Defense to look at barriers and obstacles for minorities and women to entry into aviation positions, and I hope that when that study becomes available, it may inform what you do as well.

But let me just wrap up by saying thank you to each and every one of you for your commitment to diversifying our workforce. I look forward to working with you so that we are doing on Capitol Hill everything that we need to do so that industry can really lead the way on achieving greater diversity in the aviation industry.

Thank you, Mr. Chairman. I yield back the balance of my time.

Mr. KAHELE. Mahalo, Mr. Brown. The Chair now recognizes Mr. Payne for 5 minutes.

Mr. PAYNE. Thank you, Mr. Chairman.

Mr. Webley, I am pleased to see the push to recruit pilot candidates that are diverse from underserved communities. However, there are more employment opportunities in the aviation sector than being a pilot. There are executives, engineers, air traffic controllers, coworkers.

The push for diversity must include the other opportunities. How do we increase diversity for these employment opportunities, and what can Congress do to assist?

Mr. WEBLEY. Thank you, Congressman, for that question.

And I guess I would just start it by—

[Audio malfunction.]

Mr. PAYNE. We cannot hear you.

Mr. WEBLEY. Sorry. Are you not hearing me anymore?

Mr. PAYNE. Yes. Now we hear you. Go ahead.

Mr. WEBLEY. OK. I apologize. So I will be quick.

I was just going to say to your point, OBAP started out as the Organization of Black Airline Pilots. Ten years ago, we changed our name to the Organization of Black Aerospace Professionals to address exactly what you are talking about.

Probably for every pilot job, there are probably 100 other jobs in the aerospace professions that are available. So we are definitely focused at OBAP on trying to expand the opportunities that are out there.

I think some of the ways that we could approach this from a congressional standpoint is to expand opportunities such as the Workforce Development Grants that were announced earlier this year.

On the pilot side, there was the pilot and unmanned aerial systems operator grant, and then there was one for mechanics, but that does not address all of the other career professions that are out there.

So I would say more diversity within those grant programs, additional funding for those grant programs so that organizations such as our organization can continue to do programming particularly for youth that is not focused on pilot careers, such as space, engineering, maintenance, technology, et cetera.

Mr. PAYNE. Excellent, and I look forward to speaking to you in the future also about the unmanned aerial space sector. I work with the African-American Consortium of Drone Operators, so I want to make sure they are connected to you as well.

But thank you for your answer.

Captain Zapata-Cardone, encouraging young students to pursue a career in aviation is one of the best ways to bring a new generation into the field. Like you, I believe that increasing educational financial aid will allow more students, especially those from underserved communities, to pursue a career in aviation.

If we do not increase financial aid, what will be the consequence?

Ms. ZAPATA-CARDONE. Thank you for that question, Representative Payne.

The consequence is very simple. As everyone has mentioned, we are not going to get that diversity, equity, and inclusion within the airline industry and the aerospace industry if we do not increase the financial aid. That is unfortunate.

We can only do so much. All of our organizations can only do so much. As Mr. Webley described, we get requests all the time to go and speak to schools, but we are very limited. There are not that many Latino pilots that can go to these schools. Exposure is huge.

The other thing is gatekeepers. A lot of guidance counselors out there do not realize that there are so many careers that are in the aviation industry that are available to their students.

I can just quickly say that when I talked about wanting to be a pilot or a flight attendant even when I was a teenager, I was laughed at.

Granted, you cannot see this because I am 5 feet tall and I am sitting down and I wear glasses. So the military was not an option for me either to become a pilot, but even when I finally became aware that I could become a civilian pilot, the financial cost almost made me walk away.

I am lucky that I had parents that were able to support me and able to cosign loans for me, lend me money, and my own hard work of saving up money for all of the certificates and ratings, but it was overwhelming, and there were several times I almost left aviation because of the overwhelming financial barrier that is there.

Mr. PAYNE. Thank you so much.

And, Dr. Lutte, if the aviation industry does not voluntarily provide data for metrics such as race and ethnicity or occupation level, do you think that Congress should require it?

Ms. LUTTE. Yes, I do. The short answer is yes.

Again, how do we know whether we are moving the numbers if we do not know where we are at?

Some of the racial, ethnicity data that we all talked about this morning all came from the BLS, which is a fine source, but it could easily come from a more defined source, if you will, by adding it to the FAA airman certification data.

So yes. The answer is yes.

Mr. PAYNE. I yield back the balance of my time. Thank you for the short answer.

Mr. KAHELE. Mahalo, Mr. Payne. The Chair now recognizes Ms. Titus for 5 minutes.

Ms. TITUS. Thank you very much.

I just heard Captain Zapata-Cardone mention about being short and wearing glasses. I appreciate that, but I want to continue that kind of discussion.

We have seen where outdated regulations really discriminate against women, minorities often. Sometimes it is height. Sometimes it is weight. Sometimes it is hairdo or style.

I wonder if you could comment about how those regulations may have changed over time or what we can do to push the industry in that direction so people are not discriminated against for artificial kinds of reasons or cultural biases.

Ms. ZAPATA-CARDONE. And I am assuming that question was for me.

Ms. TITUS. Yes. I am sorry.

Ms. ZAPATA-CARDONE. OK. Thank you, Representative Titus.

Yes, obviously regulations are there for certain reasons. Obviously, in the military, military jets are built for a certain stature. I did not meet that requirement, and I do not hold the military in any kind of contempt or upset about that because that is just the way it is.

Certain regulations do need to be enforced for safety, and obviously back then you needed 20/20 vision. I believe the military has relaxed their requirements for vision since then.

But as far as the other, like you said, stature or hairdos, obviously that is the work of every company's DEI to understand that all hair is professional, and what I mean by this, and I cannot speak because I am not a Black woman and I want to give this to Ms. Gibbs, but oftentimes women that are African American, they are the ones that often suffer from this bias of hair not being professional.

I am very lucky. I have never suffered from that, but as far as regulations, obviously I was able to become a flight attendant for another airline. They had done away with their stature requirements, and it was actually at that airline that I started meeting female pilots. So I am forever grateful for that job that I started meeting female pilots and they mentored me and put me on this path to becoming a pilot.

But obviously the work needs to be done at the companies for diversity, equity, and inclusion and recognizing that everyone looks a little differently. Our hair is all going to look different. That does not make us unprofessional.

Ms. TITUS. Ms. Gibbs, do you want to comment on that?

Ms. GIBBS. Sure. I am proud to say that we recently just revamped our entire uniform policy to make it more inclusive, to remove bias, to acknowledge the differences in our skin and our hair and celebrate those things.

So, we really worked to ensure that there is no longer a bias around all of the uniform policy.

The other thing that I think is important is we have to realize that culturally as we bring more people into the fold, that there is going to be change and transition, and how do you ensure that there is not bias? That is making it part of policy.

If you don't change policy and you leave it to interpretation, then you often leave yourself open for bias to come in and for people to be penalized for the way their hair looks or the way they might be wearing their garb that is native to their culture, their religion.

So, we really wanted to remove those biases and allow our crewmembers to have the opportunity to express themselves and to really redefine what professionalism looks like.

Ms. TITUS. Thank you. That is great.

I recall a time when flight attendants all had to look like Barbie dolls, and even Mattel has expanded what Barbie looks like. So I am glad the airlines are doing the same thing.

Just briefly, we have heard about increasing the opportunities for STEM fields for students and minority students. I have been working on something. There is a way to fund that and that is using the H-1B visas. These are for foreign workers in high-tech sectors.

If we could use a little more of that funding and designate it for minority-serving or historically Black colleges and so that it would go specifically for teaching STEM to those students, I think that is a way to help build that population as well as the things like reducing student loan and Pell grants.

Would you generally agree that might be a good idea? Anybody?

Ms. GIBBS. We absolutely agree. That is definitely a way to introduce them, to support colleges, but we have to start younger. We have to get the kids when they are younger so that they grow up loving aviation.

So how do you take some of that funding and make STEM programs that are geared toward education that are really targeting younger students?

Ms. TITUS. That is true. We found that if you do not start by junior high, you have lost them. So maybe we need not just higher education but public K through 12.

Thank you, Mr. Chairman. I yield back.

Mr. KAHELE. Mahalo. The Chair now recognizes Member Lynch for 5 minutes.

Mr. LYNCH. Thank you, Mr. Chairman.

Ms. Titus just stole my question or comment.

I am former president of the Ironworkers Union in Boston, and we adopted a program with women in construction to try to get women and racial minorities into the unions. We thought it made us a stronger union when our membership reflected the entire city of Boston.

And thankfully, they have made leaps and bounds, and now we've had women in leadership positions in that union over the past 30 years. So they have done a very good job of that.

But what Ms. Titus and Ms. Gibbs have talked about, I also founded a charter school based on STEM. It is one of the most diverse charter schools in the city of Boston, but we really, really have to get in there early.

Our charter school is 5th grade through 12th grade, but you know, I struggle because when we put it out, we had 3 English positions that were open, and we had about 140 applicants, but we had 3 math and science positions open and we got 11 applications because industry is just stealing that talent.

I am just wondering. Is there a way? Can we establish, like, academic chairs that would pay a stipend or a bonus to math and science and STEM instructors and teachers to keep them in the schools at those young ages so we can actually prepare these young

men and women to get into STEM-focused professions and really to open up the widest opportunity for them as they are educated?

I am just wondering. I am trying everything to try to get resources to put those teachers in those schools to prepare these young people, and I am struggling. I have had limited success.

Ms. Gibbs, you seem to be all over this issue. I wonder if you might have some thoughts on that.

Ms. GIBBS. I definitely think that offering stipends for our educators to stay in the school is important, but there are also so many programs to get college students who are about to graduate—how do you get them into schools?

So there are several programs that nonprofit organizations that work specifically with that target audience that you are talking about, and so capturing those students while they are right out of school, energetic and have a lot of ideas, and bringing them into charter schools and helping them get planted in their field.

You might not keep them forever, but you will have them when they first graduate. So I think that is really one of the ways to continue to look at bringing STEM education to life for younger students.

And you cannot just do chalk and talk. You have to really show all of the opportunities within STEM and all of the opportunities for science, technology, engineering, and math.

And one of the ways to do that is to bring in careers and let people see the things that they could do if they pursue some of these avenues.

So good luck, but I think definitely going after some college students and looking at the nonprofit programs that exist for that reason will be helpful.

Mr. LYNCH. Thank you.

Ms. Zapata, as a union sister—and I appreciate that, you are right upfront on that—do you think the unions have a role to play here? Is there something ALPA could do, or the Machinists Union, to diversify the workforce?

Ms. ZAPATA-CARDONE. Absolutely. ALPA has created the President's Committee for Diversity and Inclusion, which I am a part of, and we are working with all of the organization, Latino Pilots Association, OBAP, Sisters of the Skies, Women in Aviation, in order to collaborate, to reach out to these communities and show all of these young people.

And it has been said over and over again. We have to get them at the grade school level to get them inspired to join the aviation and aerospace industry, but we are working together in order to diversify what our flight decks look like, to better represent what the United States actually looks like.

Mr. LYNCH. Well, that is great.

My time has basically expired. So I want to thank you, all of the witnesses, for your willingness to help the committee with its work.

Thank you, Mr. Chairman. I yield back.

Mr. KAHELE. Mahalo, Mr. Lynch. The Chair would like to now recognize Representative Johnson of Georgia.

[Pause.]

Mr. KAHELE. Representative Johnson?

Mr. JOHNSON OF GEORGIA. Thank you, Mr. Chair, for holding this hearing.

And thank you to the witnesses for your time and for your testimony.

Since the Wright Brothers first took to the skies at the turn of the 20th century, the dual goals of human aerospace travel and equality in America have rested on the horizon, the same as they do with Jeff Bezos and other billionaires venturing into space. This issue of equality and equity still looms large like the Earth in front of a spaceship and those in it.

The dual goals of aerospace travel and equality in America have rested on the horizon. More than a century later, one dream has been achieved while the other woefully lags. Americans of color and women are severely underrepresented among pilots and flight engineers, and they are absent from leadership positions across the aviation industry.

Racial injustice must be rooted out of every enterprise of American life.

Ms. Gibbs, corporate responsibility is not just an industry buzzword. It is essential to a more just, fair, and prosperous country.

America's companies large and small must lead by example and be a part of the solution. Unconscious bias in the training and hiring processes has long stymied diversity in the workplace.

However, you state that JetBlue has revamped its hiring process to reduce unconscious bias. What specific changes have been made to the hiring process, and how do those changes advance the goal of mitigating unintended discrimination?

Ms. GIBBS. Thank you for your question.

So we have two initiatives that we have put forth recently. One is Blue Select, and that is a required training program for how we interview, designated to reduce bias in the interview process.

And so we reduce inherent bias by having a structured interview process where we define the competencies that we want to evaluate to advance the interview. So if you meet competencies, we cannot interject personal opinion. And so we really want to make sure that everyone is being interviewed using the Blue Select process.

That makes sure that we are putting forth everybody on an equal playing field and advancing them solely based on competencies.

The other thing that we are doing to increase diversity in leadership is the Diverse Slate initiative. And so historically for officers and above or directors and above, about 50 percent of the candidates have been from underrepresented minority groups.

And so how do you continually make sure that that number is higher?

And then how do you advance those people?

So if you present more opportunities, more diversity, we believe that will give us an opportunity to select the best candidate from a diverse pool of people.

Mr. JOHNSON OF GEORGIA. All right. Thank you.

Ms. GIBBS. And using this process, that helps with mitigating bias.

Mr. JOHNSON OF GEORGIA. OK. Thank you for that answer.



Mr. Kaiser, airline companies are generally successful at integrating former military pilots into their ranks. What efforts then are underway to integrate military personnel who worked in support roles, such as mechanics and crewmembers, into civilian aviation?

And can you tell us about what your company is doing in that regard to ensure equity for underrepresented persons?

Mr. KAISER. Yes, sir. So I am not qualified to speak on behalf of the industry and companies and what their individual programs are.

I can speak to our program and what we are doing and who we are targeting. We go after everybody in the military. It is no secret that you get a huge, diverse group that joins the military, and they are looking at it as a step up in society, right?

When you come from a home where you have seen people struggle, you look at the military as that window of hope that is going to give you an opportunity to advance myself and my family, again, have a better life.

And I think what we need to focus on is actually, you know, I have heard measuring and following through, but it is the following through that needs to happen. We need to actually ensure that it is a stepping up into that next career regardless of what that next career is and where that person came from.

Mr. JOHNSON OF GEORGIA. Thank you. My time has expired and I yield back.

Mr. KAHELE. Mahalo, Mr. Johnson.

The Chair would like to now recognize Mr. Cohen for 5 minutes.

Mr. COHEN. Thank you. Thank you, Mr. Chairman.

I want to thank the chairman of the full committee and the chairman of the subcommittee for having this hearing which is so important.

It is amazing the lack of diversity that we see in the aeronautics industry in personnel, and we need to do what we can to improve that.

The witnesses have talked about the fact that less than 5 percent of airline pilots are women; 3.4 percent are African American; 5.4 percent of aircraft technicians are women; and only 10.8 percent of aircraft technicians are African American. Less than one-half of 1 percent of total professional pilots are Black women.

These are staggering discrepancies, and they need to be rectified.

Mr. Webley, you are the chair of the board of directors of the Organization of Black Aerospace Professionals. As a distribution hub of America, my district, Memphis, Tennessee, claims an extensive network of transportation infrastructure that contributes heavily to our Nation's aviation industry.

Home to the Memphis International Airport, which houses the FedEx super hub, and our local economy depends on a strong aviation system, and we have got a majority African-American population in our city. Sixty-four percent of that population is African American.

It is important our aviation professionals are representative of our community. In Olive Branch, Mississippi, your organization opened a Lieutenant Colonel Luke Weathers, Jr. Flight Academy, with a goal to train more than 225 Memphis-area high school stu-

dents to become certified flight instructors or secure private instrument ratings by the year 2025.

This is special to me because Lieutenant Colonel Weathers, who was a member of the famous Tuskegee Airmen who flew 112 combat missions during World War II, was the first African-American air traffic controller for the Federal Aviation Administration at the Memphis airport. He is honored with a plaque at the airport.

I was honored to attend his funeral in Memphis and to attend his burial at Arlington Cemetery where he was buried with full honors, a true American hero and a great aviation pioneer.

Can you speak to the importance of this flight academy named in Lieutenant Weathers' honor in Memphis and how it has helped facilitate the aviation opportunities to students in Memphis area schools and other individuals in the mid-South region?

Mr. WEBLEY. Thank you, sir. I really appreciate getting this question.

The Luke Weathers Flight Academy which you mentioned is absolutely one of the things that we are most proud of at OBAP. It is one of the very few truly nonprofit organizations that is not a university that is focused 100 percent on producing more pilots from underrepresented communities, specifically like you said, the Greater Memphis area.

One of the things I think that makes Luke Weathers the most unique in the area is, again, we are not focused on generating revenue through that program. We measure our success by the impact in outcomes that come from it.

We consider our students to be members. They are part of our family. So the moment that they walk out of the door, out of the flight school, we still continue to care and be concerned about their well-being, whether it is their physical, emotional, spiritual well-being, et cetera.

So that is one of the most important things about what Luke Weathers is doing. With our partnerships through FedEx and the Greater Memphis School District, Shelby County School District, we have been able to train and educate dozens of new pilots.

Specifically, right now, we have 23 young Black women in training right now at Luke Weathers, which I do not think that number is matched anywhere else in the country in terms of effort to get that number you talked about, one-half of 1 percent, to increase that number.

So, yes, we are very proud of it.

Mr. COHEN. Thank you for your work, your organization's work, and honoring Lieutenant Colonel Weathers.

Federal Express has got an outstanding record on diversity efforts, and they have been recognized for that over the years, both in pilot recruiting, diversity inclusion, aircraft mechanic recruiting, and other areas. So I am pleased that you are working with them.

Let me ask the ladies on the panel, Captain Zapata-Cardone and Ms. Lutte.

Is there any reason that women are institutionally neglected in the pipeline of airline personnel, that they are less involved in the military, less likely to be selected as military pilots that oftentimes filter into the commercial aviation or other areas where they have a larger hurdle to overcome to get into the industry?

Ms. ZAPATA-CARDONE. Thank you for that question.

The time is up. So I would like to ask if you would like for Dr. Lutte and I to submit a written response to that question.

Mr. COHEN. Time is up, but time is never up for two outstanding witnesses to respond to a question.

Ms. ZAPATA-CARDONE. Well, thank you.

Obviously, yes, and I always refer to Dr. Lutte's research that there are a lot of biases. There are a lot of unconscious biases, outright discrimination against women, and this is not just in the military.

And I have never been in the military. So I cannot speak as a military pilot, but just in my own experiences, being dismissed. One of the funniest ones is I was told that I was not strong enough to be a pilot, that the aircraft would overpower me and I would never be able to recover from a deep stall, which is absolutely ludicrous.

There are biases because I am a Latina. People knew that my parents were Colombian. Many people jokingly, but it still hurt, asked if I was becoming a pilot so I could do drug runs from Colombia back to the United States, and these are all micro aggressions that add up, and that is speaking from my experience.

Listening to other women speak about their experiences, they have experienced different discrimination factors, but we all have the same story, that we all persevered. We tried not to listen to these biases and continue on.

And then I will pass this off to Dr. Lutte.

Ms. LUTTE. Well, thank you, Captain Zapata-Cardone.

You perfectly described the experiences that many, many, many women in aviation have, having read hundreds if not thousands of survey responses on this topic. So you are exactly right.

So to answer the question, yes, there are significant barriers, but this particular barrier, again, is one of the greatest, and if we do not address this issue, we do not move the needle.

And that starts from the top with visible, loud commitment from leadership and, quite frankly, setting an environment of respect for all and zero tolerance for anything else, not just in words, but in action.

Mr. COHEN. I want to thank the witnesses and thank the chairman for his indulgence in allowing me the extraordinary time, and I yield back the balance of my time.

Mr. KAHELE. No problem, Mr. Cohen.

The Chair now recognizes Member Norton for 5 minutes.

Ms. NORTON. Thank you, Mr. Chairman.

Can everybody hear me?

Mr. KAHELE. Yes, ma'am.

Ms. NORTON. My question is for Dr. Lutte.

Excuse me? Can you hear me?

Mr. KAHELE. Yes, ma'am, we can hear you. Can you repeat your question and who it was directed towards?

Ms. NORTON. Dr. Rebecca Lutte.

Dr. Lutte, your testimony outlines the challenges that women have faced in balancing work and family. I would be interested in any concrete family-friendly policies that you think the aviation in-

dustry should adopt to retain and to ensure the steadiness of the career advancement of their female workforce.

Ms. LUTTE. Thank you for that question, Representative Norton.

We know we talked about culture and bias and those factors, but as an example, in one survey of women in aviation, 38 percent of the women said they had thought about leaving the industry. So if we cannot hold on to who we have, we are not going to increase the numbers.

And in a followup question asking why, the number one reason most often given was the challenge of work-family balance, followed by that workplace culture that we were just talking about with Captain Zapata-Cardone.

So we know it is an issue. We know it needs to be addressed. So how do we address it? We look at things like paid family leave, maternity and paternity leave, flexible schedules, and recognizing, you know, unique ways.

We certainly learned a lot in the last year on scheduling and flexibility, but we have also seen what is referred to as the "shecession" in our industry with disproportionately losing women in the workforce because they take up more of the burden of work at home and childcare and caregiving. So we need to recognize that as well.

So I think it is important, and I appreciate the question that we look at family policies like paid family leave and flexible scheduling to address some of these issues.

Ms. NORTON. Thank you.

This is a question for Mr. Webley because I am interested in your testimony. You describe your organization's school outreach efforts.

So I would be interested in knowing how many school visits does your network typically conduct, let's say, in a year and how many do you think would be needed to effectively build awareness about aviation career opportunities?

Mr. WEBLEY. Thank you, Representative, for the question.

So I could give you pre-COVID numbers because obviously with things that happened with COVID, being physically in schools no longer became an option for many of our members.

So most recent data from 2019, again, that is a pre-COVID number. By the end of February, we had reached 50,000 students, and we were on track to reach 100,000 students in a single year.

Our program to date has reached well over 200,000 students across the country. I do not have my total number of schools in front of me, but I believe it is somewhere in the range of 250 schools, and that is just 1 organization.

A 100-percent volunteer program. We receive no dollars to operate that program. That is purely our members volunteering to go out and do the good work.

So, it would be very difficult for me to estimate how many more schools, but I can say that year over year, the program continues to grow, and what I would attribute that to is the more educators find out about it, the more they want us to participate in that program.

So, I would say the growth is probably limitless especially if you start talking about outside of major city centers where it is easier

to find volunteers. If we start going into smaller, midsize cities, rural communities, things of that nature, it probably is a limitless amount of educators that want to participate.

Ms. NORTON. Thank you very much. I yield.

Mr. KAHELE. All right. Do I have any more to testify? Just myself.

OK. Well, I am going to yield myself 5 minutes then.

And first of all, I want to thank the chair and the ranking member for having this committee hearing. I think it is something very, very important.

And I also want to thank the organizations that inspire future pilots and mechanics and children across the country to enter the aviation and aeronautics sector, organizations like AOPA and ALPA and OBAP and Women in Aviation, and the thousands of pilots across the country who sit at career fairs and aviation trade shows and military air shows and so many that volunteer to inspire the next generation of aviators.

I also want to thank Captain Zapata-Cardone for your testimony. I think it was spot on, and as someone who is a Native Hawaiian pilot, recognizing a Latina pilot that just decades ago was very few and far to come by, it is quite an accomplishment of what you have been able to do, and thank you for sharing your story.

I think what you highlighted in your testimony, specifically the financial challenges of seeking an airline career or a highly skilled aviation profession career is something that we as a Congress can address.

You talked about the Federal education aid program, such as the Pell grants and programs that in many cases are tied to accreditation. You talked about the GI bill and its expansion, and we know that unless you have a private pilot's license, you cannot use your GI bill for flight training programs.

You talked about student loan cancellation and student loan forgiveness. I think these are all things we can do to incentivize aviation throughout the country.

And so, I want to thank you for your testimony but direct the funding component of your testimony to Dr. Lutte at the University of Nebraska and their Omaha Aviation Institution, which is an accredited program.

Do you have any suggestions on how either the public or the private sector can increase the financial incentives or the financial opportunities for students, especially from minority and underrepresented communities, to pursue careers in aviation, to put them on pathways to get into American cockpits across the country?

Ms. LUTTE. Thank you for that question.

In addition to the financial aid that has already been discussed, there are a couple of areas to talk about in terms of cost. One, of course, is scholarships, acknowledging that organizations like Women in Aviation International has given out over \$14½ million in scholarships in their existence.

But the other, to your point, is industry buying in and ponying up and putting some money on the table. And we are seeing some good examples of that. The United Aviate Academy, you know, if you get accepted to the academy, they pay for your private pilot license.

Another one that I am really excited about is AAR, which is a collaboration between a global aviation services and maintenance provider, education, Department of Labor grant funding, and labor unions to help provide, at no charge, training for sheet metal courses, for example.

And that program that they do is actually targeted at Chicago at the South Side, and it is almost entirely targeted to underrepresented groups.

So that is a collaboration between education and industry where you are targeting underrepresented groups. They are getting paid skill, learn to earn, if you will, and they will take that skill set and be able to go right into AAR or into other aviation industry, and they are beginning to stack that skill, continuing to work with education to continue to add to their credentials.

So I think industry collaboration is a really important part of the puzzle for the cost issue.

Mr. KAHELE. Are you seeing students that attend the program at the University of Nebraska, that in addition to their college tuition and all the fees associated with that, have to cover the cost of their flight provider fees, which in cases can run from \$40,000 a year up to \$85,000 a year?

Are you seeing that they are having issues utilizing the Pell grant or other Federal financial aid programs that could be, I guess, opened up more to aviation career fields?

Ms. LUTTE. Without a doubt, yes. So we know, for example, the Pell grant program doesn't even cover the cost really of tuition these days. So it is what, \$6,400 max, I think, for the year. Our in-state tuition runs about \$19,000 with housing, and that is not counting flight on top of that.

So then you are going to add, say, \$50,000 in flight training cost on top of your tuition, housing, fees, and everything else. It is not enough.

We absolutely need to increase access to Pell grants and financial aid funding for students to be successful, and that includes being able to target a wide variety and diversity of students.

Mr. KAHELE. All right. Thank you for that answer, and it looks like our time is up.

So Mr. Graves.

Mr. GRAVES OF LOUISIANA. Thank you, Mr. Chairman.

I want to thank all of the witnesses for being here today and, most importantly, helping us identify some of the obstacles that are impediments into working to help improve the diversity of our workforce.

But as I mentioned in my opening statement, just making sure that we have a workforce that is there to meet the demands moving forward, as the chairman has noted.

So, Mr. Chairman, thank you very much, and I yield back.

Mr. KAHELE. All right. And with that, we are adjourned. Thank you so much.

[Whereupon, at 1:03 p.m., the subcommittee was adjourned.]

## SUBMISSIONS FOR THE RECORD

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### **Prepared Statement of Hon. Sam Graves, a Representative in Congress from the State of Missouri, and Ranking Member, Committee on Transportation and Infrastructure**

Thank you, Chair Larsen and Ranking Member Graves, and thank you to our witnesses for being here today.

I'm pleased the Chair has called this hearing to discuss the importance of Congress, the FAA, and industry stakeholders working together to ensure a strong pipeline of training and opportunities for people seeking careers in aerospace.

We held a similar hearing during last Congress, right before the COVID-19 pandemic took hold.

The issue of developing a skilled and diverse workforce was critical then and is even more critical now.

This Committee worked in a bipartisan manner to pass the FAA Reauthorization Act of 2018, which included the large and comprehensive aviation workforce title, including provisions intended to improve diversity in the industry.

The aviation industry has stepped up to the plate as well, and is investing significant resources to develop a pipeline of talented and diverse workers.

For example, the Aircraft Owners and Pilots Association (AOPA) has created a high school STEM curriculum that is being taught in 28 states in over 200 high schools across the country.

More than 45 percent of the participants are students of color.

There are many other examples of ways industry, labor, and academia are recruiting and training the workforce of the future.

I look forward to hearing from our witnesses about how initiatives like AOPA's are working and how they will help the United States maintain its competitive advantage in aerospace.

Thank you, Chair Larsen. I yield back.

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### **Prepared Statement of Hon. Eddie Bernice Johnson, a Representative in Congress from the State of Texas**

Thank you, Subcommittee Chairman Larsen and Ranking Member Graves for holding today's hearing, which will allow our committee to delve into prospective paths to increase minority participation in the aviation industry. I would like to thank our outstanding witnesses for testifying, and my colleagues on the Aviation Subcommittee for engaging in this critical discussion.

Both in my capacity as Chairwoman of the Committee on Science, Space and Technology and the Committee on Transportation and Infrastructure, increasing access for women and minorities to enter and excel in STEM related occupations is one of my top priorities. Certainly, the statistics regarding the lack of minorities and women in STEM fields and in aviation related professions specifically is alarming. In the aviation sector, the Bureau of Labor Statistics reports that 94 percent of all U.S. aircraft pilots and flight engineers are white males, while most airline executives and senior leadership and management positions are occupied primarily by white males as well. Clearly, this is an issue that needs to be addressed immediately.

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**Prepared Statement of Faye Malarkey Black, President and Chief Executive Officer, Regional Airline Association, Submitted for the Record by Hon. Garret Graves**

The Regional Airline Association (RAA) thanks the U.S. House Committee on Transportation & Infrastructure, Subcommittee on Aviation for holding the hearing titled, "Bridging the Gap: Improving Diversity and Inclusion in the U.S. Aviation Workforce." RAA submits this statement for the record to inform the Committee on the regional airline industry's efforts to foster and support a diverse and inclusive aviation workforce and urge additional partnership between the federal government and the aviation industry to promote a robust, diverse, and well-trained aviation workforce.

The Regional Airline Association has seventeen airline members and, collectively, our industry employs approximately 70,000 individuals who work every day to deliver passengers and cargo to their destinations and uphold the highest principles and practices of aviation safety. As has been well documented, the United States is facing substantial workforce shortages for aviation maintenance technicians and pilots in the immediate and near-term, and much of the long-term health of the regional airline industry rests on our collective ability to resolve these shortages. It is RAA's position that we will only be able to meet this objective by recruiting and attracting more diverse people from a variety of backgrounds into our industry. In addition, our members are committed to diversity and inclusion as a both a deeply held value and a long-term business strategy, which is embedded within their hiring practices for all career paths and supported by business operations that foster a work environment where employees can embrace who they are and freely share their varied backgrounds, experiences and perspectives. Broadly, efforts to reach and attract diverse candidates focus on three interrelated strategies, which include financial assistance for education and training; outreach, partnerships, and pathway programs; and representation.

As the industry sector that hires more first year pilots than any other, we have a unique perspective to share. While today's statement presents only a small sampling of the many programs underway today to foster diversity and inclusion among our member airlines, these examples illustrate how outreach to underrepresented populations as well as inclusion and support programs at airlines present two key elements of building and maintaining a diverse aviation workforce. We also hope to draw attention to a missing element, highlighting a key role for the US Government to play in leveling the playing field for aspiring aviators by ensuring equitable access to training through rightsized student loans. To succeed in building a diverse and vibrant aviation workforce, aviation candidates must be supported at every step, from early career aspirations, through education and training and into a welcoming and inclusive post-hire environment.

Airlines have made continuous investments in these arenas, making considerable headway through programs designed to spark career interest among candidates who have been historically underrepresented in the career, while offering rewarding careers to a diverse workforce. Nonetheless, no amount of generated interest, and no amount of investment in a post-hire environment, can make up for the tremendous disconnect that transpires when some students and families have the financial wherewithal to access training, while others do not. Airlines are stepping in here as well, with moves that garner headlines, such as the development of airline owned or sponsored flight training institutions with deep tuition subsidies and airline-backed lending, as well as other programs like scholarships, tuition reimbursements and numerous other steps to help more pilots afford training. Although these programs are important and helpful, they cannot begin to address the cost barriers facing students from economically disadvantaged backgrounds and cannot fully remedy the fact that students with wealth or access to private capital can fund or finance the training required for this lucrative career, but students without those means cannot. This inequity in training access is a fundamental public policy problem that must be addressed to successfully foster a diverse future workforce.

**FINANCIAL ASSISTANCE FOR FLIGHT EDUCATION & TRAINING**

The high cost of flight education and training prevents many individuals from becoming pilots when they cannot pay for the training outright or qualify for private loans. The high costs of pilot training pose a particular barrier for students from lower income households. According to the Brookings Institute, the median white

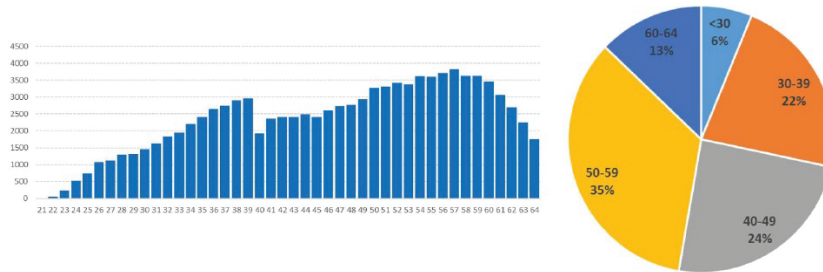


household has a net worth ten times that of the median black household<sup>1</sup>. This persistent racial wealth gap means the burden of cost, as a barrier to pilot training access, falls more heavily on black families than white families. The resulting disparity in pilot training access impedes the goal of achieving diversity in the aviation workforce. These objectives have been of paramount importance to industry and lawmakers for decades, yet progress has been unacceptably slow. According to the Census Bureau Labor Force Statistics Demographic Data for Pilots & Flight Engineers<sup>2</sup>, the pilot profession is not diverse—with 94% of the profession identifying as White, 5.6 percent Female, 3.4 percent Black, 2.2 percent Asian and 5 percent Hispanic. Even where economic background is not statistically associated with an underrepresented population, financial barriers that deter or prevent some candidates from pursuing training further constricts an already unacceptably narrow pool of potential candidates.

The disparities outlined above showcase some of the financial obstacles that contribute to an unacceptable lack of diversity within pilot ranks. This not only stands as an affront to the goals of a modern, vibrant and inclusive workforce, it imperils the financial health of the aviation industry. According to Boeing's 2020 Pilot and Technician Outlook, North America will need more than 200,000 new pilots over the next 20 years, or approximately 10,000 new pilots each year. Contributing to this demand are age-driven retirements; fully 47 percent of today's qualified commercial airline pilot workforce face mandatory retirement within the next fifteen years and roughly 13 percent of all ATP AMEL airmen with valid 1st class medicals will reach their federally mandated age-65 retirement age within five years (Figure A).

As we approach these retirements, and despite a strong job outlook and median pay of \$160,970 for airline pilots<sup>3</sup>, far too few new pilots are entering the profession to meet the projected demand. In fact, according to the U.S. Civil Airmen Statistics, only 6,664 Airline Transport Pilot (ATP) and Restricted (R-ATP) certificates were issued in 2019 and just 3,999 such certificates were issued in 2020. The monthly average through May 2021 was 257 new certificates, which is 288 lower than the average in 2019. Should production continue at current rates, 2021 is forecast to produce just 3,086 new ATP AMEL airmen; which is 53 percent fewer than 2019 (Figure B). While low certificate production in 2020 certainly reflects COVID-19 impacts, issuances remain depressed as of mid-year 2021. While these numbers may indicate some programs have been slow to recover from the pandemic, if certificate issuances do not recover more fully in the coming months, concern for a future qualified workforce only increases. In either case, high demand for airline pilots presents an additional challenge within the training pipeline, as flight schools face difficulty retaining their instructor workforce during periods of intense airline hiring.

**Figure A. ATP AMEL Pilots with Valid 1<sup>st</sup> Class Medicals by Age**

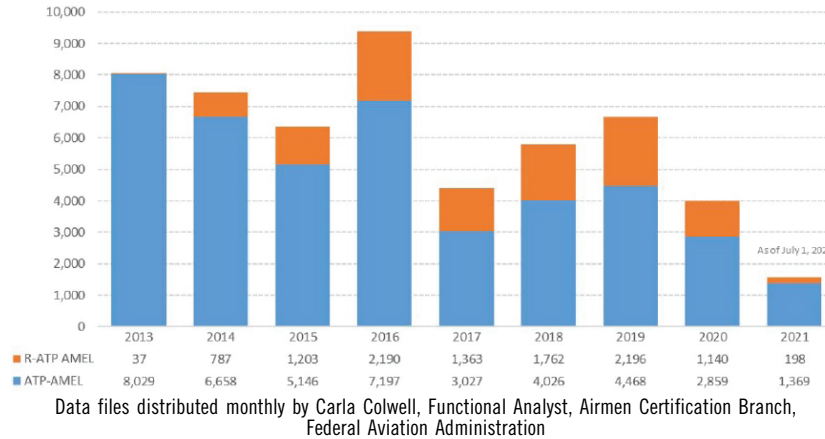


Data files distributed monthly by Carla Colwell, Functional Analyst, Airmen Certification Branch, Federal Aviation Administration

<sup>1</sup> See <https://www.brookings.edu/blog/brookings-now/2021/01/08/charts-of-the-week-the-racial-wealth-gap-the-middle-class-income-slump/>

<sup>2</sup> See Labor Force Statistics from the Current Population Survey, Bureau of Labor Statistics: <https://www.bls.gov/cps/cpsaat11.htm>

<sup>3</sup> See Occupation Employment and Wage Statistics, May 2020, Bureau of Labor Statistics, Airline Pilots, Copilots, and Flight Engineers: <https://www.bls.gov/oes/current/oes532011.htm>

**Figure B. Original Issuance ATP AMEL and R-ATP AMEL**

To meet industry demand and create a more diverse workforce, flight education and training must be made more accessible to a larger population of candidates, especially those who are underrepresented in the profession. To do this, it is important to view the costs of training in the context of higher education assistance available to students today. Due to the cost of operating aircraft used in training programs, associated insurance requirements and the cost of flight training instruction, flight training typically adds \$80,000 to the cost of a four-year degree, for a total of at least \$120,000 for a professional pilot degree at public, in-state institution<sup>4</sup>. Unlike graduate students who can borrow additional student loans to support their professional studies and certifications, individuals enrolled in flight education and training programs are capped at an undergraduate student loan ceiling of \$57,500 for an independent student and \$31,000 for a dependent student. Additionally, even if the individual qualifies for the maximum yearly Pell grant award of \$6,345, there remains a substantial aid gap relative to the cost of attendance. To address this gap, RAA and other aviation stakeholders have offered a proposal for increasing the amount of federal student loan aid by \$80,000 for unsubsidized loans and \$42,000 for subsidized loans for individuals enrolled in accredited flight education and training programs. We firmly believe this will help close this aid gap and finally make the pilot profession more diverse and inclusive. Importantly, these additional loans would allow aspiring pilots to easily enroll in Department of Education Income-Driven Repayment plans to ensure that they have affordable loan payments once they graduate. RAA anticipates this proposal will be formally introduced in legislation this year. This is one of the single most important steps the US Government can play in addressing pilot training access disparity for a more inclusive and equitable career and we ask every Member of this Committee for your support for this legislation when introduced.

While the above proposal will benefit all prospective pilots, including Veterans, we want to draw additional attention to hurdles faced by Veterans who wish to use their GI bill benefits to become commercial pilots. These veterans struggle against limitations related to using their benefits for paying for their flight education and training as part of a professional pilot degree. Today, GI bill benefits cannot be used to pay for a private pilot certificate. This certificate is the first step to becoming a commercial airline pilot, and it comes at a cost of between \$10,000 and \$15,000. The inability of the GI bill to cover this cost, especially when it covers all other flight training and education costs associated with a professional pilot degree program, is a disincentive for those who wish to enter the pilot career path. The USG should fully incentivize veterans' participation in this highly lucrative and in-demand profession, and we urge Members of this Committee to work in partnerships with their

<sup>4</sup> See: <https://www.usnews.com/education/best-colleges/paying-for-college/articles/paying-for-college-infographic>

colleagues on the House Committee of Veteran's Affairs to remove this critical impediment so that it is easier for veterans to become commercial pilots.

#### OUTREACH, PARTNERSHIPS, & PATHWAY PROGRAMS

Alongside promoting training access equity, airlines are focusing on outreach to more diverse audiences, attracting candidates to aviation who may not have considered the career without specific outreach designed to include them. As one important means of reaching diverse populations, regional airlines partner with organizations who regularly engage and support underrepresented candidates who are seeking aviation careers, such as the Organization for Black Aviation Professionals, National Gay Pilots Association, Women in Aviation, Sisters of the Skies, Latinos Pilot Association, Professional Asians Pilots Association and others. This engagement includes supporting scholarship programs and attending events with these organizations to educate students on the careers and opportunities available to them. Many of these organizations host career fairs that offer a safe and welcoming environment for members of these communities to speak with potential employers and to even interview for a position within the company. They also host guest speakers to educate employers on awareness of diversity and inclusion issues such as implicit bias in the workforce. RAA members cite close partnerships with these organizations both in physical outreach and as a source of better understanding. Airlines have taken their lead from some of these organizations, through listening sessions with their members and employees.

Carriers also attend and host events at flight schools and collegiate programs with diverse populations, especially in communities that they serve. For example, Cape Air founded a flight training program in Owensboro, Kentucky (a community where they provide the sole source of commercial air service, through the Essential Air Service program) to make flight education and training more hands-on and accessible. Similarly, at Cape Cod Community College in Massachusetts, Cape Air invests in a 24-month airplane maintenance training program to help meet the need for highly skilled technicians, training them in airframe and power plant repair and culminating in certification—including full FAA Certification. Both programs offer further incentives if students join Cape Air after graduation. Additionally, CommutAir has assisted with funding training for Airframe and Powerplant licenses for mechanics along with prepaying for flight training hours for veterans who are transitioning from rotary to fixed wing aircraft. For civilian pilots, the carrier has also paid for certified flight instructor ratings for individuals so that it is easier for them to gain flight hours to qualify as a first officer at a Part 121 air carrier.

Airline outreach is not limited to college-age students; in fact, carriers conduct outreach to students in elementary, middle and high school in diverse school districts to help inspire an interest in aviation career paths. They also participate in aviation summer camps where students tour facilities and aircraft and speak with pilots and senior leaders about their jobs. All RAA members are engaging with their communities, offering opportunities that expose students to aviation. This outreach is also not limited to airlines. One of the most impressive examples of this outreach can be found right here in Washington, through the Aero Club of Washington Foundation. The Foundation enjoys well-deserved support from RAA and many other Washington-area aviation groups for its strong work connecting students in the District of Columbia, who might not otherwise gain any exposure to aviation, with aviation experiences, like touring a flight simulator or control tower or hearing from real, diverse people who have succeeded in aviation. More information about the Foundation is available on its website at <https://www.aeroclub.org/foundation/>.

Service members who are transitioning out of the military and veterans are also highly sought-after employees because they often have transferable skills and training that fits well within the airline industry in addition to the unique life experiences and backgrounds they bring to their work. Carriers regularly conduct outreach on military bases that are near hub locations along with attending job fairs and events and working with staffing agencies and conferences that are specifically for recruiting individuals with a military background. In one example of working with veterans, PSA Airlines has launched a Maintenance Military Transition program for mechanics that are looking to transition through an abbreviated airframe and powerplant course and test to become a mechanic. Experienced and qualified veterans are offered assistance up to \$10,000 which includes the course, testing, and a training stipend.

Additionally, many regional carriers have partnered with larger airlines to create pathway programs where pilots work at a regional airline before they move to a larger carrier. Pathway programs also partner with schools with diverse student populations, including minority serving higher education institutions like Histori-

cally Black Colleges and Hispanic Serving Institutions, as part of their recruitment and outreach efforts. These programs are designed to identify and prepare candidates for careers as pilots. Once admitted to the program, these candidates are mentored by individuals with similar backgrounds and life experiences.

In addition to recruitment and outreach, one of the major attractions of pathway programs for aspiring pilots is that they provide a career path for the individual with guarantees of employment at various stages of their career. For example, at the end of the basic training that provides a pilot with a Commercial Certificate, they will know where they can build time to meet the hours necessary for a Restricted Airline Transport Pilot Certificate. Once that has been achieved, they will have preferred interviews or even a guaranteed seat at a regional airline. Furthermore, the pathway program will specify the time that the pilot will have to spend at the regional airline before an opening at a major airline is made available. The stability offered by pathway programs helps to encourage individuals into the industry by offering pilots career certainty, and a greater ability to predict where and when each step of their career will take place.

Many airline employees have long held aspirations to become pilots; however, like other individuals, the high cost of training has deterred them from recognizing this dream. Some regional carriers like Cape Air for instance have created internal programs to provide financial assistance to cover a portion of their employees' flight training expenses so that they can realize their dream of becoming a pilot. Republic Airways has opened its own flight training school call LIFT (Leadership in Flight Training) Academy that utilizes state of the art equipment and training practices to train the next generation of pilots. Students who successfully complete the career pathway program will have a guaranteed pathway to a career as a pilot at the air carrier. Through this program, Republic subsidizes the cost of the flight training by \$15,000 dropping the tuition from \$90,000 to \$75,000. Supporting LIFT academy is an aviation maintenance apprenticeship program in partnership with the U.S. Department of Labor, apprenticeships will learn as they earn over a thirty-six month period, and upon completion will be ready to begin a career as an Aviation Maintenance Technician.

#### REPRESENTATION

A key element of recruiting and retaining diverse talent is ensuring representation across employee groups. As one RAA member has put it, people want and need to see other people that look like them and share their backgrounds when they choose a career path. Representation is essential for creating a safe space for employees to share their life experiences and perspectives. This challenge is most prevalent and pervasive within the pilot and mechanic ranks, which are overwhelmingly white, male dominated professions. Unfortunately, it is not uncommon to hear women and people of color share stories at career fairs about how they never thought they could become a pilot or mechanic because they never saw someone like them in the role growing up.

In one example of fostering representation, Horizon Airlines is committed to increasing its racial diversity among its leadership to better reflect the diversity in its frontline workforce. They also utilize their internship program to support a diverse pipeline of future employees. While some aviation professions, such as pilot, flight attendant, and maintenance technicians, are better known, there are many other less well-known career paths that are critical to the success of the company. Horizon's most recent intern class was greater than 50 percent BIPOC.

Human Resource Departments for regional air carrier also often have formal goals related to recruiting diverse candidates for open roles and provide tools to leaders to help foster an environment of inclusion. For instance, Cape Air provides managers and leaders with resources to identify signs of implicit biases to help maintain a safe and inclusive workplace for women, people of color, and veterans to feel comfortable sharing their perspectives.

Tools and resources are also provided directly to employees to encourage their continued education and development. Piedmont Airlines utilizes its Employee Resource Groups to drive engagement on diversity and inclusion. In these groups, employees are provided a safe space to exchange best practices, learn, have difficult conversations, network and have fun. Similarly, PSA Airlines utilizes an Inclusion Council to provide insights from employees related to its efforts to create a more inclusive and diverse culture and workforce. Leaders on the Council work towards bringing team members together across employee groups with the aim promoting understanding and embracing differences. They also act as outreach ambassadors for PSA.

Lastly, carriers also highlight the existing diversity within their companies and their commitment to increasing representation through social media engagement, outreach efforts, and utilizing events such as Black History Month in February and Veteran's Day, to raise awareness and foster engagement throughout the company. In addition, carriers encourage their employees to authentically be themselves by showing support for diversity and diverse causes such as Black Lives Matter and Pride. Carriers emphasize that efforts must not simply follow headlines, nor should be limited to providing commentary at opportune times; instead, carriers are seeking to develop a genuine culture around including and celebrating diverse employee groups—consistently showing that support internally as well as outwardly.

#### CONCLUSION

Thank you for your leadership in holding this critical hearing. The workforce challenges facing the regional airline industry are pressing and threaten the economic health of our industry, but we believe there is also tremendous opportunity to create a more robust and diverse workforce that is representative of the communities we serve. We stand ready to partner with the Committee to support a vibrant, diverse, and inclusive aviation workforce. Thank you for this opportunity to provide our comments.



## APPENDIX

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QUESTIONS FROM HON. EDDIE BERNICE JOHNSON TO REBECCA LUTTE, PH.D., CFII, MEI, ASSOCIATE PROFESSOR, AVIATION INSTITUTE, UNIVERSITY OF NEBRASKA AT OMAHA

*Question 1.* Professor Lutte, as you note in your testimony, the percentage of women in the field of aviation has increased just minimally over the years. In your estimation, what are the underlying reasons you attribute that to?

*ANSWER.* As noted in my testimony [<https://transportation.house.gov/committee-activity/hearings/bridging-the-gap-improving-diversity-and-inclusion-in-the-us-aviation-workforce>], women remain significantly underrepresented in many aviation occupations with representation often less 20%. The greatest gaps exist in senior leadership roles (3%), airline pilots (5%), and maintenance technicians (2.5%). In many classifications, the number of women in aviation has changed by only a percentage point or less in the last 15 years.

Research supports the underlying reasons can be attributed to:

- *Outreach:* Need for additional outreach
  - Should include a “see it, be it” element
  - Emphasis on youth. Age 10 and under is a key age group to target.
  - Provide important “next step” information. Access to clear pathway information is essential. Provide resources/website with pathway information.
  - Outreach should also target those who are “gatekeepers” or influencers such as school counselors, teachers, and parents. These key groups need to be better informed on the pathways to aviation careers through resources/website to provide that information.
  - Numerous excellent youth outreach programs targeting women in aviation exist. Support for expanding these programs and creating additional programs should be provided. Examples include:
    - Women in Aviation Girls in Aviation Day
    - OBAP Girls Launch
    - 99s mentorship program and Let’s Fly Now!
    - Sisters of the Skies Girls Rock Wings
- *Cost of entry*
  - Particularly challenging for those pursuing professional flight careers.
  - Need for increased access to financial aid (grants and loans) for students to cover not only tuition and fees but the added costs associated with aviation programs such as flight training (\$50,000–\$80,000).
  - Expand scholarship opportunities and create resources to increase awareness of available scholarships.
- *Family work balance*
  - A clear challenge for women in aviation that impacts retention is work family balance.
  - Family supportive work policies are needed:
    - Flexible work schedules
    - Paid parental leave to include both maternity and paternity leave
- *Workplace culture:* Need to create a positive environment
  - Negative workplace culture has been identified as a primary deterrent to the recruitment and retention of women in aviation.
  - Need to address gender bias, discrimination, and sexual harassment in the workplace.
    - Education and awareness
    - Zero tolerance policy
    - Create a confidential reporting system
  - Provide communities of support such as employee resource groups
  - Requires leadership commitment to diversity and inclusion
  - Address artifacts/symbols of culture

- Language
- Images in publications, marketing, social media
- Uniforms
- *Lack of Women in Leadership Positions*
  - In the International Aviation Women's Association (IAWA) Soaring Through the Glass Ceiling study<sup>1</sup>, the two most important enablers for the advancement of women in aviation were identified as having more women role models in leadership and ensuring a strong and visible commitment to diversity and inclusion from leadership.
  - Need for mentoring programs
  - Need for sponsorship programs

*Question 2.* Professor Lutte, in your testimony you say that “establishing a comprehensive system of tracking data and reporting on trends is the only way to verify that diversity investments and efforts are working.” What do you think are the best avenues in which we can encourage companies in the aviation field to not only conduct this kind of research but to act upon it as well?

*ANSWER:*

#### *FAA Data Changes*

- FAA Airmen Certification Data is a valuable source for gender data in aviation but should be expanded to include not only race/ethnicity, but the ability to break down gender data by race/ethnicity.

#### *Annual Industry Workforce Reporting*

- Annual workforce data reporting by aviation organizations should be publicly available. Workforce data should be reported by gender, race/ethnicity, and occupation level for increased transparency of the number of members of underrepresented groups employed and in leadership positions.
- Boeing Best Practice: One best practice example of this is Boeing's recent move to publicly display on their website their workforce data along with a message from leadership acknowledging the efforts to do more.<sup>2</sup> (Boeing 2021 Global Equity, Diversity & Inclusion Report). As stated in a recent Harvard Business Review article, if a company doesn't track representation, the company isn't serious about gender equity.<sup>3</sup>
- Reporting elements should include
  - Number of underrepresented groups employed to include gender and race/ethnicity
    - include breakdown by department and occupation level within the organization (to identify leadership positions)
  - Actions taken to increase recruitment, retention, and advancement of women
  - Identified measures to track progress on recruitment, retention, and advancement of women
  - Identify methods to hold organizational members accountable for the recruitment, retention, and advancement of women
- Options to encourage reporting could include:
  - *Required:* Reporting could be required of aviation organizations based on certain minimum number of employees and/or those organizations that operate under certain FAA regulations (121, 135, 139, 141, 147, etc.).
  - *SMS:* Include annual reporting as a required element of Safety Management Systems (SMS). All organizations that are required to implement SMS would be required to participate in annual reporting.
  - *Recommended best practice:* Using examples such as Boeing, recommend that aviation organizations who wish to be competitive and successful in creating a diverse workforce participate in publicly available annual industry workforce reporting.

#### *Annual Report to Congress*

- Create an annual industry diversity workforce report summarizing the annual industry workforce reporting data and FAA Airmen Certification Data.
- Potential GAO activity, RFP for independent research, or grant program to solicit report preparation.

<sup>1</sup> Korn Ferry. (2020). IAWA Soaring through the glass ceiling. <https://www.kornferry.com/content/dam/kornferry/docs/pdfs/aviation-glass-ceiling.pdf>

<sup>2</sup> Boeing 2021 Global Equity, Diversity, & Inclusion Report. <https://www.boeing.com/principles/diversity-and-inclusion/annual-report/>

<sup>3</sup> Kersey, A. Women at Work. Harvard Business Review. [https://m.a.email.hbr.org/rest/head/mirrorPage/@Cc\\_7lkxsfMcI-wgTzP5zqwKkVfnCNi4tZO6ipfi\\_p2PqTN8NTWQkfvVlnSG8yupg520tJsp3ymhp3FrwUmqPG7UrMiQgtsQAW20D-x\\_gVL\\_11Yu.html?deliveryName=DM138446](https://m.a.email.hbr.org/rest/head/mirrorPage/@Cc_7lkxsfMcI-wgTzP5zqwKkVfnCNi4tZO6ipfi_p2PqTN8NTWQkfvVlnSG8yupg520tJsp3ymhp3FrwUmqPG7UrMiQgtsQAW20D-x_gVL_11Yu.html?deliveryName=DM138446)



*Transparent, Periodic, Recurring Reporting*

- All data reporting must be periodic, public, and recurring to determine trends.

QUESTIONS FROM HON. EDDIE BERNICE JOHNSON TO ICEMA D. GIBBS, VICE PRESIDENT OF CORPORATE SOCIAL RESPONSIBILITY AND DIVERSITY, EQUITY, AND INCLUSION, JETBLUE AIRWAYS

*Question 1.* Ms. Gibbs, what concrete steps is JetBlue taking to attempt to reduce unconscious bias and increase diversity in your hiring process?

*ANSWER.* In 2021 we are actively hiring new crewmembers but in 2020 our talent acquisition team utilized the reduced hiring period to create an in-house method of interviewing called BlueSelect, which aims to reduce bias throughout the process. While continuing to focus on culture add, we completely rebuilt this process to reduce unconscious biases, and increase diversity in the process.

At JetBlue, we have used DDI's Targeted Selection interviewing method for decades, and it includes the "tell me about a time" questions we all know and love. As we reimagined our diversity, equity and inclusion strategy, we built BlueSelect to use some components of that method, but completely rebuilt and tailored specifically to our airline and culture. Candidates now go through a standardized process that evaluates them fairly and objectively.

We have continued to implement feedback from our People team (Human Resources) leaders and hiring managers to enhance the process. Currently, the Blue Select model has been deployed across all workgroups and departments to support hiring efforts.

*Question 2.* Ms. Gibbs, the Gateway College program you mention in your testimony sounds like it has been quite successful thus far in recruiting and augmenting opportunities for minorities at JetBlue. I applaud you and JetBlue for your efforts! I am curious though, which schools do you partner with? And how does the program work administratively? How could a prospective student in my congressional district in Dallas for example, enroll and participate if he or she is interested?

*ANSWER.* JetBlue has led the industry in developing airline pathway programs for aspiring pilots, and we've recently expanded our programs to include pathways for those interested in careers as technicians. Our Gateway programs have grown to include an entire suite of programs for both internal and external candidates. These programs help us attract a more diverse talent pool, make careers as pilots and technicians more accessible and ensure we have highly qualified crewmembers to meet our hiring needs.

Our newest pathway, Gateway College, is for crewmembers with little or no flying experience who want to become JetBlue pilots through our prescribed training and time-building program.

University Gateway is our longest standing program. It launched in 2008 for students at partner universities who follow a prescribed education and time-building pathway to become JetBlue pilots.

We currently have a variety of university partners including:

- Our newest school—Hampton University (based in Hampton, VA), our first historically black college and university (HBCU) partner;
- Vaughn College (based in Queens, NY), a minority serving institution (MSI), universities and colleges that enroll a significant percentage of students from minority groups; and
- InterAmerican University of Puerto Rico, a Hispanic servicing institution (HSI), an accredited, degree-granting, public or private nonprofit institution of higher education with 25% or more total undergraduate Hispanic or Latinx full-time equivalent (FTE) student enrollment.

Other University Gateway program school partners include Embry-Riddle Aeronautical University—Daytona, Embry-Riddle Aeronautical University—Prescott, University of North Dakota, Jacksonville University, Auburn University, and Bridgewater State University. The University Gateway Program continues to evolve and additional AABI-accredited schools may be added over time.

*Question 3.* Ms. Gibbs, I see that JetBlue generally has outstanding outreach, training, and gateway programs for interested high school, vocational and college students, but have you considered beginning your outreach earlier by reaching out to middle school and possibly even elementary school children, particularly in minority-majority school districts, to engage students in these age groups as well?

*ANSWER.* Through our corporate social responsibility efforts and the work of the JetBlue Foundation, we work to reach students as early as possible to spark an interest in science, technology, engineering and math (STEM). The JetBlue Foundation encourages aviation-related education and helps ignite interest in STEM pro-

grams, especially among communities traditionally underrepresented in these areas including girls and women and students of color. JetBlue's STEM education-focused foundation furthers JetBlue's efforts to introduce students to the vast array of careers available within aviation. Over the past eight years, the JetBlue Foundation has built lasting relationships with more than 90 STEM and aviation-focused programs and provided grants and in-kind support to help these programs take off.

A sampling of events, programming and partnerships geared towards elementary and middle school students include:

- *The Organization of Black Aerospace Professionals (OBAP) Aviation Career Exploration (ACE) Academy* introduces aviation careers to students ages 14–18 from backgrounds traditionally underrepresented in the industry. During these programs, students participate in hands-on activities and have the opportunity to learn directly from JetBlue pilots and other aviation professionals. Each summer the JetBlue Foundation partners with OBAP to host ACE Academy programs in several JetBlue cities including Boston, Fort Lauderdale, Los Angeles, Orlando, New York, San Juan and St. Thomas. *View a video on this initiative here* [<https://cts.businesswire.com/ct/CT?id=smartlink&url=https%3A%2F%2Fjetblue-7.wistia.com%2Fmedias%2F0w4fr0ecqu&esheet=52091260&newsitemid=20190910006072&lan=en-US&anchor=here.&index=1&md5=852f2f139abc91aa049fe93792548633>].
- *Project Scientist STEM Expedition Academy* is a summer program for girls ages four to 12, in Southern California who have a strong interest and aptitude for STEM. The vision of Project Scientist is to transform the face of STEM by nurturing future scientists who will lead the world in solving tomorrow's greatest challenges. With support from the JetBlue Foundation, the STEM Expedition Summer Academy has included behind-the-scenes looks at STEM-focused companies and college programs as well as a visit to JetBlue's previous operation at Long Beach Airport. *View a video on this initiative here* [<https://vimeo.com/363390480>].
- *JetBlue's Fly Like A Girl* programming provides opportunities for young girls to learn first-hand about careers above the wing, below the wing and behind-the-scenes at an airline directly from women working in aviation and STEM. Attendees have the chance to engage with JetBlue crewmembers while visiting education stations including:
  - *Above the Wing*—An interactive experience on an A320 aircraft with crewmembers from JetBlue's Flight Operations and Inflight teams.
  - *Below the Wing*—Exploration of the exterior and inner workings of an A320 aircraft with crewmembers from the airline's Technical Operations group.
  - *Behind-the-Scenes*—Opportunities to learn about what it takes to create the JetBlue experience from check-in to onboard food, beverage and entertainment offerings, as well as flight training.

QUESTION FROM HON. NIKEMA WILLIAMS TO ICEMA D. GIBBS, VICE PRESIDENT OF CORPORATE SOCIAL RESPONSIBILITY AND DIVERSITY, EQUITY, AND INCLUSION, JETBLUE AIRWAYS

*Question 1.* Ms. Gibbs, in your testimony, you identified an opportunity to increase diversity within the Officer and Director ranks, where the racial composition has remained stagnant. You mentioned that JetBlue has developed some new pathways to help crewmembers grow into leadership roles.

Can you tell us more about those pathways?

ANSWER. Congresswoman, thank you for the question regarding increasing pathways for our crewmembers and candidates to bolster diversity in our leadership roles.

While we are a diverse organization overall, our frontline crewmember population is quite diverse, that dwindles at each progressive level. Our greatest opportunity for improvement is within the Officer and Director ranks where the racial/ethnic composition has remained stagnant.

Recognizing this, one way we are approaching this is through new pathways to help more frontline crewmembers transition from operational to corporate services roles. These more prescribed paths enable a more diverse slate of candidates to be in the talent pool who ideally grow into leadership roles. Moreover we are creating an inclusive environment where all crewmembers can envision themselves in leadership roles, because they see people that look like them and with shared experiences already in these positions.

#### *Diverse Slate Initiative*

Historically for Director and above positions, about 50% of candidates in the interview process have been from under-represented backgrounds (women and racial/eth-

nic minorities). Since the launch of our Diverse Slate Initiative that number has increased to 70%. The initiative requires that at least one member of the interview panel is from an under-represented background. Moreover the Diverse Slate Initiative increases the amount of recruiting investments and sourcing for candidates from under-represented backgrounds. While ensuring we have a diverse slate of candidates for available positions, we will always hire the most qualified candidate.

Finally we are holding ourselves accountable to meet our commitments including:

- Doubling race and ethnic minority representation at the Officer and Director level, from 12.5 percent today to 25 percent by the end of 2025
- Increasing representation of women at the Officer and Director level, from 32 percent today to 40 percent by the end of 2025.

QUESTIONS FROM HON. EDDIE BERNICE JOHNSON TO JOEL WEBLEY, CHAIRMAN,  
BOARD OF DIRECTORS, ORGANIZATION OF BLACK AEROSPACE PROFESSIONALS

*Question 1.* Mr. Webley, I applaud you and the Organization of Black Aerospace Professionals for the amazing work you have done over the last four decades to encourage the advancement of minorities in all aviation and aerospace careers.

How can individual students, for example, in my congressional district in Dallas, become involved and participate? Is the process easy to navigate logistically?

*ANSWER.* Getting involved with OBAP can happen in multiple ways. Many of our students learn about OBAP programs by way of school visits made to classrooms (in-person and virtually) across the country. By visiting OBAP.org, students and parents can browse the full list of programs available to students of different ages. Logistically we make the processes as easy as possible within the limits of our resources available. We've invested significantly in the past year to modernize our IT systems with the goal of improving our ability to effectively communicate with students as well as capture data to improve our program effectiveness.

The biggest challenge we see in specific cities is finding a volunteer who has the time and resources to support the needs of school districts and students. We have been fortunate to find many volunteers across the country who are willing and able to support programs in their local areas, but there are still gaps.

For example, in 2019–2020 (Pre-covid) we reached over 12,000 students at over 20 schools in Houston, but in Dallas we had no school visits. Again, additional funding to utilize paid staff to supplement cities where we don't have a volunteer leader with the bandwidth to support programming would allow our organization to reach significantly more students.

*Question 2.* Mr. Webley, similar to my previous question, with respect to individual schools, how can a school in my congressional district join in partnership with OBAP?

*ANSWER.* The easiest way to start the conversation with an individual school is to email us at [info@obap.org](mailto:info@obap.org). Our info inbox is monitored daily and all messages are routed to the appropriate team leader within the organization.

*Question 3.* How can members of this committee assist your organization to further expand your program's outreach and engage even more kids?

*ANSWER.* First—It takes funding for these types of programs to thrive. We have many volunteers who want to participate, but without enough funding for paid staff and IT systems to manage those volunteers and programs, it significantly limits our reach. Renewable grants to help sustain staff levels would be particularly helpful as it would allow us to retain staff and have the confidence that those positions are funded despite the funding volatility that we experience as non-profit organizations. Put differently, as a leader of a non-profit organization tied to the extremely volatile Aviation industry, I have to be very careful about longer term staffing commitments because of the nature of the fundraising cycle (a significant portion of our funds comes from airlines). This equates to hesitancy to hire staff to support needed expansion of programs.

Second—It would be very helpful to gain access to better data across the industry with regard to diversity and inclusion. There are very little resources available to help us measure the impact of our programs outside of the data we capture internally. It would be helpful to create a "diversity dashboard" whereby employers could upload anonymized HR data for viewing by the general public and other stakeholders to view. While some data is available from the Bureau of Labor and Statistics, the information captured is not structured to be used as a tool to aid in data based decision making. A system as I'm describing would be extremely helpful to use as a standard benchmark from which to measure the effectiveness of individual efforts by industry employers, but avoid the understandable hesitancy to spotlight organizations who are underperforming.

Third—According to the Bureau of Labor and Statistics, the government office that classifies occupations and gathers related data, Air Transportation work are not considered to be STEM occupations (<https://www.bls.gov/oes/topics.htm#stem>). Given the high level of technology involved the Aerospace Transport Industry, my recommendation to the committee would be to take a closer look at adding all of the 53–2000 SOC Occupations, as well as other aviation or aerospace occupations (49–3011 Aircraft Maintenance Technicians) to the official listing of what is considered to be a stem profession. Additionally some aerospace related professions, such as Aircraft Dispatchers, are not even included in the listing of BLS tracked occupations—it would be extremely helpful to add an aerospace sub-category to ensure all of the evolving occupations are included in the listings. This change would be helpful in at least two ways: 1) the annual data regarding Aviation/Aerospace occupations would be reported along side of all other STEM occupations which would provide better information about the efficacy of programs to increase participation in these occupations, 2) the inclusion of these occupations would make it potentially easier to gain access to STEM specific grant money, research dollars, and other resources.

QUESTION FROM HON. NIKEMA WILLIAMS TO JOEL WEBLEY, CHAIRMAN, BOARD OF DIRECTORS, ORGANIZATION OF BLACK AEROSPACE PROFESSIONALS

*Question 1.* Mr. Webley, in your testimony, you mentioned that Congress can support diverse employment by encouraging employers in the aviation industry to prioritize diversity in their recruitment and hiring practices.

Are there specific practices that Congress should consider encouraging, and what policy tools do you recommend we employ to incentivize these practices?

*ANSWER.* First—It takes funding for these types of programs to thrive. We have many volunteers who want to participate, but without enough funding for paid staff and IT systems to manage those volunteers and programs, it significantly limits our reach. Renewable grants to help sustain staff levels would be particularly helpful as it would allow us to retain staff and have the confidence that those positions are funded despite the funding volatility that we experience as non-profit organizations. Put differently, as a leader of a non-profit organization tied to the extremely volatile Aviation industry, I have to be very careful about longer term staffing commitments because of the nature of the fundraising cycle (a significant portion of our funds comes from airlines). This equates to hesitancy to hire staff to support needed expansion of programs.

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