

**YOUTH ACCESS TO AMERICAN JOBS IN AVIATION TASK FORCE (YIATF)
MEETING AGENDA**

*June 9, 2021*** 9:00 AM to 2:30 PM EDT*

Morning Session <https://youtu.be/pfdVxREcu84>

Afternoon Session <https://youtu.be/aZstI0LFzB0>

Time	Topic	Facilitator
9:00 – 9:10 am	Call to Order Federal Advisory Committee Act (FACA) Official Statement	Angela Anderson
9:10 – 9:15 am	Open Meeting/ Adoption of March 2021 Meeting Minutes	Sharon DeVivo
9:15 – 9:45 am	Update from Subcommittee Chair/Discussion – <i>Trends</i> Speakers: <ul style="list-style-type: none"> • Brett Levanto • Kasey Herzberg • Cyd Smith 	Yvette Rose
9:45 – 10:15 am	Update from Subcommittee Chair/Discussion - <i>Funding</i> Speakers: <ul style="list-style-type: none"> • David Purser • John Huff • Tammera Holmes 	Dr. Ralph Coppola
10:15 – 10:25 am	Break – 10 min	
10:25 – 10:55 am	Update from Subcommittee Chair/Discussion - <i>Awareness Building</i> Speakers: <ul style="list-style-type: none"> • Whitney Dix • Jennifer Henderson • Stacey Bechdolt • Amy Voss 	Joey Colleran
10:55 – 11:25 am	Update from Subcommittee Chair/Discussion - <i>Expanded Pathways</i> Speakers: <ul style="list-style-type: none"> • Dr. Nancy Shane Hocking • James Hall • Joel English • Jo Damato • John Hornibrook 	Ryan Goertzen
11:25 – 11:50 am	Subcommittee Open Discussion	Sharon DeVivo

11:50 – Noon	Break – 10 min	
Noon – 12:20 pm	FAA Social Media Approach	Allison LePage
12:20 – 1:00 pm	Lunch Break	
1:00 – 1:20 pm	United Airlines Aviate Academy Pledge	Kyle Sucher
1:20 – 1:40 pm	USAF Approach to Developing the Workforce	Brig. General Christopher Walker
1:40 – 2:00 pm	Action Item Review	Sharon DeVivo
2:00 – 2:10 pm	Adjourn Meeting	Sharon DeVivo, Angela Anderson

**DRAFT YOUTH ACCESS TO AMERICAN JOBS IN AVIATION TASK FORCE
RECORD OF MEETING**

MEETING DATE: March 31, 2021

MEETING TIME: 9:00 AM – 3:30 PM EDT

LOCATION: The Youth Access to American Jobs in Aviation Task Force (YIATF or Task Force) held a public virtual meeting. Recordings of the meetings can be found on the FAA’s YouTube Channel.¹

PUBLIC ANNOUNCEMENT: The Federal Aviation Administration (FAA) provided notice to the public of this YIATF meeting in a *Federal Register* notice published on March 11, 2021 (86 FR 13962).

ATTENDEES:

Committee Members

Amy Voss
Brett Levanto
Cyd Smith
David Purser
James Hall
Joanne Damato
Dr. Joel English
Joey Colleran
Captain John Hornibrook
John Huff
Kasey Herzberg
Dr. Nancy Shane Hocking
Dr. Ralph Coppola
Ryan Goertzen
Dr. Sharon DeVivo
Tammera Holmes
Whitney Dix
Yvette Rose

¹ [Youth Access to American Jobs in Aviation Task Force Public Meeting – Morning Session - YouTube](#)
[Youth Access to American Jobs in Aviation Task Force Public Meeting – Afternoon Session - YouTube](#)

Non-Committee Members

<u>Name</u>	<u>Affiliation</u>
FAA	
Angela Anderson	Designated Federal Officer
Brad Mims	Deputy Administrator
Aliah Duckett	Office of Rulemaking
Thuy Cooper	Office of Rulemaking
Leslie Welch	Office of Communications
Lindsay Aaronson	Office of Communications
Steve Custer	Office of Communications
Emma Duncan	Office of Public Affairs
Arlene Salac	Office of Public Affairs
Sean Torpey	National Engagement and Regional Administration
Daniel Blum	Office of the Deputy Administrator
Presenters	
David Rottblatt	Eve Air Mobility from EmbraerX
Dr. Jeff Montgomery	Civil Air Patrol – Aviation Education and Outreach
Ernanda White	Black Girls Drone
Kathryn Creedy	Future Aviation Aerospace Workforce News

The FAA live streamed this meeting on its social media platforms. As a result, the list of FAA and public attendees does not capture those individuals.

Welcome and Introduction

Ms. Angela Anderson, DFO, began the meeting at 9:00 am by welcoming everyone to the second (YIATF) public meeting.

Ms. Anderson read the required press disclaimer and the live stream statement, as the meeting was live streamed on the FAA's YouTube, Facebook, and Twitter accounts. She also read the Federal Advisory Committee Act (FACA), Title 5, United States Code (5 U.S.C.); Appendix 2 (2007) statement.

Deputy Administrator Brad Mims provided the welcoming remarks. Mr. Mims thanked Ms. Anderson and the Task Force on behalf of Secretary Pete Buttigieg. He emphasized the importance of the Task Force with regard to changes and advancements in the aviation industry.

Dr. DeVivo thanked everyone for attending the meeting and noted that each subcommittee would provide a status update. Dr. DeVivo reminded the Task Force of the

importance of their work to reach students at an early age. She thanked the FAA team, and she reminded the public that all feedback is welcomed.

Ratification of Minutes

Dr. DeVivo asked for a motion to accept the minutes from the October 16, 2020, meeting. Ms. Tammera Holmes motioned to accept the minutes, and Mr. Brett Levanto seconded the motion. The YIATF voted to ratify the minutes with no objections.

Status Reports

The March 31, 2021, YIATF meeting packet can be found at:
https://www.faa.gov/regulations_policies/rulemaking/committees/documents/index.cfm/document/information/documentID/4843 .

Trends Subcommittee

Dr. DeVivo asked Ms. Yvette Rose, Subcommittee Chair, to provide the subcommittee's status report, which included a list of members and a description of the charge.

Ms. Rose stated the subcommittee's charge is to identify industry trends that encourage or discourage youth in the United States from pursuing careers in aviation. Ms. Rose reviewed the subcommittee's work process, which included weekly meetings, personal outreach, and surveys. She described elements of the surveys and goals for data gathering from results. Ms. Rose asked Mr. Levanto to detail the program survey.

Mr. Levanto emphasized the importance of the surveys to act as a platform for further discussions and as an instrument to collect accurate information to help establish trends. He listed specific areas of focus of information that the subcommittee is gathering.

- Program Survey – The focus areas included programs that work well and why, best age to reach young people, opportunities to inform and engage parents, role teachers and counselors play, best approaches to inspire students, why aviation is not a career choice, and tracking placement into the aviation workforce.
- Youth Survey – The focus areas included what inspired the responder to pursue a career in aviation, what age did the responder first get interested in aviation, role of high school teachers/counselors, and barriers to entry.

Ms. Cyd Smith described the key takeaways from the Program Survey. As a school counselor, she noted that it is best to expose children to information at an early age. She described the phases of engagement from kindergarten through high school. Ms. Smith stressed the importance of keeping students interest throughout all phases and of using platforms that engage students, such as social media. She emphasized that there are opportunities to engage parents and that the role of teachers and counselors is important.

Ms. Kasey Herzberg reviewed the approaches to reach youth and noted that the best way to reach youth is through social media and platforms like YouTube and TikTok. She also stated that virtual reality and gaming experiences are good ways to reach the youth and teach them about aviation. Ms. Herzberg said that in person/hands on experiences are extremely important, but that children would like to see other people who look like them also joining these experiences.

Ms. Herzberg described trends and impediments the group has found through research. She noted that there is a shortage of women and minorities in the aviation industry. She stated that the continued use of drones will create more jobs and hopefully more interest in aviation from the youth. Ms. Herzberg mentioned the possible disconnect between science, technology, engineering, and mathematics (STEM) programs and aviation. She described how the group is tracking data and measuring success. She noted that aviation is viewed as very much a white male dominated industry.

The key takeaway from the Youth Survey is the role of high school teachers and counselors in introducing students to aviation and aviation careers. This includes adding more aviation-related classes to the curriculum, providing opportunities for teachers and counselors to gain knowledge on aviation and aviation careers, and to have more aviation-related field trips, guest speakers, and extra-curricular activities. The survey results showed that youth need more exposure to the field to become more interested.

Ms. Rose noted that the number one barrier to entry into aviation is cost. She stated that people feel the cost of training and education is too high. She said that other barriers include the lack of exposure, the lack of information, and the view that aviation is not a mainstream career path. Ms. Rose described the next steps and asked members if they had any questions.

Dr. DeVivo asked if the subcommittee identified any programs that can be used as a model. Ms. Rose mentioned the STEM program, and specifically the field of engineering, would be a good model for the team to follow. Mr. Joel English asked if there were any specific success stories that began with any certain event or spark of interest at the middle school age. Mr. Levanto described an aviation event sponsored by the U.S. Navy that has acted as a milestone event for youth in the middle school age range. He noted that the event creates an immersive experience the military uses to recruit students, which could be a model as a gateway to aviation interest. Ms. Smith added that middle school is a very unique age where children are eager to learn and comprehend.

Awareness Building Subcommittee

Dr. DeVivo asked Ms. Joey Colleran to provide the subcommittee's status report, which included a list of members and a description of the task.

Ms. Colleran stated the subcommittee is tasked to consider how the Administration; air carriers; aircraft, powerplant and avionics manufacturers; aircraft repair stations; and

other aviation stakeholders can coordinate efforts to support youth in pursuing careers in aviation.

Ms. Voss described the approach, methodology, and key observations for the work the group has done. She detailed how the FAA, employers, non-profits and others are currently involved in workforce development. Ms. Voss noted that there is not currently one cohesive place that one can go find aviation information and that making this information easily accessible to parents and children is vital. Ms. Whitney Dix discussed the structure and best practices that currently exist to reach younger people.

Ms. Dix described an approach to develop the best structure as having the FAA, employers, non-profits, and others work together to create a pipeline and use best practices to expose aviation information to the youth. She stated that the subcommittee believes engaging children and keeping in touch with them during certain touch points in their lives is key. Ms. Dix mentioned the need to incorporate aviation curriculum into current STEM programs to build awareness about jobs in aerospace. She emphasized the importance of social media and of a 'one-stop shop' virtual experience of aviation education information.

Ms. Colleran described the next steps, which would include applying survey results to the subcommittee's tasks, to bridge the gap of analysis, and to work towards the 'one-stop shop' for aviation data.

Dr. DeVivo agreed that the 'one-stop shop' would be helpful and should be more than a bulletin board of information. Members discussed how a 'one-stop shop' can expand tracking, mentorship, and longevity of students' interests in aviation for current and future aviation. Mr. Levanto added that the 'one-stop shop' should include information on aviation-related camps, resources, and activities. Ms. DeVivo reminded members to provide their input to Ms. Colleran.

Mr. Ryan Goertzen asked about the 'opt-in' option of students entering their personal information into the 'one-stop shop' website and any barriers associated with getting that information. Ms. DeVivo spoke on the release of information at various levels of educations, and she stated that she believes that parent permission would be required for students at younger ages. Ms. Holmes added that her organization has successfully tracked data for younger children in the Chicago area. She described the work and collaboration efforts required on local and regional levels in order to create a 'one-stop shop' on a bigger scale. Ms. Holmes spoke on her experience growing up in an urban area and creating her own path to aviation and its relation to the importance of diversity and inclusion. The group agreed that targeting youth in large urban areas would be beneficial.

Funding Subcommittee

Dr. DeVivo asked Dr. Ralph Coppola to provide the subcommittee's status report, which included a list of members and a description of the task.

Dr. Coppola stated the subcommittee is tasked to identify potential sources of government and private sector funding, including grants and scholarships that may be used to carry out the recommendation and strategies and to support youth in pursuing careers in aviation. Dr. Coppola reviewed questions the group is considering, developed by both the FAA and by the subcommittee. He outlined the approach to the work the group is taking. He stated that the group's goal is to obtain ongoing funding to support programs that lead to students entering the aerospace workforce. Dr. Coppola explained that a funding strategy was developed, and that the subcommittee has begun drafting recommendations. He agreed with the other subcommittees about the importance of an all-inclusive aerospace information list.

Dr. Coppola detailed the group's proposed recommendations, which include an incentive-based funding solution, proposed legislation, and an aerospace education program list. He explained the criteria and tier ranking structure for being on the aerospace education program list, the steps to get funding, and the plan to market the aerospace education programs to companies. Dr. Coppola outlined next steps the group plans to take, most of which focus on collaboration, research, and writing draft recommendations.

Dr. DeVivo asked Dr. Coppola how the group plans to connect funding from a source to an individual. Dr. Coppola noted that the plan would be for the organization who is providing the service or training to get a scholarship, which would subsidize the cost to the individual receiving the service or training. Ms. Holmes added that paying participants can also help subsidize costs for participants who are unable to pay. Dr. DeVivo stated that tracking scholarships through organizations sounded like a good idea. Dr. Coppola emphasized the importance of tracking both financial and methodological data.

Mr. Goertzen asked Dr. Coppola about the financial data that the subcommittee has found so far, specifically in relation to pilots and the Title IV funding program. Dr. Coppola noted that the subcommittee has looked at such funding mechanism issues, and he believes funding to the aviation workforce is a separate problem.

Ms. Rose asked if a non-profit organization would be eligible for the education program list through the tiers Dr. Coppola discussed. Dr. Coppola noted that the barrier to be eligible for funding in tier 1 is relatively low. He stated that as long as the organization is providing some sort of service in the aerospace industry, there should not be an issue. He stated that the goal is to reduce the burden for everyone, the programs, the organizations, and the individuals. Ms. Helzberg stressed that non-profits would be eligible, as would any other entity that is able to receive federal grants.

Ms. Colleran asked about a 'one-stop shop' list of funding sources, and a member confirmed that the Task Force received the list via email. Members agreed to continue the discussion on funding.

Expanded Pathways Subcommittee

Dr. DeVivo asked Mr. Goertzen to provide the subcommittee's status report, which included a list of members and a description of the task.

Mr. Goertzen stated the subcommittee is charged to identify industry trends that encourage or discourage youth in the U.S. from pursuing careers in aviation. He noted that the subcommittee broke the work down into three paths, and he explained the approach to the work using case studies and interviews. Mr. Goertzen continued explaining key observations the subcommittee made in relation to high school programs expansion, the importance of teachers and parents, and the critical pathway of information.

Mr. Jim Hall and Mr. Paul English described key observations associated with high school programs expansion. Mr. Hall noted that most high schools are funded on the State level and the importance of a nationally approved curriculum. Mr. English described barriers with dual enrollment programs and with secondary and post-secondary partners to participate. Mr. Hall emphasized that schools are not aviation focused, so it is important to show how the cost of aerospace programs can be a benefit for the school and students.

Mr. John Hornibrook described the key observations associated with the importance of teachers and students. Mr. Hornibrook explained factors of influence such as diversity, the role of teachers (and their contagious effect on both students and parents), the creation of summer programs, and support from the private industry.

Ms. Jo Damato and Dr. Nancy Hocking described observations from the information data that the group collected. Ms. Damato noted that, similar to things other subcommittees have noted, there is a lack of overall information, resources, and mentorship. She explained that data collection is important to creating a smooth pathway to information and to creating some sort of tracking for students in existing aviation programs. Ms. Damato emphasized the need to reach out to underrepresented students in the field.

The subcommittee described that the next steps would include developing the concepts of a nationally approved curriculum leading to industry-recognized credentials, developing the concepts of a summer teaching academy program, developing the concept for a robust national aviation website, and creating a virtual counselor platform.

Ms. Dix expressed her admiration for the next steps the subcommittee outlined and asked about sending packets of information to all schools around the country. Ms. Damato noted that the subcommittee has considered the possibility of a national strategy to rollout information. Dr. Hocking agreed and stated that part of the national strategy would be to include groups beyond schools. Ms. Smith asked the group if they believed project-based

learning or technical-based programs would be a better approach. Mr. Hall noted that he believes there should be a combination of both.

Guest Speakers

Dr. DeVivo introduced Mr. Sean Torpey to speak on the FAA's STEM and Aviation and Space Education (AVSED) program. Mr. Torpey outlined the strategic plan, which focuses on inclusion and diversity, recommendations for agency-wide STEM AVSED governance, realignment of the program under the Office of National Engagement and Regional Administration, and propose revision to the STEM AVSED Program Order. He highlighted the program's accomplishments and provided an overview of the FY 2021-2024 Strategic Plan. The plan includes four goal areas: pipelines and pathways to aerospace careers, STEM education for every student, strategic partnerships to maximize benefits, and cross-agency collaborations to optimize the program.

Dr. DeVivo thanked Mr. Torpey and the FAA for making this a priority. She asked Mr. Torpey if his office was involved in the FAA grant program. He noted that NEXTGEN has control over the grants and will bring recommendations to the FAA through the program. Mr. Goertzen asked how the industry could work together to collaborate with these FAA efforts. Mr. Torpey noted that he understands the role of governance versus an industry advocate and hopes the two can work together.

Ms. Holmes asked how Task Force members can continue engaging with the FAA after subcommittee recommendations are made and submitted. Mr. Torpey encouraged engagement beyond the submitting of recommendations. Dr. DeVivo asked about advisory councils on the regional level, and Mr. Torpey noted that, with help, the right partnerships can be built together to get exposure into targeted communities.

Dr. DeVivo introduced Ms. Kathryn Creedy, who spoke on what is needed to attract more youth into aviation/aerospace. Ms. Creedy explained why she launched the publication, *Future Aviation Workforce News*. She described the accomplishments that have come from the inception of the publication in November 2020. She emphasized the need for more minorities in aviation.

Ms. Creedy described problems with aviation data and challenges the industry faces and listed ways to connect the dots between -

- education and the corporate workforce,
- social justice movements and workforce development,
- workforce policies and diversity, and
- organizations for equal treatment, corporate workforce development programs, and corporate culture reform.

She also emphasized the need for targeted publicity and student funding strategies. Ms. Creedy detailed recommendations including to create a workforce ecosystem, to work with diversity groups, to develop mentoring programs for all ages of education, and to

develop relationships with the right media and create materials for parents, guidance counselors, kids, and diversity publications.

Dr. DeVivo asked Ms. Creedy for her thoughts on who could lead the ‘one-stop shop’ mentioned frequently throughout the meeting. Ms. Creedy noted that, as the governing body, the FAA, could host the effort, but that the industry could develop an outside of the box experience (perhaps with the National Air and Space museum, airlines, and other partners) then decide who will host it after its developed.

Ms. Creedy stated that she believes creating mentorship programs between industry representatives, college students, and younger kids can help to expose the information early and travel with them through different stages of life. She mentioned programs that currently exist, such as Mobile Airways, Collins Aerospace, Latino aviation organizations, that provide this type of exposure.

Dr. DeVivo introduced Mr. Jeff Montgomery to speak on the Civil Air Patrol (CAP) Aerospace Education organization. Mr. Montgomery stated CAP’s mission is to empower members with opportunities and resources to promote aviation-related STEM education and careers. He described the products and programs CAP uses to accomplish their mission, including curriculum and hands on activities for students at all levels that meet national educational standards. Mr. Montgomery emphasized newly developed programs and curriculum on the subjects of women in aviation and the Tuskegee Airmen. He described programs such as Aerospace Connections in Education (ACE), Adopt-A-Classroom, and a STEM Kit program. Mr. Montgomery noted that tools for aviation education can be pricey, but their STEM Kit program has been successful. Mr. Montgomery reviewed gender and diversity statistics and noted that CAP has a strategic plan to target underserved populations.

Dr. DeVivo introduced Ms. Ernanda White to speak on Black Girls Drone. Ms. White stated that Black Girls Drone wants to increase representation of women and girls, especially of color, in the unmanned aircraft systems/drone aviation industry by providing aerospace education and career awareness to young women and girls in underserved communities. Ms. White explained the organization’s plans for accelerating the workforce pipeline and detailed success stories of girls involved with the organization. Ms. White reviewed career objectives for their high school girls in 2021 and described the Youth in Aviation Diversity Equity and Inclusive Council the organization created.

Dr. DeVivo asked, given the lack of diversity in aerospace, how has Ms. White reacted to the barrier of young women of color not having role models that look like them in aviation. Ms. White stated that the girls see her as a woman of color and as a leader in aviation and more exposure and mentorship can create relationships similar to what she has with the girls who participate in Black Girls Drone. Mr. Levanto asked about the relationship of literacy to the Black Girls Drone programs. Ms. White explained literacy creates the advancement of other technical skills, which furthers conversations about data

analytics and other subject matters. She noted the importance of artificial intelligence and the ways youth can learn and interact with it.

Dr. DeVivo asked Mr. David Rottblatt to describe the work that Embraer X (Urban Air Mobility) has been doing. He gave a brief background of Embraer and the innovation of aerospace related to electric air mobility. He discussed the revenue of the industry and the value of inspiring youth into aviation jobs. Mr. Rottblatt stated EVE Mobility is establishing itself as a true ecosystem partner by developing a next generation air traffic management solution that provides shared situational awareness and enables equitable airspace access.

Dr. DeVivo asked Mr. Rottblatt if there are any specific workforce demand challenges. Mr. Rottblatt noted the need for a workforce specialized in material chemistry, battery technology, and material sciences to help grow and mature the urban air mobility industry. Dr. Coppola asked about the management of unmanned passenger vehicles and the areas of engineering that are most important to the design of these vehicles. Mr. Rottblatt said that some manufacturers have already demonstrated the ability for a vehicle to fly without a pilot onboard, but he does believe the first generation aircraft they are producing will have a pilot. He said that, as the vehicles expand globally, countries will be determining their own thresholds. Mr. Rottblatt described the different aircraft and noted that engineering resources would vary by design.

Subcommittee Discussion and Action Items Review and Other Business

Dr. DeVivo stated that the Task Force did not receive any requests from members of the public to speak at the meeting.

Dr. DeVivo summarized the subcommittee reports and themes of the presentations. She spoke about funding, the ‘one-stop shop,’ data gathering, and how these ideas can have a large impact on the future of aviation careers by using influencers and other methods that speak to the youth. She asked if members wanted to share any ideas on themes. The recurring themes that members identified included:

- developing a communications strategy and how to keep the information fresh, using a multi-layered approach to reach a broader audience
- tracking of information, especially of students’ involvement from an early stage.

Dr. DeVivo asked the Task Force for recommendations on future presentations. Ms. Holmes recommended reaching out to the Tuskegee Airmen Chapter to highlight the effects of social justice on aviation. In addition to trying to diversify the aviation industry, the Task Force should explore why there is lack of diversity. Mr. Levanto suggested the Task Force be more inclusive and diverse and invite non-aviation industry success stories. Ms. Colleran offered further suggestions for guest speakers.

Dr. Coppola asked the subcommittees to think about a timeline for the work they are doing. Dr. DeVivo asked the subcommittees to have draft recommendations to her by May 31. She also noted that that while the charter expires in October 2021, she has

requested the FAA for an extension. She stated that the next public meeting would likely be in June.

Ms. Anderson confirmed that the FAA is in the process of updating and extending the charter for another 2 years. She noted that the agency would like a realistic timeline of when the Task Force will complete its work. Dr. DeVivo stated that she would work with the subcommittee chairs to get that information.

Ms. Rose asked about members' status in relation to the renewal of the charter. Ms. Anderson stated that she believes current members will continue to serve on the Task Force under the renewed charter. A member asked about how one can apply to be on the Task Force. Ms. Anderson said she would have more information on new members after the charter is renewed.

Adjournment

Dr. DeVivo adjourned the meeting at 3:39 p.m.



Trends Subcommittee Update

YOUTH ACCESS TO AMERICAN JOBS IN AVIATION TASK FORCE

PUBLIC MEETING: JUNE 9, 2021

Trends Subcommittee Members

- Yvette Rose
President, Aero Club Foundation of Washington & Subcommittee Chair
- Kasey Herzberg
Director of Engineering, Aircraft Data Fusion
- Brett Levanto
Vice President of Operations, Aeronautical Repair Station Association
- Cyd Smith
School Counselor at Elkins Park School, Cheltenham School District,
Cheltenham, PA

FAA Subject-Matter Experts

James Brough, Analyst, National Aviation and Space Education Program

Christina Drouet, Manager, Aviation Workforce and Education Division

FAA's National Engagement & Regional Administration
Office of Policy, International Affairs, and Environment

Trends Subcommittee Task

Identify industry trends that encourage or discourage youth in the United States from pursuing careers in aviation



Continue to Meet Weekly

- Virtual meetings among subcommittee members and FAA SMEs

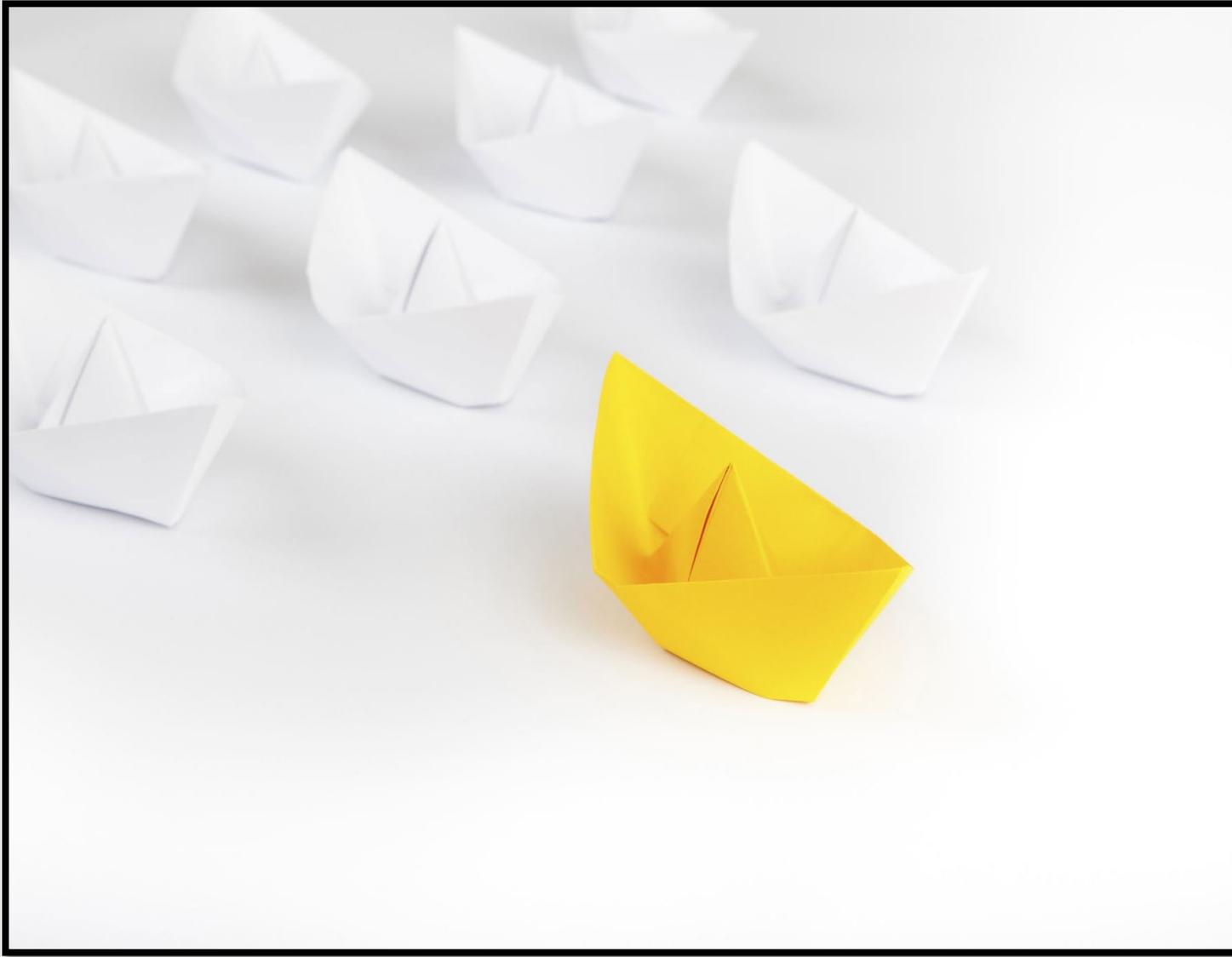
Coordinate with other Subcommittees and Outreach to Smithsonian

- Joint meetings and joint information sessions

Focus on Educator Survey

- Concentrating efforts on educator survey/focus groups

Updates



Value of Educators

- One teacher impacts countless young people
- Educators are the key linchpin to inspire and influence students
- Parents trust teachers; teachers trust teachers
- Youth survey revealed the role teachers play

Additional Key Conclusions

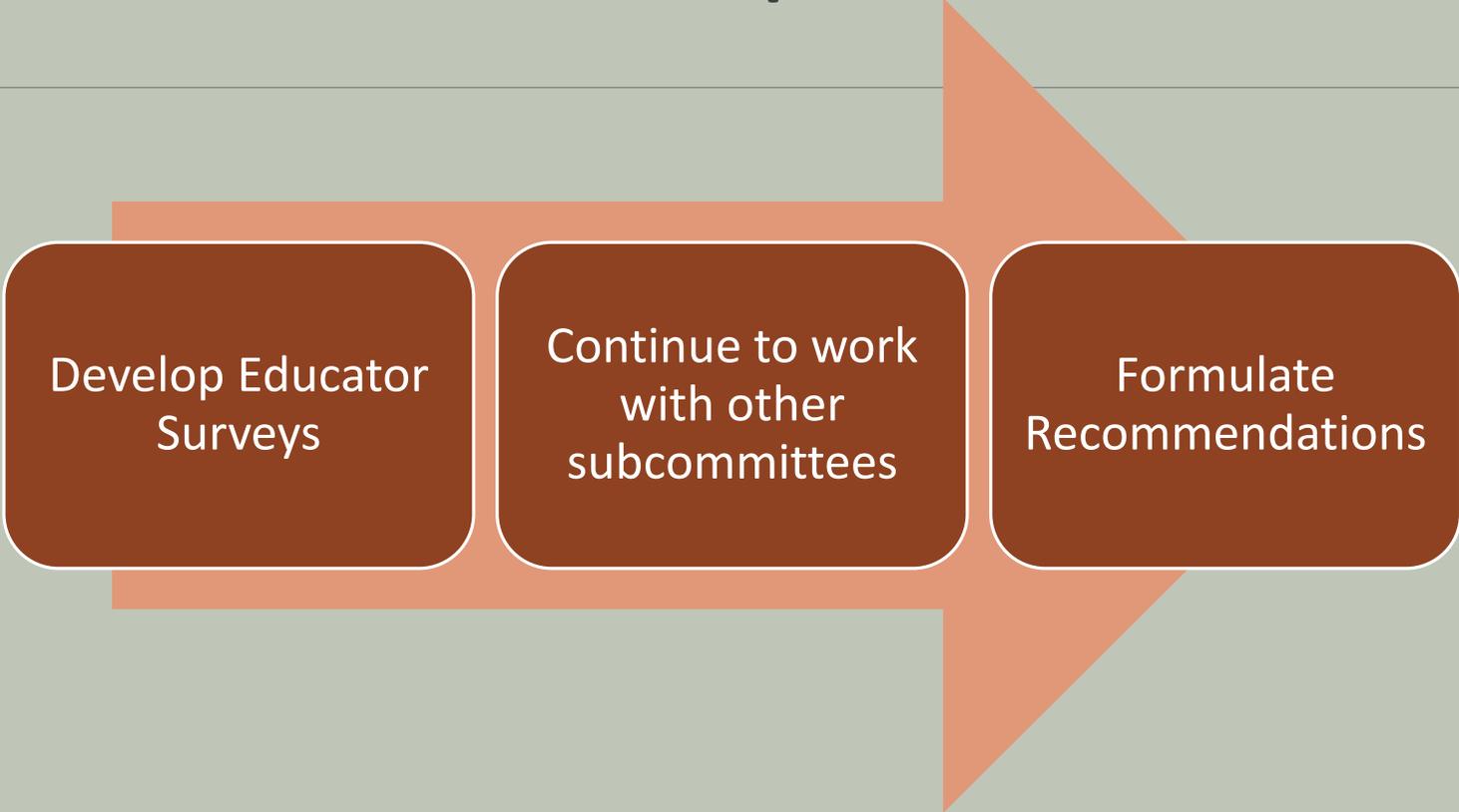
Focus on Formative Years (ages 10 and 18)

Outreach to HBCUs and Community Colleges

Online platforms provide opportunities to reach young people

- College and Career readiness databases
- General online research/internet searches
- Social Media piece

Next Steps



Develop Educator
Surveys

Continue to work
with other
subcommittees

Formulate
Recommendations



Questions

Funding Subcommittee

June 9, 2021

Agenda

- Background
 - Identifying gaps in traditional sources of funding
- Recommendations
 - Funding for individuals
 - Funding for programs
- Explanation of the recommendations
- Q&A

Members of the Funding Subcommittee

Dr. Ralph K. Coppola

Chair, Funding Subcommittee
Founder & Executive Director, Real World
Design Challenge & President
RKC International

Tammera L. Holmes

Founder & CEO of AeroStar Consulting
Corporation & AeroStar Avion Institute

John Huff

VP of Human Resources, HAECO Americas

David Purser

Aviation Physics Instructor
Karnes City High School

Jonni Christian

FAA AVSED

Michelle Christensen

FAA AVSED

Gaps in Traditional Funding Sources

Loans

- Must be repaid
- Interest accruing
- Qualification requirements present barriers to access
- Disproportionate negative outcomes among underrepresented borrowers

Grants

- Little to no aviation focus
- Low success rate
- Highly competitive
- Robust tracking and evaluation

Scholarships

- Difficult to locate (no centralized database for national aviation scholarships)
- Do not often fund vocational education programs
- Usually offer one-time support
- Highly competitive
- Dependent on philanthropic giving

Funding Requirements Needed to Impact the Aerospace Workforce

- National
- Ongoing
- Targeted to aerospace education
- Results tied to
 - Increase numbers interested in aerospace
 - Increase numbers going into the aerospace workforce

Initial Ideas



1. Offer Loan Forgiveness

Initial Ideas



2. Develop A New
Funding Source

Existing Loan Forgiveness Programs

U.S. Department of Education*

- Administered through the Office of Federal Student Aid
- Has a loan forgiveness program with two relevant components:
 - **Public Service Loan Forgiveness**- for working in a government job or a not-for-profit.
 - **Teacher Loan Forgiveness**- for teaching in a low-income area.

* U.S. Department of Education website

Initial Ideas

1. Loan Forgiveness Program

- Provide loans for students studying aerospace careers such as pilot, maintenance technician or engineer.
- Forgive the loans for service working in an aerospace job such as pilot, maintenance technician or engineer.
- Pay for the loan with a \$0.10 tax on each airline ticket sold in the U.S.
- The program would be administered by the U.S. Department of Education Office of Federal Student Aid.

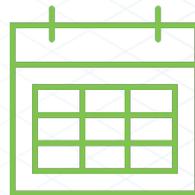
Revenue Generated from Airline Ticket Tax



X



X



=



**2.9 million
airline
tickets / day**

\$0.10 cents

365 days

**\$105+
million**

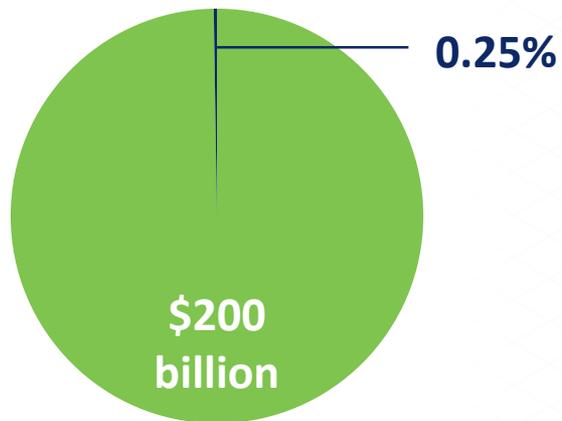
Initial Ideas

2a. Incentive-Based Funding Solution and Proposed Legislation

- The U.S. Department of Defense (DoD) and the U.S. Department of Transportation (DoT) appropriation legislation should include 0.25% in the budgets of all aerospace contracts with DoD and DoT to be used for aerospace education programs that demonstrably lead to jobs in the aerospace and defense workforce.
- The proposed legislative modification is designed to connect corporate funders and programs to work collaboratively to address the aerospace workforce need by providing incentives to both groups.
- To be eligible for funding, aerospace education and training programs need to show how they address aerospace workforce diversity needs and shortages.
- The 0.25% for aerospace education and training programs should be included in the existing contract budgets.

New Funding for Aerospace Education

DoD Annual Budget



■ Aerospace & Defense Contracts

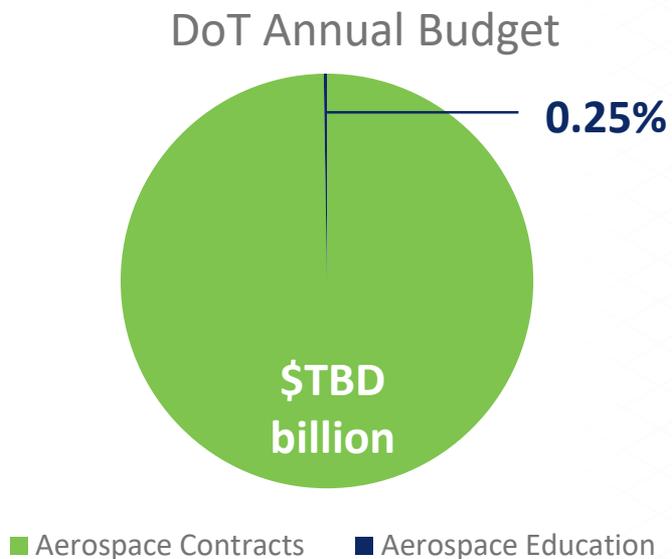
■ Aerospace Education



0.25%
x \$200 billion
= \$500 million

available for
sub-contracts for aerospace
education per year

New Funding for Aerospace Education



0.25%
x \$TBD billion
= \$TBD million

available for
sub-contracts for aerospace
education per year

Initial Ideas

2b. Aerospace Education Program List

- Develop criteria to evaluate how education programs are impacting the aerospace workforce.
- Place programs meeting those criteria on the Aerospace Education Program List (List).
- The List will have three tiers based on aerospace education program workforce outcomes that result in getting students in the aerospace workforce.
- Programs must enter data used to evaluate the program's contribution to the aerospace workforce in order to be placed on the List.
- Company funders can identify programs that contribute to the aerospace workforce and recruit the programs to be part of companies' responses to RFPs.



APPENDIX

Youth Access to American Jobs in Aviation Task Force

Key Terms & Acronyms

- **Aerospace** - refers to aviation and space
- **AVSED** - Aviation & Space Education
- **Cage Code** - Commercial And Government Entity Code
- **DoD** - Department of Defense
- **DoT** – Department of Transportation
- **DUNS Number** - Data Universal Numbering System
- **FAA** - Federal Aviation Administration
- **Funders** – Corporate Funding Source
- **HBCU** – Historically Black College & University
- **List** – Aerospace Education Program List
- **Programs** – Aerospace Education & Training Programs
- **ROTC** – Reserve Officer Training Corp
- **RFP** – Request for Proposal

Recommendation Resources

Draft Funding Subcommittee Recommendations

1. Funding individuals
 - a. Loan forgiveness
2. Funding programs
 - a. Incentive-based funding solution and proposed legislation
 - b. Aerospace education program list

Criteria for being on the Aerospace Education Program List

040

1. Total number of students the program impacts.
2. Total number of minority students the program impacts. These include: African Americans, Hispanics, Native Americans and Pacific Islanders.
3. Total number of female students the program impacts.
4. Percentage of students who moved into an aerospace related program after finishing K-12. This can be a college, university, trade school, apprenticeship program, etc. as long as it is a program that is preparing people for post secondary aerospace careers.
5. Percentage of students from a sample that go into the aerospace workforce.
6. Percentage of the students from the program going into the aerospace workforce with a large enough sample to be able to generalize to the whole population.
7. Percentage of the students holding an aerospace job for 2 or more years.

Funding Eligibility for Aerospace Education Programs

Type of Programs

- Aerospace Education Programs
- Curricular Programs
- Extra-Curricular Programs

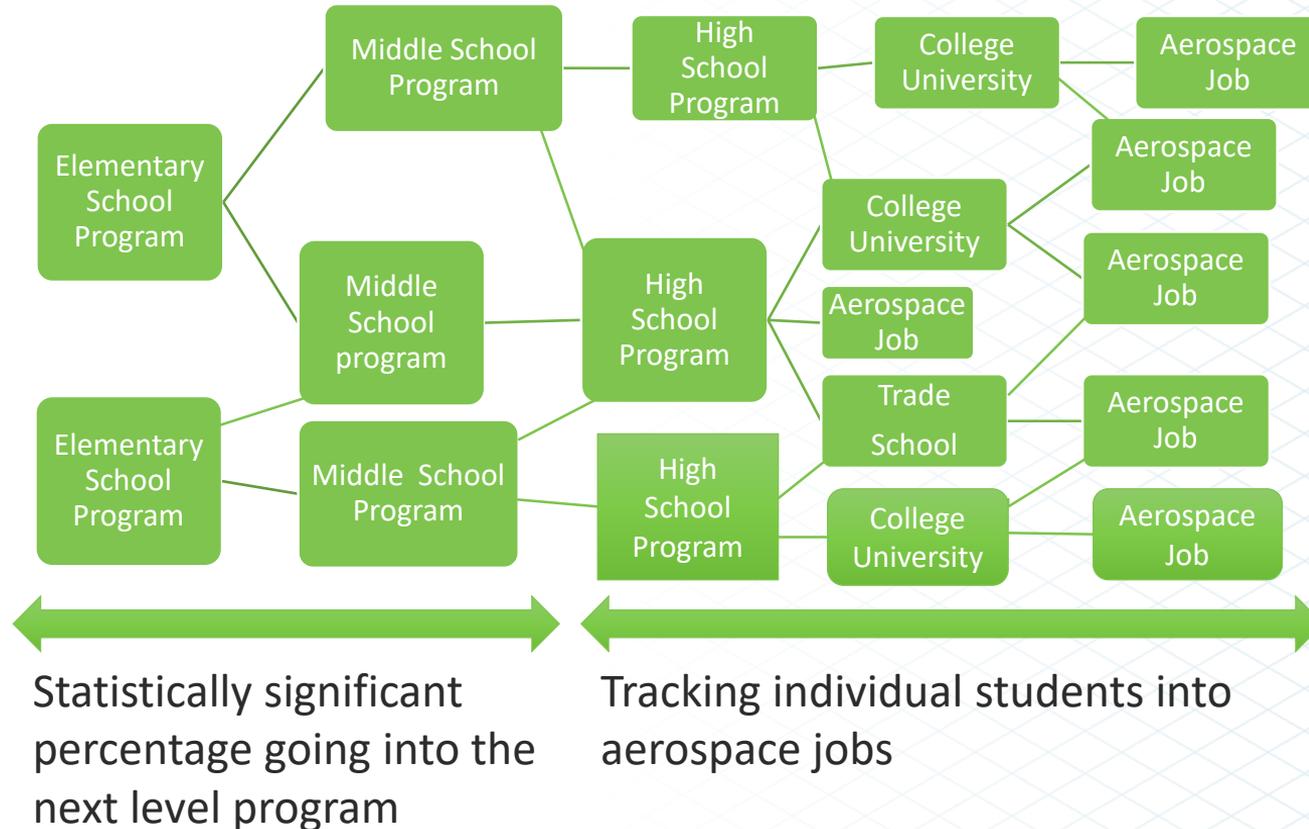
Type of Organizations

- Local Education Agencies
- Institutions of Higher Education
- For Profit Organizations
- Not-For-Profit Organizations

Contracting

- Programs must be a separate entity from the prime contracting organization

Tracking Students into the Aerospace Workforce



Sequence

Incentive-Based Funding Solution and Proposed Legislation



Task Sequence Aerospace Education Program List



Primary Functions of the Aerospace Education Program List Tiers

- Help programs enhance their contribution to the workforce by having clear measures of success as they move up the tiers.
- Enable companies to identify programs that are contributing the aerospace workforce when considering them for funding

Tier 1: Ranking criteria: Impact on the aerospace workforce

Program Name:		
Criteria	Raw Score	Rating 1-5
1. Total number of students the program impacts.		
2. Total number of minority students the program impacts. These include: African Americans, Hispanics, Native Americans and Pacific Islanders.*		
3. Total number of female students the program impacts.*		
Total Rating Score		
* The information in these criteria categories is not required to be in Tier 1 but they increase the overall score in the rating.		

Tier 2: Ranking criteria: Impact on the aerospace workforce

047

Program Name:		
Criteria	Raw Score	Rating 1-5
1. Total number of students the program impacts.		
2. Total number of minority students the program impacts. These include: African Americans, Hispanics, Native Americans and Pacific Islanders.		
3. Total number of female students the program impacts.		
4. Percentage of students who moved into an aerospace related program after finishing K-12. This can be a college, university, trade school, apprenticeship program, etc. as long as it is a program that is preparing people for post secondary aerospace careers.		
Total Rating Score		
All these criteria categories are required to be in Tier 2.		

Tier 3: Ranking criteria: Impact on the aerospace workforce

048

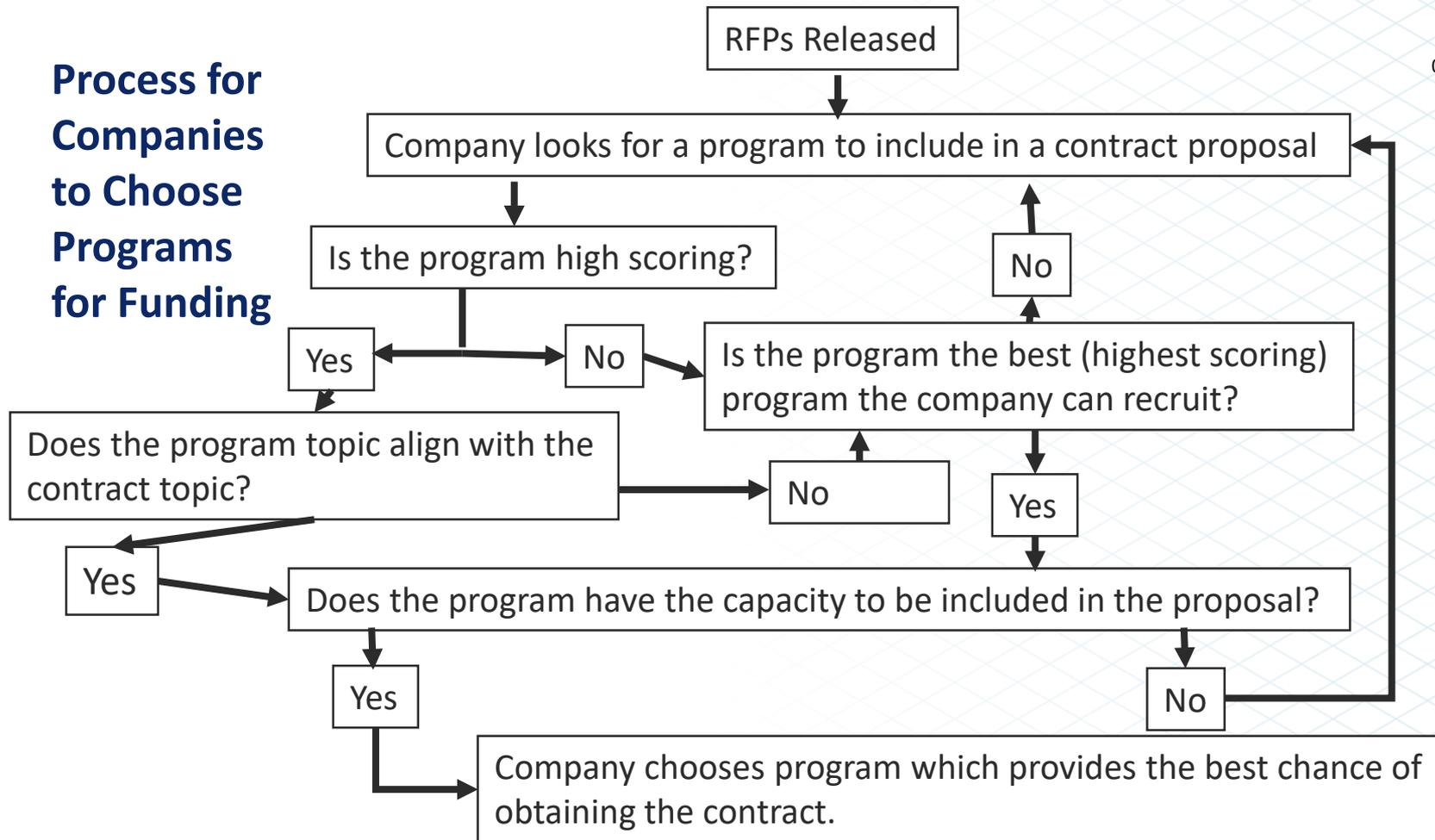
Program Name:		
Criteria	Raw Score	Rating 1-5
1. Total number of students the program impacts.		
2. Total number of minority students the program impacts. These include: African Americans, Hispanics, Native Americans and Pacific Islanders.		
3. Total number of female students the program impacts.		
4. Percentage of students who moved into an aerospace related program after finishing K-12.		
5. Percentage of students from a sample that go into the aerospace workforce.		
6. Percentage of the students from the program going into the aerospace workforce with a large enough sample to be able to generalize to the whole population.*		
7. Percentage of the students holding an aerospace job for 2 or more years.*		
Total Rating Score		
* The information in these criteria categories is not required to be in Tier 3 but they increase the overall score in the rating.		

Programs Moving Through the Tiers and Enhancing the Contribution to the Aerospace Workforce



Criteria	Tier 1	Tier 2	Tier 3	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
7									
6					Program A				
5				Program A			Program B		
4						Program B			
3									Program C
2									
1								Program C	

Process for Companies to Choose Programs for Funding



Process for Aerospace Education Programs to obtain funding and enhance the contribution to the workforce

Program enters data on the Aerospace Education Program List

Program is located on a tier

Program receives offers to participate in RFPs

Program chooses RFPs based on dollar amount & the program's capacity

Program determines the number of RFPs it can accept

Program identifies criteria needed to move up in tiers

Program enhances its contribution to the workforce to move up in the tiers

Market the Funding Opportunity to Aerospace Education Programs

052

Goal 1: Get the funding information out to as many Aerospace Education Programs as possible.

Goal 2: Get money to as many Aerospace Education Programs as soon as possible.

Steps to get the Funding

1. Fill out the Aerospace Education Program List criteria online.
2. Ensure your program has the following:
 - Cage Code
 - DUNS Number
 - Have a sound accounting system
3. Learn about Department of Defense (DoD) and Department of Transportation (DoT) contracting requirements.

Market the Funding Opportunity to Aerospace Education Programs Continued

Means of Reaching Programs

- Government agencies
- Non-Government Organizations (NGOs)
- Institutions of higher education
- Professional societies
- Business organizations
- Education programs
- Schools

Market the Aerospace Education Programs to Companies

Identify Education Programs that Contribute to the Aerospace Workforce

- Once the proposed legislation is included in the DoD and DoT contract RFPs the companies seeking these contracts will need to know how to identify the aerospace education programs to include in their proposals.
- Getting the information to the companies is key to success. Language will be included in the RFP's directing the companies to the Aerospace Education List.

Additional Marketing of the Aerospace Education Programs to Companies ⁰⁵⁵

- U.S. Department of Defense Office of the Undersecretary for Research and Engineering
- U.S. Department of Transportation (DoT)/Federal Aviation Administration (FAA)
- Aviation Week
- Aerospace Industries Association (AIA)
- American Institute of Aeronautics and Astronautics (AIAA)
- National Defense Industries Association (NDIA)
- The General Aviation Manufacturers Association (GAMA)

Next Steps

Collaboration

Meet with the YIATF Subcommittees

- Trends
- Pathways
- Awareness

Meet with the Women in Aviation Advisory Board Subcommittees

- Understanding the Problem & Industry Trends
- Training & Recruiting
- Mentoring & Professional Development
- Success Stories

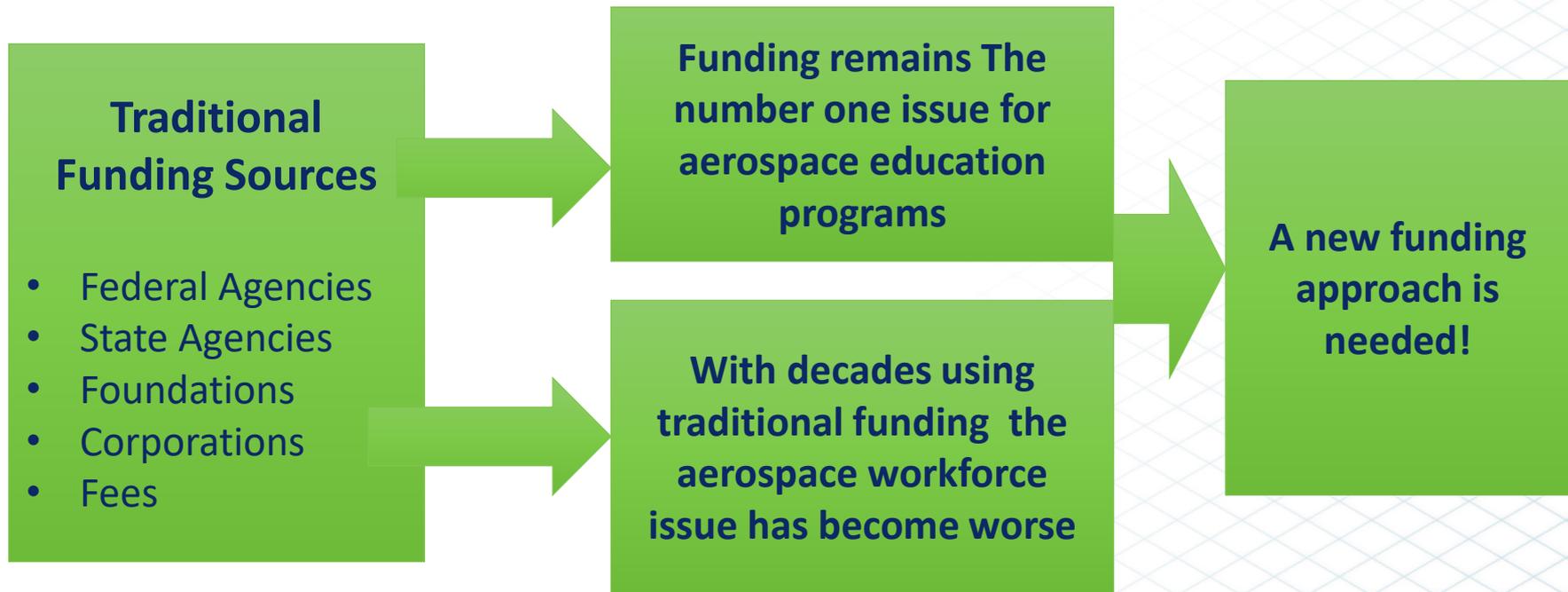
Next Steps Continued

- Test recommendations with industry & Congress
- Additional Research
- Coordination of the development of materials with other Subcommittees.
- Write a draft Funding Subcommittee Report Chapter for consideration.

Research on the Current State of Funding

Traditional Funding Sources Used to Support Aerospace Education Programs

059



Finding Federal Grants

Grants.gov is one stop location to find federal grants. It includes grant opportunities from NSF, NASA, DOT/FAA, U.S. Department of Education, etc.

Federal Funding: National Science Foundation (NSF) Directorate for Education & Human Resources (EHR)* ⁰⁶¹

Division	Budget	Success rate
Division of Graduate Education (DGE) Support for graduate students & innovative ways to prepare tomorrow's leaders	\$244,060,000	18%
Division of Human Resource Development (HRD) Strengthen STEM in underserved communities	\$178,300,000	28%
Division of Undergraduate Education (DUE) Strengthen STEM at undergraduate colleges and universities	\$219,390,000	27%
Research on Learning in Formal and Informal Settings (DRL) Improve STEM for all ages	\$181,720,000	17%
Total EHR	\$823,470,000	23%

These grants are very competitive. None have an aviation focus. Pointing more people to these opportunities will reduce the success rate and make them more competitive.

*NSF website

Federal Funding: U.S. Department of Ed. Carl D. Perkins Career & Technical Education Act*

Section 122(a)(1) of Perkins V requires each eligible agency desiring assistance for any fiscal year under the Act to prepare and submit a State plan to the Secretary. Each eligible agency must develop its State plan in consultation with key stakeholders, the Governor, and other State agencies with authority for Career & Technical Education (CTE), consistent with section 122(c) of the Act.

Statutory requirements for consultation in developing state plans must include “representatives of secondary and post secondary career and technical education programs.”

Funds will be used to support secondary and post secondary technical education programs in the states. Budget: \$1.2 Billion

Informal education programs cannot apply for funds unless they fit a specific state plan. No specific funding for aviation. State plans may include aviation as a “career pathway”.

*U.S Department of Education website

Pell Grants: U.S. Department of Education Office of Federal Student Aid*

Eligibility

- Undergraduate students who display exceptional financial need and who have not earned a bachelor's, graduate or professional degree.
- Some students enrolled in post baccalaureate teachers certificate programs.

Awards

- Maximum of \$6,495 per year.
- Does not have to be repaid

*U.S Department of Education website

Federal Funding: DoT The Flight Act

- Lowering the barriers to Reserve Officer Training Corp (ROTC) participation for students at Historically Black Colleges & Universities (HBCUs) and minority institutions.
- Supplementing flight training costs for ROTC members enrolled at HBCUs.

Targeted to getting underrepresented groups into aviation.

Department of Transportation

- [FAA Reauthorization Act of 2018](#), section 625.
- The [National Defense Authorization Act for Fiscal Year 2020](#)
 - FAA Maintenance Technical Workers Workforce
 - FAA Aircraft Pilot Workforce

Congress appropriated \$5 million for EACH program

Targeted to only two key areas of the the aviation workforce. The programs is small and does not impact large numbers of people.

Federal Funding: DoL National Apprenticeship ACT 2020*

Provides statutory authority for the registered apprenticeship program within the Department of Labor (DOL), provides for related grant programs, and contains related provisions. The bill provides statutory authority for the Office of Apprenticeship (OA) within DOL. The bill also establishes in statute the responsibilities of state apprenticeship agencies and offices. Education and Training providers provide apprenticeships in the states.

\$400,000,000

The overall support is good. DoT/FAA is one area of many included. The impact on aviation is limited.

*U.S Department of Labor website

90% of U.S. Foundations do not have a website

The **Foundation Center** provides the *Foundation Directory* online

- Private & Independent Foundations
- Corporate Foundations

Subscriptions are \$199.99 per month.

Researching State Funding Opportunities

Research America provides information on state funding.

- Federal Block Grants
- Private
- University
- NSF

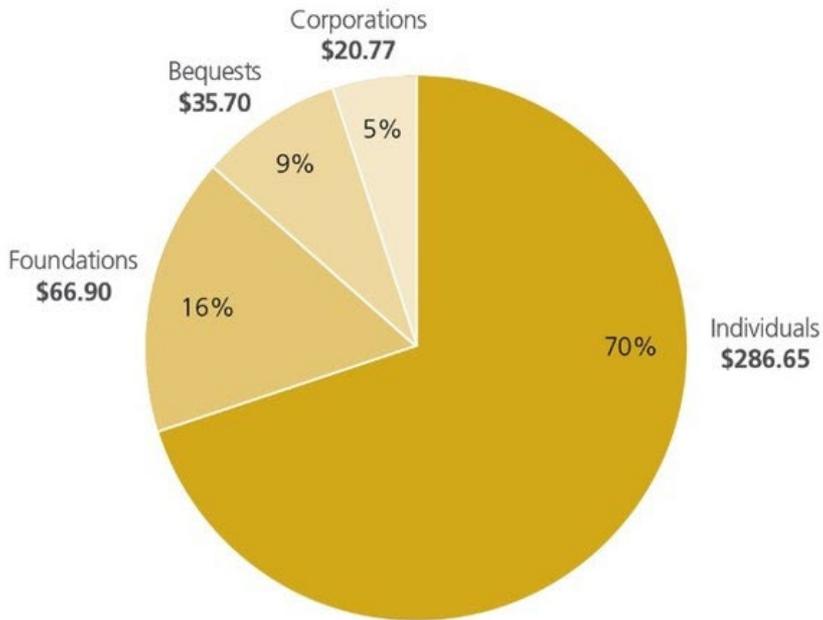
The main focus is on health issues with STEM and other topics are listed like state NSF grants.

Pearson

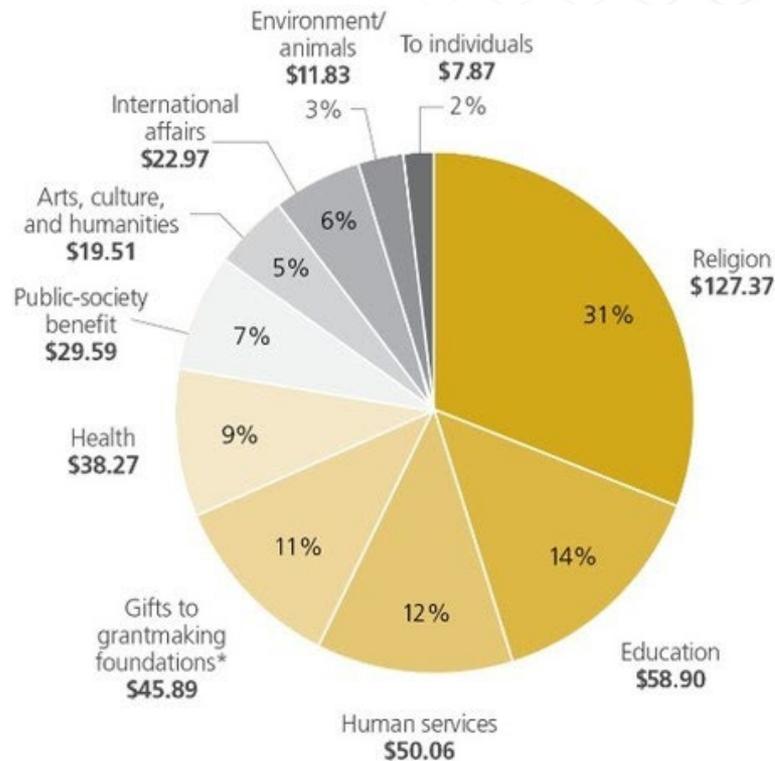
Provides information online about grants by state. Including Perkins Funding.

Private Sector Giving By Source and Recipient*

Giving by Source



Giving by Recipient



*The Curtis Group Giving USA 2018

Youth Access to American Jobs in Aviation Task Force

* Estimate developed jointly by the Foundation Center and Giving USA

Corporate Funding

070

Corporate funding has been provided for decades.

Annual Donations \$20,770,000,000.*

Amount of annual donations to education \$2,900,000,000

- Most corporate funding is limited to 3 to 5 years of support.
- Often when the champion at a company leaves the funding for the program dries up.
- Corporate donations to aerospace education is a significantly smaller fraction of the overall donations to education.
- The amount of corporate funding for aerospace education has been limited due to lack of program metrics demonstrating that the investment impacts the workforce.

*The Curtis Group Giving USA 2018

Limitations of The Traditional Sources of Funding on Impacting the Aerospace Workforce

071

- Some are very competitive and impact small numbers of aerospace education programs.
- Some are big with significant resources allocated but are difficult for aerospace education programs to access due to the structure of the program.
- Most are not targeted targeted to aerospace education.
- Some are targeted to aviation but are too small of have a significant impact on the aerospace workforce.
- Many do not provide ongoing support.
- The Traditional Funding sources are an unconnected patchwork with no national focus on addressing the aerospace workforce.
- The key sectors industry, government and education are not working collaboratively to address the aerospace workforce need.

Awareness Building

June 9, 2021

Members of the Committee

- Stacey Bechdolt
 - President and Founder of Aerospace Education Resource Organization (AERO)
- Joey Colleran
 - Director of Customer Success at Redbird Flight Simulations
 - Board Member of University Aviation Association
- Whitney Dix
 - Manager of Dispatch Training at Southwest Airlines
- Captain Jennifer Henderson
 - Engineering Test Pilot/Chief Pilot of 737 at Boeing
- Amy Voss
 - Regional Training Manager at Cirrus Aircraft

FAA Subject Matter Experts

- Christine Sharp
 - Manager, Aviation Workforce and Education Division
- Robyn Mulenga
 - Management Program Analyst

Current Subcommittee Work

- Creation of survey for
 - School counselors
 - Students (through parents/counselors/organizations)
 - Possible focus group
 - Professional organizations (aviation related)
- Survey questions
 - Two survey tracks
- Most effective way to reach people not involved in aviation
 - American Association of School Counselors
 - National Association for College Admission Advising
 - Boy/Girl Scouts
 - Boys & Girls Club of America
 - YMCA

Next Steps

- Distribute survey to organizations
 - Coordinating with subcommittees
 - Challenges with survey timing
- Gather data and analyze results
- Host guest presenters at subcommittee
 - Counselors
 - Outreach experts
 - Industry stakeholders

Expanded Pathways Subcommittee

June 09, 2021

Members of the Committee

- Joanne Damato, CAM, VP, Educational Strategy & Workforce Development; National Business Aviation Association
- Dr. Nancy Shane Hocking, Director Gateway College and Programs; JetBlue
- James Hall, Dean, Aviation Technologies; Wichita State University
- Dr. Joel English, Executive Vice President; Centura College
- Captain John Hornibrook, VP; The Boeing Company
- Ryan Goertzen, VP Maintenance Workforce Development; AAR
- Ed Cormier, Program Analyst, FAA

Charge to the Subcommittee and Questions to Consider

- *Identify industry trends that encourage or discourage youth in the United States from pursuing careers in aviation.*
- What are the existing programs that work well in reaching youth?
- What are the impediments to reaching young people and why is aviation not considered as a career choice?
- What role do teachers and guidance counselors play in shaping a student's decision to pursue aviation?

Approach to the Work

- Case Studies

- Fly Norfolk
- AeroStar Avion Institute
- Oklahoma Career Tech
- S.H.E. Can STEAM Summer Camp by the National Air & Space Museum
- OBAP ACE Academies

- Interviews

- FAA AVSED
- DODSTEM
- Boys Scouts – Aviation Merit Badge
- Kitsap County School Aviation/STEM Program
- Smithsonian Museum
- Job Corps

Key Observations

080

High School Programs Expansion

- An Industry-Recognized Credential Earned as Part of the Program
- Nationally-Approved Curriculum
- Removal of Cost Barriers for High Schools and Students
- Motivation and Benefit for the Secondary and Post-Secondary Partners to Participate

Importance of Teachers and Parents

- “You can’t be it if you can’t See It”
- Inspired teachers are contagious and impact not only students but parents.
- Creation of a Summer Teaching Academy Program.
- Industry must support through travel, hotels and transportation

Information is Critical

- Information is fragmented; lack of centralized clearinghouse for “one stop shopping”
- Many pathways exist but information on how to find/enter them is not readily available to all
- Lack of tracking of students in existing programs means they are missing key career information

Next Steps

- Develop the concepts of a Nationally Approved curriculum leading to industry recognized credentials.
- Develop the concepts of a Summer Teaching Academy Program.
- Develop the concept for a robust national aviation website.
- Creation of a Virtual Counselor platform.

Aviate and the United Aviate Academy

June 2021



What is Aviate?

- Aviate is United's innovative pilot development program that provides those who aspire to a career as a United Captain the most direct route to achieving that goal
- Aviate accommodates pilots of all experience levels – from zero hours to professional pilots flying for one of our regional partners



Aviate benefits

- ✓ Most direct path to United
- ✓ Entry points throughout a pilot's career
- ✓ Transparency and clarity along the path to United
- ✓ Career development, mentoring and access to United pilots
- ✓ Travel privileges

What is the United Aviate Academy?

084

What is United Aviate Academy?

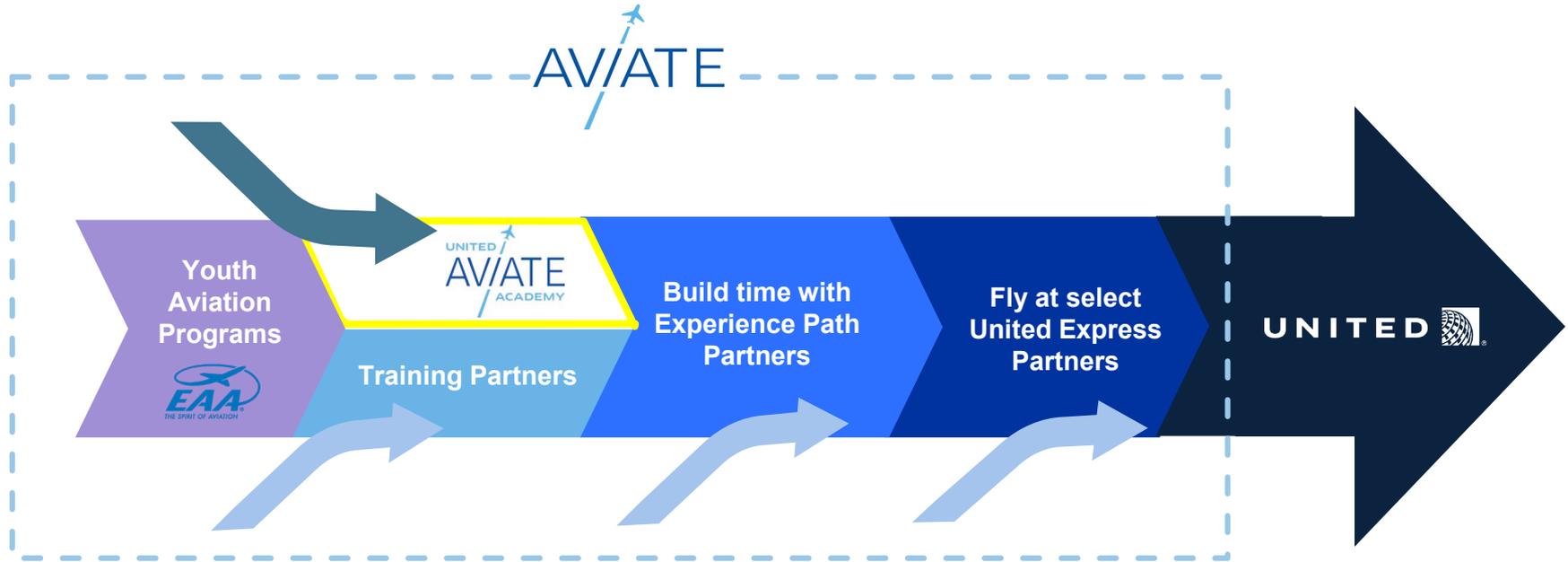
United's wholly-owned flight training academy develops and trains aspiring aviators into exceptional United pilots. An accelerated professional pilot training course offers students the most direct path to Aviate and a United flight deck

Those with little to no experience can apply to UAA and receive the best flight training to prepare for a safe and successful career as a pilot at United

*We expect to **train 5,000 new pilots** at the United Aviate Academy in the next decade, **at least half of whom will be women and people of color**. We're looking for the best and brightest to fly us forward.*



United Aviate Academy in the Aviate ecosystem



United's program uniquely encompasses all segments of the chain and includes a wholly-owned flight academy



Reducing financial barriers through scholarships and loans

- **United and JPMorgan Chase are offering \$2.4 million in financial aid**
- Admission into the academy is **required** for scholarship applicants
- Our four scholarship partners: the Organization of Black Aerospace Professionals, Sisters of the Skies, the Professional Asian Pilots Association and the Latino Pilots Association
- Additionally, loans will be available from our loan partner Sallie Mae



Your flight plan at United Aviate Academy

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1. **Apply to the Academy** – unitedaviate.com/academy
2. **Start your training** and gain your Private Pilot's License* (PPL)
3. **Interview for Aviate**
4. **Finish your pilot training** in 10 months
5. **Join an Aviate partner** and build your flight hours
6. **Fly for United Express**
7. **Transition to United Airlines** as a First Officer



* Those with a PPL are eligible to apply to both Aviate and the Academy simultaneously



An exciting and financially rewarding career as a pilot awaits you, and it all starts by enrolling at United Aviate Academy

- Get a United education from highly trained professionals
- Receive career guidance and direction from United Aviate Ambassadors
- Start experiencing United's culture and be on the inside track
- Become a part of a company that is committed to global citizenship and creating a more sustainable future
- Join United to fly the latest aircraft around the world and meet incredible people



Learn more and apply now at unitedaviate.com/academy



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Thank you!



Headquarters U.S. Air Force

Integrity - Service - Excellence

Pilot Shortage: Crisis and Opportunities

“4C’s Model” – A Common Framework for Professional Aviator Development



Youth in Aviation Task Force Briefing
Brig Gen Christopher “Mookie” Walker
Dept of Air Force Office of Diversity and Inclusion

U.S. AIR FORCE



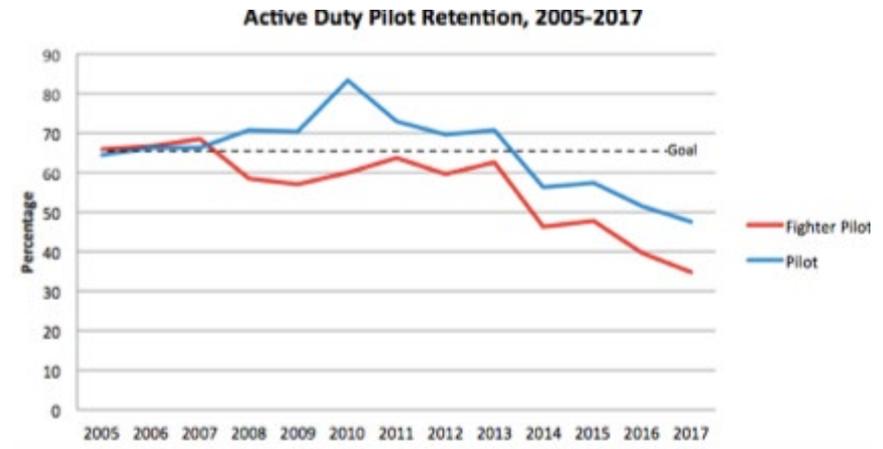
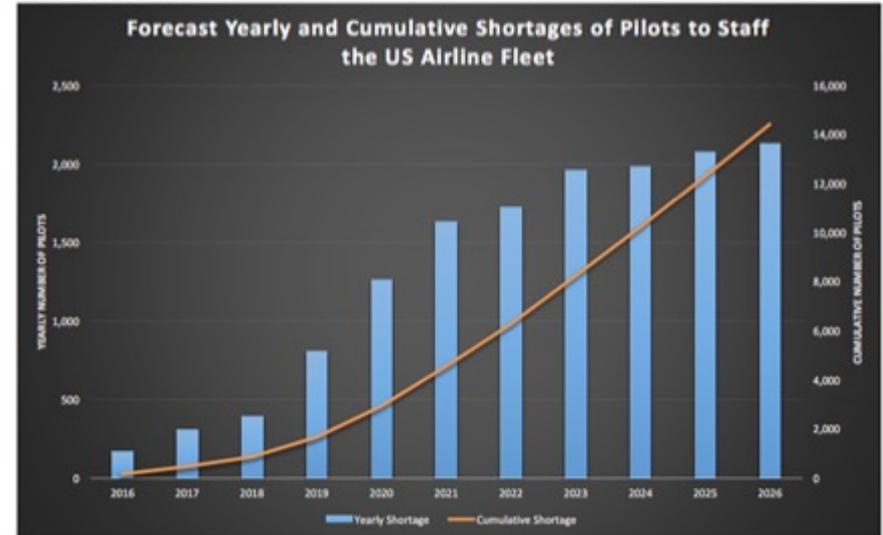
U.S. AIR FORCE

Overview

- Target
- Threat
- “Tactics”

- Q & A

UNIVERSITY OF NORTH DAKOTA



Source: Annual Air Force Officer Rated Retention Analysis Reports, 2005-2017 (Approved for Release)



U.S. AIR FORCE

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The Target

**Meet the national (global) demand
for aerospace professionals**

AND

**Ensure inclusive opportunities
in order to attract the nation's best and
brightest to our aerospace industry**

Integrity - Service - Excellence



U.S. AIR FORCE

093

Threats: Then vs. Now

How do we define what it takes and identify who has it?

THE RIGHT STUFF



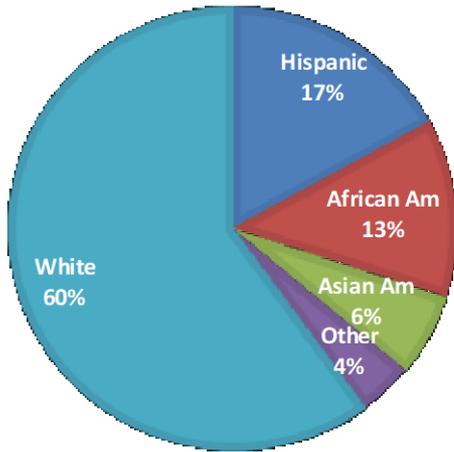
Integrity - Service - Excellence



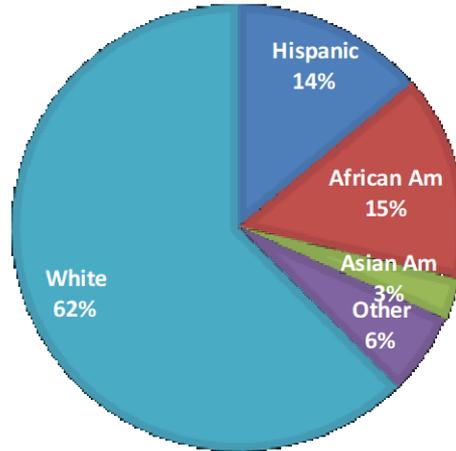
U.S. AIR FORCE

Threats: No Change Without Change

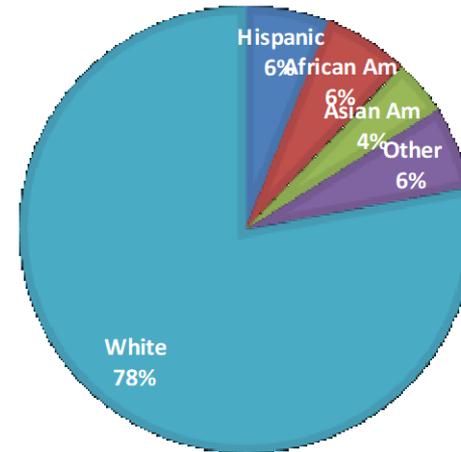
U.S. POP'N



ENLISTED POP'N

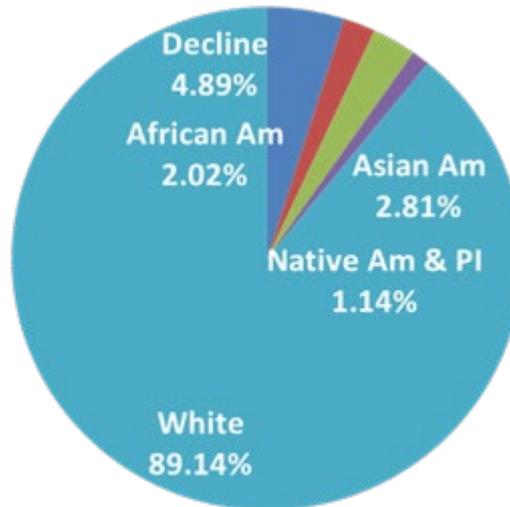


OFFICER POP'N



Generalized Statistics

Civil & Military Aviators



Pilot Demographics

**90% Male
90% White**



U.S. AIR FORCE

095

Our Mission

How do we go from this...

To This?

Or This?



Integrity - Service - Excellence



U.S. AIR FORCE

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“Tactics” Overview

How to accomplish the mission

- Institutional Level
- Organizational Level
- Personal Level

How to face threats

- Avoid
- Mitigate
- Eliminate





U.S. AIR FORCE

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Working Hypothesis

Utilize a deliberate, collaborative approach & methodology that begins as soon as you can say “AIRPLANE”!!



Cradle-to-Cockpit

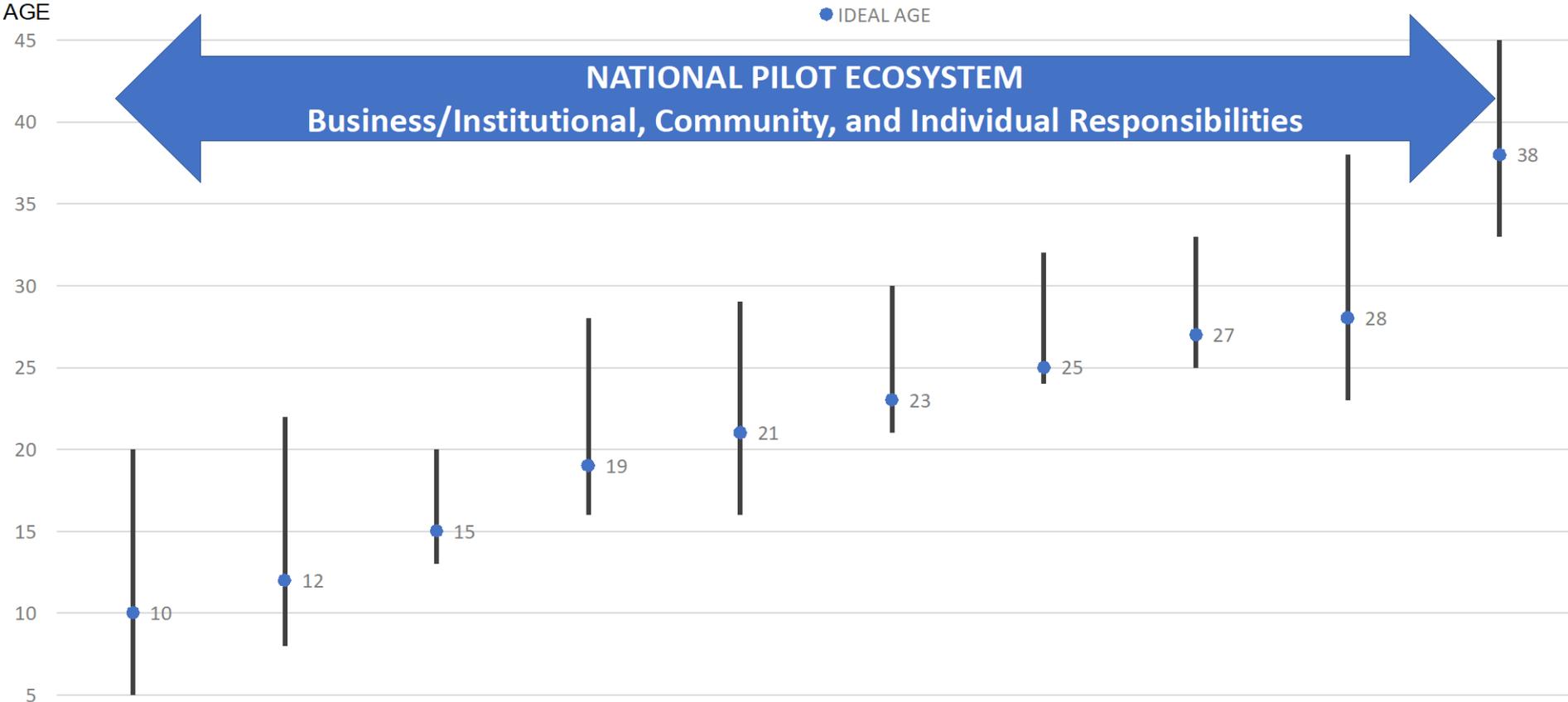
Integrity - Service - Excellence



U.S. AIR FORCE

4C's Model and National Pilot Ecosystem

4C's Model of AF Pilot Development



NOMINAL PHASES & DEVELOPMENTAL FOCUS

Awareness	Orientation / Interest	Collegiate Preparation	Officer Development	UPT Preparation	UPT Mentorship	MWS Foundations	MWS Progression	Career Goals & Mentorship	Civilian Transition
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CHILDHOOD

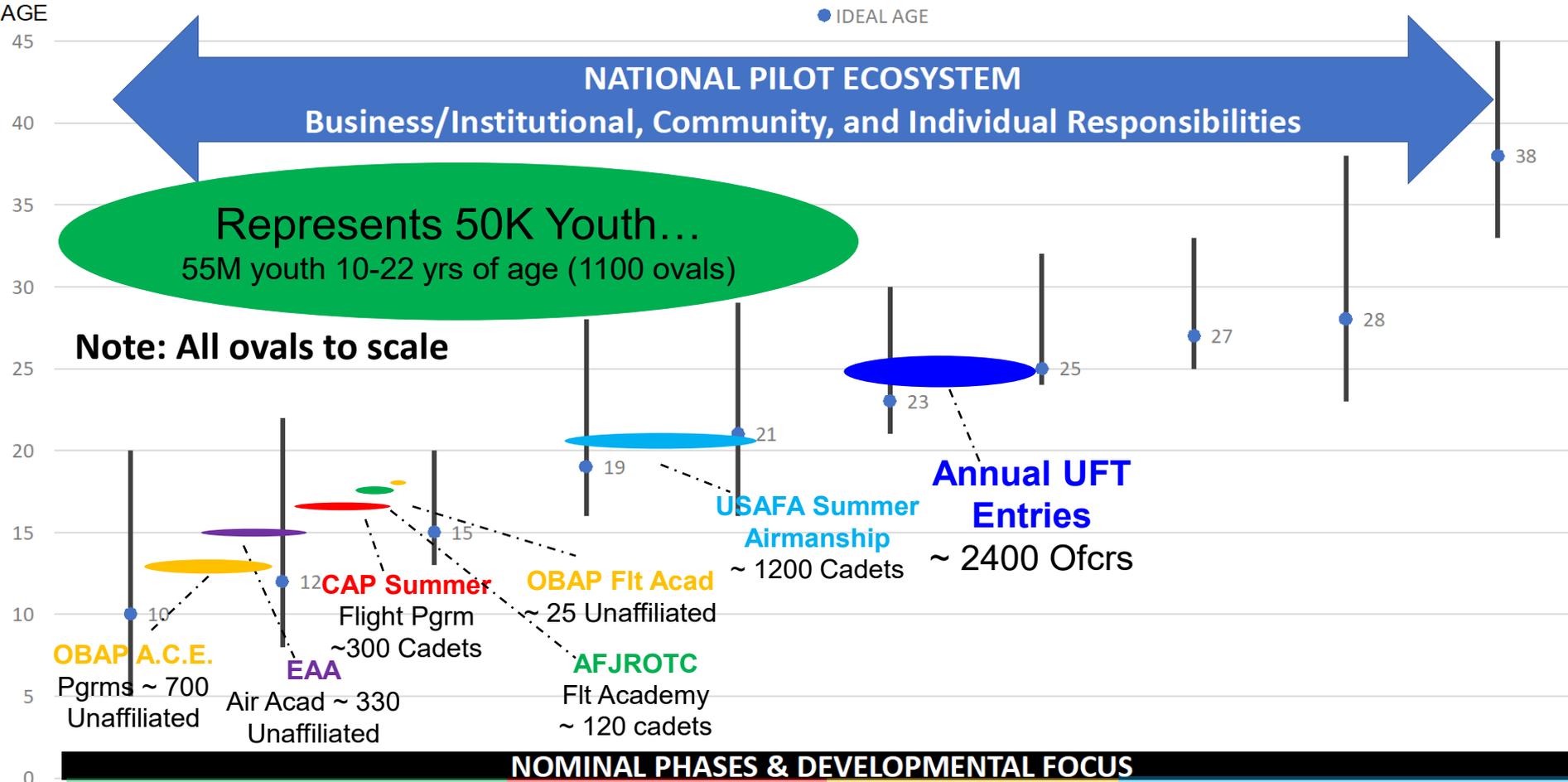
COLLEGE / CADET

COCKPIT

CAREER

4C's Model & National Pilot Ecosystem Pipeline Comparative Analysis

4C's Model of AF Pilot Development



NOMINAL PHASES & DEVELOPMENTAL FOCUS

Awareness	Orientation / Interest	Collegiate Preparation	Officer Development	UPT Preparation	UPT Mentorship	MWS Foundations	MWS Progression	Career Goals & Mentorship	Civilian Transition
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CHILDHOOD

COLLEGE / CADET

COCKPIT

CAREER



National "Pilot" Ecosystem

U.S. AIR FORCE

BUSINESS / INSTITUTIONAL



COMMUNITY



AAB International



U.S. AIR FORCE

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National "Pilot" Ecosystem

INDIVIDUAL



Integrity - Service - Excellence



U.S. AIR FORCE

CHILDHOOD

AWARENESS

- Media
- Friends and family
- Deliberate outreach

ORIENTATION & INTEREST

- Single events
 - Airshow, open house, career days, etc.
- Focused programs
 - Summer camps, aerospace/STEM orientation

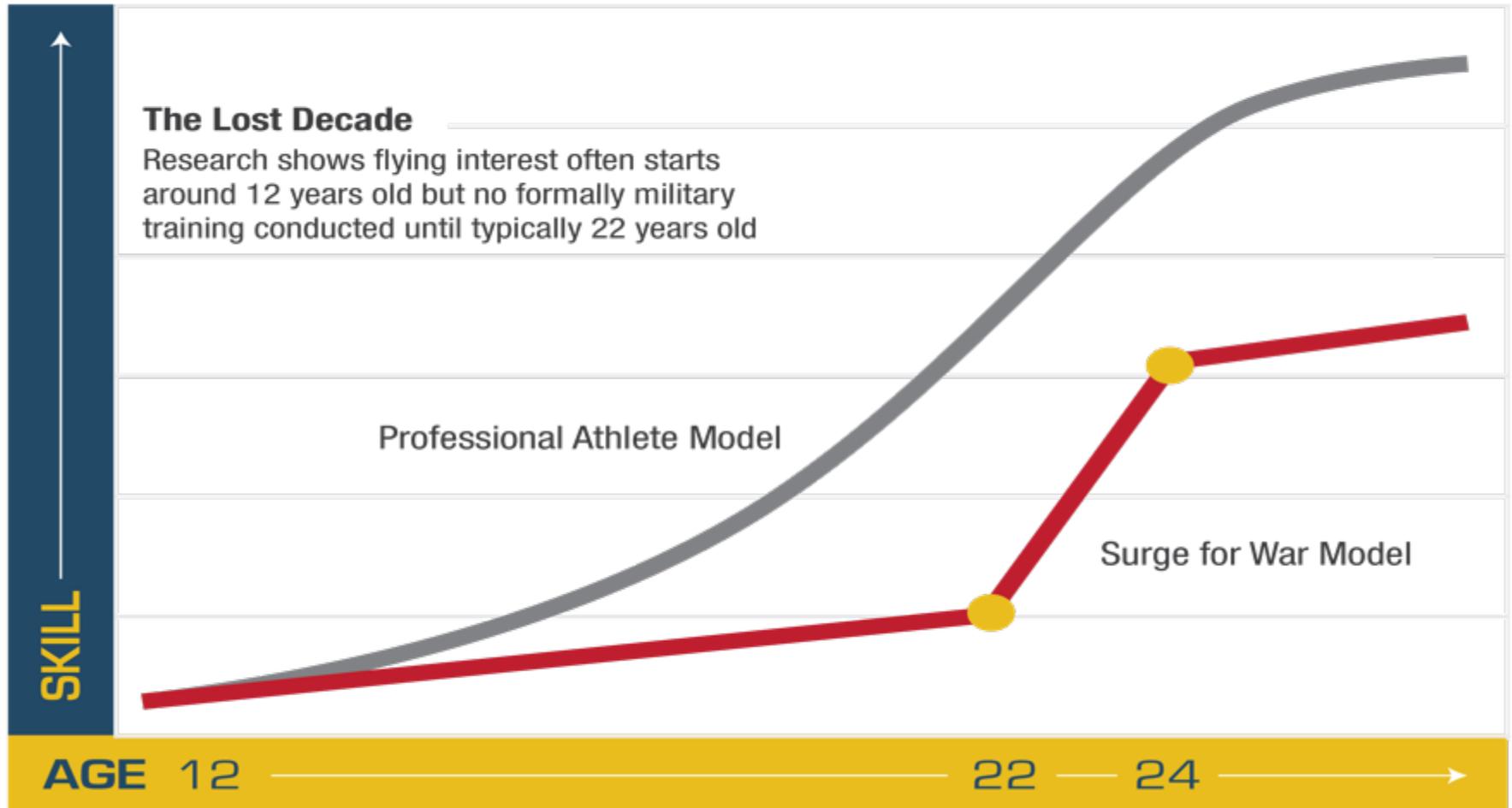
COLLEGIATE PREPARATION

- Sustained activities
 - Internships, academic enrichment flight training
- Mentorship
- Scholarships / Financial assistance

Introducing Students to Aviation Careers



Professional Athlete Model vs. Surge for World War II Model





Air Force JROTC Flight Academy

04

- Aug 2017 CSAF's ACTF reached out to AFJROTC w/following request:
 1. Get kids excited about aviation & 2. Increase aviation Diversity
 - Why AFJROTC: 120K cadets, diversity, 875 HS (w/1.5M studs), propensity to serve
- Conceptualized as 8-week Pilot certification pgm vs. historical solo model
 - Why PPC: goal = aviation career; solo = high-risk investment, min diversity impact
- 2018 proof of concept: 120 cadets attended 6 universities for \$2.4M
- 2019 pgm increased to 150 cadets, 11 universities at \$3.8M
- 2020 COVID cancellation, planned 200 cadets, 17 universities & \$4.6M budget
- 2021 RDI planned 400 scholarships, ~25 universities & \$9.6M
 - 300 AFJROC Cadets, 50 AFRS Det 1, 20 ROTC, 20 CAP & 10 USAFA



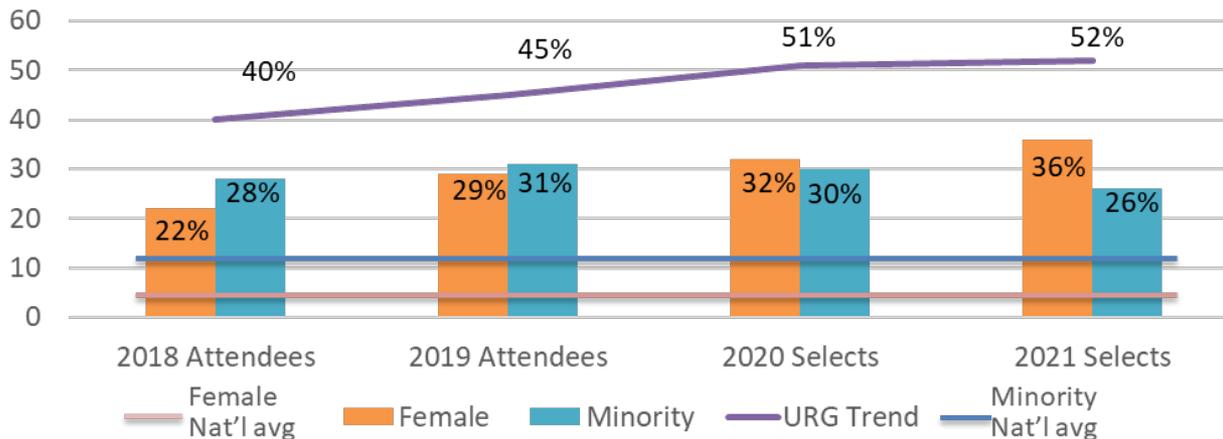
U.S. AIR FORCE

Air Force JROTC Flight Academy cont'

National Impact

- 270 Cadets attended the Flight Academy in 2018-2019 (2020 = COVID)
- 217 New Pilots at an astounding 80% completion rate
- 41% of these new pilots are from underrepresented groups
- Biggest WIN! Females = 18% of nation's new female pilots (ages 16-19)
- Biggest Challenges: black males remain lowest demographic applicant and unit participation (~400 mostly majority minority units without applicants)

Changing the Face of Aviation



Lindsay Cosby added 8 new photos. 10h · 🌐

It's official! Graduated with my Bachelors of Aeronautical Science with minors in Applied Meteorology and Airline Operations. Finished in 2 1/2 years Cum Laude as a Certified Flight Instructor (CFI/II), Commercial Single/Multi & Instrument rated Pilot. So thankful for everyone and everything that helped out along the way. Let's Fly ✈️



A 2018 FA graduate, Lindsay attended ERAU, CFI to one of our 2019 attendees, ROTC Scholarship but DQ for peanut allergy.



U.S. AIR FORCE

Air Force JROTC Flight Academy cont'

Accessions ROI

- Citizenship with benefits!
- 124 of 270 graduates in an AF accessions source
- 46% of FA attendees tracking “blue”
 - 101 Cadets enrolled in ROTC @ 38% URG
 - 12 Cadets enrolled in USAFA @ 25% URG
 - 11 Cadets enlisted
- Cadets are tracked for 5 years following FA



The Flight Academy was a huge blessing to me. It gave me the chance to represent my family and AFJROTC detachment in an honorable way. Before the Flight Academy I would've never considered aviation as a career path for myself. The Flight Academy has opened my eyes to aviation. Being in AFJROTC has increased my confidence in taking the lead in tasks and increased my confidence in taking the lead in tasks. I have also learned the importance of helping out in my community and taking care of others.

*Cadet 4th Class Kaitlinn Brandon,
Det 790, Tennessee State University,
formerly of AFJROTC Unit TX-20141*



U.S. AIR FORCE

COLLEGE (CADET) / COCKPIT¹⁰⁷

Being a pilot



What my friends think I do



What my mom thinks I do



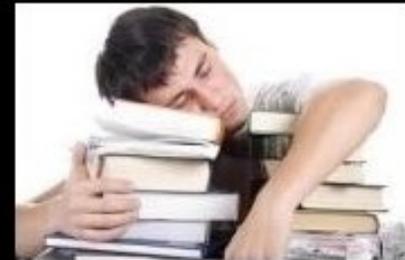
What society thinks I do



What my flight instructor thinks I do



What I think I do



What I really do

Integrity - Service - Excellence



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CHARACTER DEVELOPMENT

- Internal / self
- External / teamwork

FLIGHT TRAINING PREP

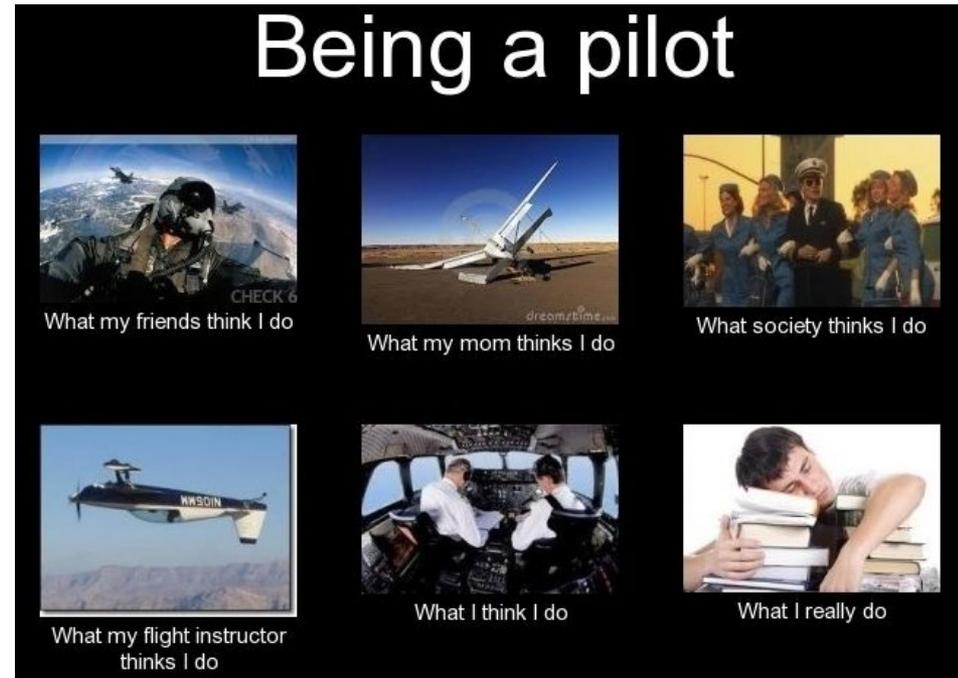
- Primary flight training
- Prerequisite

FLIGHT TRAINING MENTORSHIP

- Military UPT / Regional Jet Training
- Processes, Standards, Expectations

AIRCRAFT FOUNDATIONS

- Initial mastery and proficiency
- Organizational / Cultural norms





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AIRCRAFT PROGRESSION

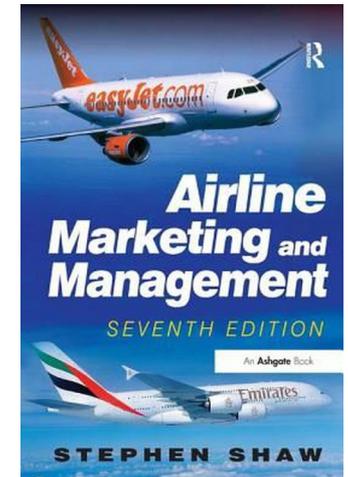
- Upgrades
- Different aircraft assignment

CAREER GOALS

- Special flight opportunities
- Broadening assignments
- Family, work/life balance

TRANSITION

- Leadership / Management
- Academia
- Volunteering





U.S. AIR FORCE

More than a dream... A goal with a plan!



Integrity - Service - Excellence



HIGHLIGHTS

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- Unprecedented opportunities and challenges within global/national aerospace industry
- Our task/target is to find those who have *The Right Stuff* from throughout the nation
- Robust collaboration, deliberate pathways, and focused outcomes are the way to our destination