

WOMEN IN AVIATION ADVISORY BOARD (WIAAB) MEETING AGENDA

May 25, 2021 *** 9:00 AM to 3:30 PM EDT

Morning Session <https://youtu.be/BIsPz3OcKW0>

Afternoon Session https://youtu.be/6_rDxnHWg0U

Topic	Facilitator
Call to Order	Angela Anderson Designated Federal Officer (DFO)
Welcome Remarks/Introduce FAA Speaker	Angela Anderson DFO
Opening Remarks	FAA Speaker
Open Meeting Adoption of January 2021 Minutes	Heather Wilson WIAAB Chair
<i>Presentations</i> <ul style="list-style-type: none"> Vision of the Board Statement Barriers & Solutions: Systems Timeline Model 	Rene Banglesdorf Becky Lutte
Break	
<i>Presentations (cont'd)</i> <ul style="list-style-type: none"> Barriers to the Recruitment and Retention of Women in Aviation Recommendations for Enhancing Recruitment and Retention of Women in Aviation 	Bobbi Wells Crystal Barrios
Break	
<i>Presentations (cont'd)</i> <ul style="list-style-type: none"> Recommendations for Enhancing Recruitment and Retention of Women in Aviation 	Crystal Barrios
Lunch Break	
<i>Presentations (cont'd)</i> <ul style="list-style-type: none"> Culture Change Model Report Outline & Prepare Plans for Writer's Workshop 	Bobbi Wells Dana Donati
<i>Committee Open Discussion & Action Item Review</i>	Heather Wilson WIAAB Chair

Adjourn Meeting	Heather Wilson and Angela Anderson
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DRAFT WOMEN IN AVIATION ADVISORY BOARD COMMITTEE RECORD OF MEETING

MEETING DATE: January 14, 2021

MEETING TIME: 9:00 AM – 3:30 PM EST

LOCATION: The Women in Aviation Advisory Board (WIAAB) Committee held a “virtual” meeting.

PUBLIC

ANNOUNCEMENT: The Federal Aviation Administration (FAA) provided notice to the public of this WIAAB meeting in a *Federal Register* notice published on December 14, 2020 (85 FR 80884).

Recordings of the meeting can be found at:

<https://www.youtube.com/watch?v=M9pa-Y1r8y4>

<https://www.youtube.com/watch?v=sHKp1DjH6FE>

ATTENDEES:

Committee Members	
Rene Banglesdorf	
Crystal L. Barrois	
Kassandra “Kandy” Bernskoetter	
Maryanne DeMarco	
Dr. Karrie Dixon	
Dana Donati	
Lindsey Dreiling	
Elise Eberwein	
Kathryn P. Fraser	
Kate Gebo	
Patricia “Trish” Gilbert	
Lauren Lacey Haertlein	
Laura Jones	
Kelly Jost	
Dr. Rebecca Lutte	
Jean Lydon-Rodgers	
Suzanne Markle	
Candace McGraw	

Allison McKay	
Tracy Miller	
Martha Morris	
Constance von Muehlen	
Stacey Rudser	
Kriya Shortt	
Tammie Jo Shults	
Amy Spowart	
Bobbi Wells	
Pam Williams	
Beth Wilson	
Dr. Heather Wilson, Chair	
FAA	
Angela Anderson	Designated Federal Officer
Leslie Welch	Office of Communications
Public Attendees	
Lindsay Aaronson	
Steve Custer	
Jack Fino	
Faye Gibbins	
Brandi Teel	Utep.edu
Staci Thompson	Fbcboerne.org

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, Designated Federal Officer (DFO), began the meeting at 9:00 a.m. by welcoming everyone to the second WIAAB 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.

Dr. Wilson thanked everyone for attending the meeting and noted that each subcommittee would provide a status update. Also, Dr. Wilson provided a few updates since the last meeting. She noted the resignation of DOT Secretary Chao and retirement of Deputy

Administrator Dan Elwell. She also noted that she has been in touch with the Designate Secretary of Transportation.

Ratification of Minutes

Dr. Wilson asked for a motion to accept the minutes from the August 11, 2020, meeting. Ms. Trish Gilbert motioned to accept the minutes, and Ms. MaryAnne DeMarco seconded the motion. The WIAAB voted to ratify the minutes with no objections.

Status Reports

Information on WIAAB meetings can be found at:

https://www.faa.gov/about/office_org/headquarters_offices/ahr/advisory_committees/women_aviation/.

Understanding the Problem and Industry Trends Subcommittee

Dr. Wilson asked Dr. Rebecca (Becky) Lutte to provide the subcommittee's status report, which included a review of the mission statement, a list of members, and a description of each task.

Dr. Lutte stated the subcommittee's mission statement is to examine the industry trends that directly or indirectly encourage or discourage women from pursuing careers in aviation. She explained that the subcommittee has identified four tasking areas and has assigned a lead for each task. Dr. Lutte asked the leads to brief the Board on their specific task.

Ms. Constance von Muehlen discussed her task, which is to gather and identify the number of women in aviation. Ms. Von Muehlen reviewed a chart depicting the number of women currently represented in different occupations within aviation. She noted that not having sufficient breadth, depth, consistency, and access to accurate data has created challenges.

Ms. Tammie Jo Schults discussed her task, which is to identify factors and barriers that directly or indirectly discourage women from pursuing careers in aviation. Ms. Schults detailed specific discouraging factors the group has identified thus far.

Ms. Bobbi Wells discussed her task, which is to identify the factors that directly or indirectly encourage women to pursue careers in aviation. Ms. Wells detailed specific encouraging factors the group has identified and how these factors relate to structural problems within the system.

Ms. DeMarco discussed her task, which is to explore how these factors impact the education, training, mentorship, outreach, recruitment, and retention of women in aviation. Ms. DeMarco explained that the factors identified in tasks 1-3 will be examined

to gather data on how these factors affect education, mentorship, outreach, recruitment, and retention.

Dr. Lutte thanked the subcommittee speakers, and asked anyone with feedback or questions for the board or for this specific subcommittee to please email S612WomenAdvisoryBoard@faa.gov.

Dr. Lutte further noted that the subcommittee is developing two surveys in their data collection efforts. Ms. Lauren Haertlein explained the first survey would focus on women not in the aviation industry and the second for women working in the aviation industry. She explained that the first survey is an opportunity to gain an outside perspective of understanding why women do not get involved in aviation.

Ms. Crystal Barrois explained the second survey focuses on women currently in the aviation industry, especially in leadership positions, to expand corporate outreach and understand their career paths and possible interest in mentorship. Ms. Barrois noted that the survey is robust and includes questions regarding career paths, barriers in policy, mentorships, sponsorships, corporate culture, and the development of personality traits. Ms. Barrois said interested participants of the survey would be invited to a roundtable discussion.

Dr. Lutte asked if there were any questions for this subcommittee. She addressed a question asking if airline or other company executives were considered, and she responded in the affirmative. Ms. Rene Banglesdorf emphasized that non-airline company executives can be just as important to the aviation industry as airline executives. Ms. Gilbert stated that she would send the survey link to the Board for any additional feedback or recommendations. Dr. Lutte noted that this is a survey developed and being conducted by the subcommittee, not by the FAA.

As a point of clarification, Ms. Wells stated that, since there is no requirement to report data, the opportunity for comparison of data is difficult. She stated that the group is looking at a requirement for this kind of reporting in their recommendation. Ms. Lindsey Dreiling asked about current paths the group is headed toward, and Ms. Von Muehlen suggested that the current path is to improve the quality of data available in order to gauge the next steps.

Ms. Amy Spowart asked for clarification on the subculture of discouraging factors and how her subcommittee may be able to help with the deficits in subculture. Ms. Shults explained that the group found that the lack of diverse role models in aviation is a reason why more women aren't getting involved. She further explained that for some women, with various and perhaps modest cultures and backgrounds, exposure to fields like aviation may not mesh within these women's subcultures. Ms. Shults emphasized that a goal should be to teach women that they should not have to choose between their culture and career path. Board members agreed.

Board members agreed with Ms. Elise Eberwein's suggestion to expand the surveys to Board members. Ms. Stacey Rudser asked the subcommittee whether they considered gathering data for people that have recently left the industry and the reason for departure. Dr. Lutte noted that this is a good point, and currently, there is not a good, accurate way to find this data. Dr. Lutte explained that race/ethnicity data is also not available to connect with this information and that these are important topic issues to keep on top of going forward. Ms. Dreiling suggested collaborating on efforts for data outreach, and Dr. Lutte agreed.

Dr. Wilson thanked Dr. Lutte and her subcommittee for their status update and work.

Training & Recruitment Subcommittee

Dr. Wilson asked Ms. Dana Donati to provide the subcommittee's status report, which included a review of the mission statement, a list of members, and a description of each task.

Ms. Donati stated that the subcommittee's mission to encourage young women and girls to consider aviation career opportunities through engagement and education, while working to create a gender-balanced workforce. Ms. Donati asked the leads to brief the Board on their specific task.

Ms. Dreiling provided an update on identifying opportunities to attract a variety of age groups to aviation. Ms. Dreiling highlighted the four opportunities to attract girls and women to aviation –

1. Early engagement- Elementary school camps & activities through museums, organizations, groups, community colleges, career-focused training programs, and universities.
2. Pathway to careers - Aviation focused curriculum through middle schools, high schools, community colleges, career-focused training programs, and universities.
3. Sustaining engagement- Activities through aviation organizations and groups including federal agencies, national industry and trade organizations, and national youth organizations.
4. Industry engagement - professionals - Mentorship, education, and training programs.

She stated that next steps to attract girls and women to aviation is considering (1) how to reach out during key moments in one's aviation journeys, (2) how to connect aviation pathways from elementary to post-retirements, (3) how to prioritize aviation outreach programs, and (4) how to foster collaboration across aviation organizations to empower established groups.

Ms. Kriya Shortt provided an update on engaging and inspiring youth through industry influencers and organizations. Ms. Shortt explained that key highlights included a best in class unique experience, a broadened perspective, and representation of the audience the group is trying to reach. She stated that next steps include (1) better identifying and

tracking youth, (2) making it easier for a non-industry to partner, and (3) identifying the role of local airports and social media/influencers.

Ms. Tracy Miller provided an update on identifying educational aviation focused curriculum for primary education. Ms. Miller noted that there are minimal options available for primary aviation curriculum. She further noted that there are more STEM curriculum choices than aviation specific, and that there is a lack of female representation in aviation curriculum. She stated that next steps include identifying gaps, updating and modernizing aviation curriculum, and creating opportunities to improve female representation without a one size fits all curriculum. She noted that if a female student sees someone else who looks like them doing something, they are more likely to do it.

Ms. Suzanne Markle provided an update on establishing traditional and non-traditional post-secondary educational aviation pathways. Ms. Markle noted that both aviation colleges and aviation employers have too small of a pool of women candidates to meet their needs. She further noted that FAA requirements do not allow for transfer of high school course credit, and that FAA curriculum for aviation maintenance technician (AMT) and air traffic controller (ATC) lacks the flexibility needed for the retention of women in their programs and in the industry. She stated that next steps include considering how to (1) establish partnerships with industry and postsecondary providers, (2) have a proficiency-based model of instruction to become a qualified AMT, ATC, pilot and other aviation professional, and (3) have a proficiency-based model that provides flexibility for work-life balance.

Ms. Kate Gebo provided an update on expanding post-educational opportunities through internships, apprenticeships, and industry. Ms. Gebo explained that the key highlights include stereotypes contributing to the lack of awareness, the role of family and personal connections to opportunities that are not centrally located, and expanding aviation opportunities beyond the scope of pilot programs. She stated that next steps include (1) creating awareness of more aviation-related careers, rotational internships and apprenticeships, and (2) exploring internships and apprenticeships with union partners.

Ms. Rudser discussed the findings on promoting and providing financial assistance through scholarship and grant opportunities. Ms. Rudser highlighted factors that may deter girls and women from considering an aviation career. The factors include the instability in scholarship and grant programs, lack of a comprehensive database, lack of information on the FAA webpage, and application costs and various deadlines. She noted that steps forward include (1) increasing the awareness and availability of opportunities, (2) linking information industry-sponsored pages to other scholarship providers and FAA webpage, and (3) creating scholarships and federal grant programs.

Dr. Karrie Dixon discussed the findings on maximizing retention by closely mentoring students in aviation focused career training. Key highlights included the following.

- The aviation industry is experiencing an influx of retirements.
- Mentoring programs should be provided [around aviation career training](#).

- Career focused mentoring helps address preparation gaps.
- Career mentoring should be an integral component at universities/colleges.
- Mentoring programs need to be customized to maximize retention

She stated that the next steps include (1) obtaining data on aviation mentoring through gender and race, (2) developing successful mentorship models, (3) reviewing reports related to airline related job stress, satisfaction, security, and well-being, and (4) identifying challenges and solutions to finding the right career mentor.

Ms. Donati thanked the Board for their attention to the subcommittee's work. Dr. Wilson asked if the Board had any questions?

Ms. Kelly Jost asked whether there was discussion to reach out to aviation specific high schools, including in Michigan, to gather information on female attendance and other data. Ms. Donati said the group is reaching out to many schools with aviation programs to understand recruiting and retention. Ms. Rudser noted that, from her experience, the overall safety of the school or school zone has been a factor of recruitment and retention. Ms. Dreiling mentioned unmanned aircraft systems as an opportunity to get aviation activity into the classroom.

Mentoring and Professional Development Subcommittee

Dr. Wilson asked Ms. Spowart to provide the subcommittee's status report, which included a review of the mission statement, a list of members, and a description of each task.

Ms. Spowart stated that the subcommittee's mission statement is to (1) identify and create exposure for existing mentorship, funding, and professional development opportunities in aviation, (2) generate ideas for additional opportunities where there is a need, and (3) ensure on-going engagement. She explained that the subcommittee has broken down the mission into three tasking areas and has assigned a lead for each task.

Ms. Spowart introduced the members of the subcommittee and noted that Ms. Martha Morris is her co-lead on the first tasking. The first task is to gather and identify the process of creating a "best in class" database of scholarship opportunities and the need to share this database across industry and organizations. She reviewed the group's vision of the words "best in class" and "scholarship." Ms. Spowart asked Ms. Morris to further explain best in class challenges and opportunities. Ms. Morris noted that many schools teach aviation and aerospace in their curriculum, but these schools are often only found in high income areas and are not reaching as many girls. She reviewed other data regarding women in educational aviation programs and emphasized the need for a centralized database.

Ms. Jean Lydon-Rodgers discussed the second task, which is to explore the definition of an ideal mentor and sponsor relationship and the creation of guidelines to foster success in those relationships. Ms. Lydon-Rodgers described what the group knows, challenges

they are facing, the type of program they are trying to create, and opportunities as they relate to mentor-sponsor relationships. She explained the roles of a mentor versus those of a sponsor.

Ms. Kassandra Bernskoetter confirmed that programs already exist around the country that display the positive impacts of mentoring. She reviewed statistics related to mentoring and explained the group's vision and goals for formal mentoring programs and creating exposure to aviation related career paths. Ms. Lydon-Rodgers stressed the importance of mentorship programs, whether advertised specifically as that or as a more community-based approach, so that young career women can gain confidence and exposure to opportunities.

Ms. Jost discussed the third task, which is to leverage the benefits of professional development at all career intervals and mitigate any gaps in that development. Ms. Jost reviewed what they know, challenges, and opportunities of programs and information currently available. She asked Ms. Candace McGraw to emphasize challenges in professional development and advancement for women. Ms. McGraw stated that the right professional development programs geared toward women have the ability to ensure community engagement and develop role models. She noted that trade and other professional associations can play a pivotal role in these programs and should become communities of support. Ms. McGraw described the stages of professional development, the skillsets needed at each stage, and the influence a sponsor or mentor could have along the way.

Ms. Spowart thanked everyone for their presentations and ensured that the subcommittee would continue to find strategies to work towards their mission. She asked if the Board had any questions.

Ms. Wells asked if the group established any formal plans for a program. She also asked for clarity between mentorship and sponsorship programs, noting that sponsorship programs specifically may put people at professional risk. Ms. Spowart explained that the group is still specifically identifying their problem. Ms. Lydon-Rodgers noted that they have not identified any existing formal sponsorship programs specifically for younger women and that the group is open to all ideas. Ms. Wells said she would offer results of her subcommittee's survey to the other subcommittees.

Board members discussed the need and appreciation for efforts toward building both mentorship and sponsorship programs geared toward women in aviation. Ms. Barrois asked the group if they were planning to link the best in class database to the FAA website or how they planned to implement/execute it. Ms. Spowart emphasized that the group is staying within the bounds of scholarship and professional development to identify the problem before developing an execution plan. She further noted that a best in class database versus a best practice guideline are different, and some best practice guidelines already exist and are regulated within airlines but not by the FAA.

Success Stories Subcommittee

Dr. Wilson asked Ms. Beth Wilson to present the report for the Success Stories Subcommittee. The subcommittee's task includes identifying and promoting success stories of women in aviation in order to encourage women and girls to enter the field. Ms. Wilson reviewed the subcommittee's members and plan for the coming months. She described the group's two-prong approach

Ms. Banglesdorf provided details on the two-prong approach. Ms. Banglesdorf explained the criteria for individual success stories and showed videos detailing the success stories of women in aviation. The videos showed women discussing their personal and educational backgrounds, as well as their experiences with failure and successes.

Ms. Banglesdorf mentioned that, beyond individual stories, the subcommittee is looking at group programs, such as Flight Club 502, which started with 8 girls in 2015 and now has grown to over 200 people. Ms. Banglesdorf showed videos of participants currently involved in the Flight Club 502 program.

She continued discussing the subcommittee's plan to identify programs and survey information. She asked Ms. Laura Benson Jones to discuss the topics beyond flight that these programs are teaching. Ms. Jones emphasized that the youth produced and directed the video and that the children run the logistics of the 501(c)3 organization. She noted that the program received grants based on applications submitted by the children. Ms. Jones explained that high school level students teach programs to middle school level students, and middle school level students teach to elementary level school students. Ms. Banglesdorf noted the importance of identifying all programs and collaborating with them. She noted that the subcommittee's survey (which is not an FAA survey) is open to anyone who is willing to take it in order to gather the most data.

Ms. Allison McKay briefed the Board on Girls in Aviation Day. Ms. McKay described the history of Girls in Aviation Day, including the growth each year since 2015 from 3,850 participants to 20,000 participants in 2020. She explained the plan and execution for the September 26, 2020, virtual event despite the pandemic along with a video highlighting the success of the virtual event. She discussed plans for future virtual Girls in Aviation days scheduled for March 13 and September 25, 2021.

Ms. Pam Williams briefed the Board on the Organization for Black Aerospace Professionals (OBAP). Ms. Williams noted that she is the current vice-chair of OBAP and described successful events OBAP has developed, one of which is a weeklong virtual program called Girls Launch. She shared videos highlighting the Girls Launch program

and discussed sponsors and supporters of the event. Ms. Williams explained that the program focuses on all careers in aerospace beyond being a pilot.

Ms. Eberwein discussed the potential publicity platforms available to showcase the group's work. Ms. Eberwein discussed options for traditional press, influencers, trade publications, and aviation/aerospace company partnerships.

Ms. Kate Fraser discussed the survey that the subcommittee is developing to gather information. The desired outcome of the survey is to identify individual and group success to stories to establish best practices that demonstrate a road map for success. Ms. Fraser noted that the subcommittee distributed the survey approximately a week ago.

Dr. Wilson asked if there were any questions. Ms. Spowart asked if there is any follow up after Girls in Aviation Day, including any efforts for ongoing professional development. Ms. McKay explained that there are issues getting accurate data about the girls who participate because they are minors, but the group is developing more data gathering efforts in order to track the professional cycle of participants beyond Girls in Aviation Day. Ms. Wilson noted that informal education, such as these programs, are a lot harder to track.

Ms. Williams shared the same concerns within her organization regarding how to follow youth throughout their career. She noted that OBAP is building a database so that they could conduct annual check-ins to see who is still interested in aviation and develop their own data. Ms. Spowart suggested that they could possibly tie in mentorship and sponsorship programs to Girls in Aviation Day. Everyone agreed that mentorship is a theme throughout all of the subcommittees.

Subcommittees' Open Discussion

Ms. Shults began the discussion with a quote from her son, that 'it's only fair' that women should be involved in aviation. She discussed getting rid of the idea of fairness and other barriers that prevent women from considering aerospace as a career. Ms. Gilbert suggested that this Board is capable of coming up with good solid recommendations to implement legislation and change. She suggested making every recommendation possible to change the trajectory of women in the industry. Ms. Dreiling discussed the relationship of equality and equitable/fair. Ms. Markle suggested that the Board is a great step forward and women should not have to prove themselves in a way that men do not have to.

Ms. Rudser noted that women should not be expected to bring something to the table other than themselves. She noted that sometimes systemic barriers can prevent this from happening. Ms. Shults echoed the sentiment that each woman will bring something different to the table. She emphasized that women should be encouraged to join the industry not because it is fair, but because it is needed.

Ms. Wells referenced the Soaring through the Glass Ceilings study and stated men in senior leader positions agreed across the board that there is a problem in the industry. Ms. Miller noted that 3% of technicians are females and that is reflected in the pictures and images put out for these positions. She emphasized that someone is more likely to get into an industry if they see someone that looks like them already in it. Ms. Miller talked about the importance of teaching and exposing young girls about aviation at an early age.

Ms. Wells referenced the FAA's Safety Management Systems as a mandated regulation and noted that if women in aviation is important, there should be standards and regulations to affect change regarding women in the industry. She suggested that compliance only occurs when there is an accountability to do so. Ms. Williams agreed and emphasized the importance of having relationships with men in order to sometimes get in the door to establish partnerships in a male dominated industry. Ms. Banglesdorf discussed the importance of public relations and some sort of acknowledgement from government whether on the local, state, or federal level.

Ms. Spowart noted that she is most bold when speaking when she is confident in the information. She continued stating the importance of looking at all possible entities to obtain accurate data. Discussions continued about the importance of data gathering, early education, and mentoring and leadership programs.

Dr. Lutte asked the group if there were topics beyond information gathering that anyone felt was not covered. She gave the example of family work life balance as an issue. Ms. Shults and others agreed that a shift for women is overdue and that this group should be a great platform.

Ms. Eberwein stated that many jobs come through union contracts and that maybe standards for the union should be considered. She addressed women specific issues such as freezing eggs, adoption, and maternity leave, which are often overlooked. Ms. Bernskoetter noted that parts of her field do not offer paid maternity or paternity leave, and the Board should absolutely consider these types of issues. Ms. Gilbert explained that mandate to the employer will be needed, in addition to noting it to the union. Ms. Shortt agreed and said that educating the union groups and other organizations can help amplify the recommendations.

Ms. Eberwein discussed the idea of changing STEM to STEAM, to include the arts and to encourage a broader thought process. Ms. Rudser noted that management is a critical part of many aviation roles, and that it is very critical to have adequate management training and support for these roles.

Ms. Wells asked Board members if they could solve one thing, what it would be. Ms. Gebo stated that aviation fuels trade, and with that comes responsibility and accountability. She further stated there is no reason there should not be accurate reporting data. Dr. Dixon agreed and noted that the Board's recommendations should be a requirement for accurate data and information, so that people understand the direction of the recommendations. She stated that including diversity in publications would be a

helpful step that could be prioritized to begin the education and exposure process as a road map to the rest of the recommendations. Many others agreed. Ms. Dreiling noted that transparent data concerning recruitment and retention of applicants would be very helpful. Ms. Shults stated that bringing these recommendations as standards for companies, instead of regulations, may be an option.

Dr. Wilson noted that there may be some issues that cross between subcommittees. Ms. Dreiling noted that a list of roles and organizations as a resource for everyone to collaborate could help prevent overlap. Others agreed, and Ms. Spowart noted that there is no one reference where all aviation high schools are listed. Ms. Shortt noted that shared resources would help keep the subcommittees aligned on their recommendations to the FAA.

Ms. Miller explained that regarding curriculum, approved courses in high schools include the word 'engineer' in their course titles. She noted that she believes general aviation courses should not always include that word because it can be a deterrent from students who may be interested in aspects of aviation outside of engineering. Ms. Barrois agreed that the image of these courses as only being science or tech forward can send the wrong message. Ms. McKay suggested gearing away from connecting aviation to STEM and showing it more as a fun career. She noted that one shouldn't have to choose between being themselves and being in aviation. Dr. Lutte agreed and noted that this is not about assimilation, it is about authenticity, and that the Board can move that culture change. Ms. Rudser confirmed that being feminine and being in aviation are not mutually exclusive and mentioned that 'manicured mechanics' was trending online for a while. Ms. Bernskoetter agreed and emphasized the goal is not to just be one of the boys.

Ms. Dreiling noted that language is important and that more gender neutral terminology is needed, for example with the term airman; many agreed.

Ms. Williams noted that the Board should be very intentional to keep the recommendations open to all fields. She noted that her experience is in human resource, which is vital to the aviation process, along with other fields such as finance. Ms. Gebo noted that information technology is also a large field within aviation that should be considered.

Ms. Miller addressed mandating uniforms within their possible recommendations. Ms. Barrois stated that there should be uniform options and only recently was a uniform for pregnant pilots created. Ms. Miller and others noted that uniforms don't allow for people to be themselves, and beyond that, the standard men's uniform doesn't often fit a woman correctly.

Most discussed and agreed that having women in leadership positions and having allyships with men in leadership positions will encourage these types of recommendations to become standard. Ms. Wells discussed a voluntary initiative that is already in place for companies to increase the number of women on their staff.

Public Speakers

Dr. Wilson stated the WIAAB did not receive any requests from members of the public to speak at the meeting.

Action Items Review and Other Business

Dr. Wilson noted that Ms. Anderson would send a survey to determine the best date for the next WIAAB meeting. She asked that anyone interested in shifting membership on their subcommittee to please submit their request by March 1, 2021.

Dr. Wilson asked the Board to please submit any topic areas that they believe are overlapping within subcommittees to Ms. Anderson and to her by January 22, 2021.

Dr. Wilson asked the Understanding the Problem and Industry Trends Subcommittee to gather information on major practices and standards for family funded policies such as maternity and paternity leave.

Ms. Banglesdorf asked how detailed recommendation reports should be and if they need to include financial analysis. Dr. Wilson noted that the subcommittee can decide how detailed or not to make their recommendations.

Ms. Jost asked if there was a list organizations that the Board could contact to survey training programs and the effectiveness of those programs. Dr. Wilson said that there was not, and she asked Ms. Jost if she could take the lead on that. Ms. Jost agreed.

Dr. Wilson noted that a follow-up meeting would be scheduled with subcommittee chairs.

Ms. Anderson encouraged any members of the public with ideas, questions, or concerns, to please email them. She recognized the WIAAB for their time and hard work.

Adjournment

Dr. Wilson adjourned the meeting at 2:55 pm.

Barriers & Solutions

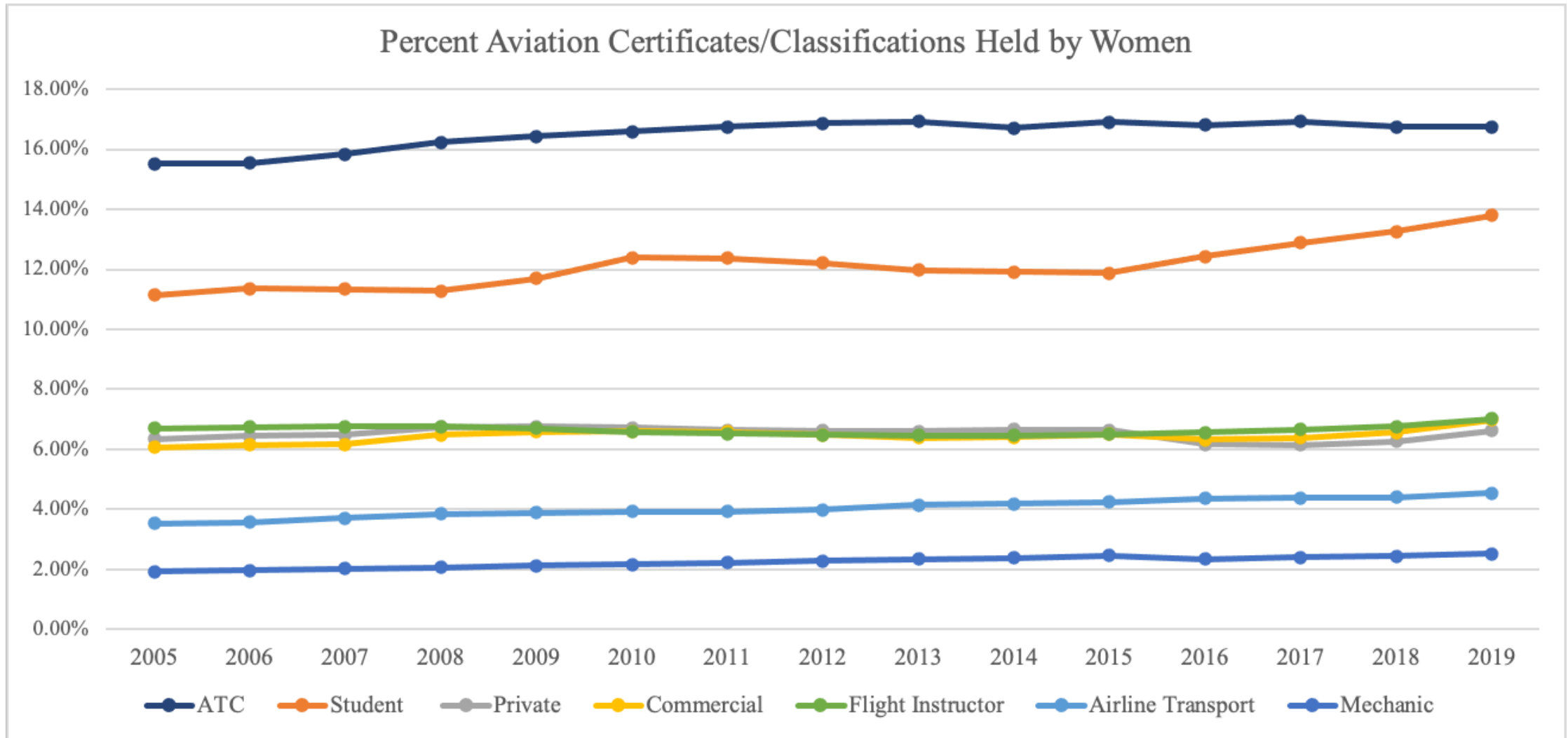
Systems timeline model

Dr. Becky Lutte

**“Every system is perfectly designed
to get the results it gets.”**

Heath (2020). Upstream: The quest to solve problems before they happen. Avid Reader Press.

	Aviation Occupation	% Women
< 10%	Maintenance technicians	2.5%
	Airline executives (CEO, COO)	3.0%
	Airline transport pilots	4.6%
	Total pilots	7.9%
10% - 20%	Aerospace engineers	11.6%
	Airport managers	16.7%
	Air traffic controllers	16.8%
	Dispatchers	19.4%
20% >	Flight attendants	79.2%
	Travel agents	79.5%

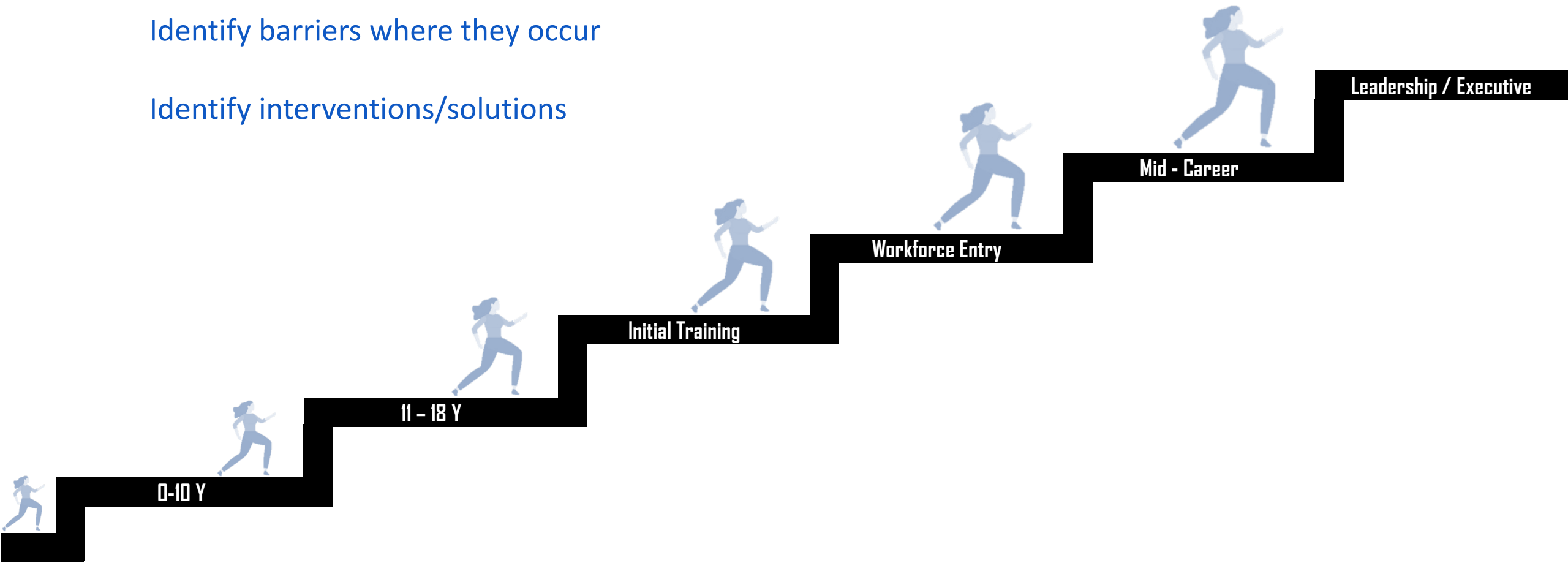


How do we change the system?

Women in aviation – systems timeline model

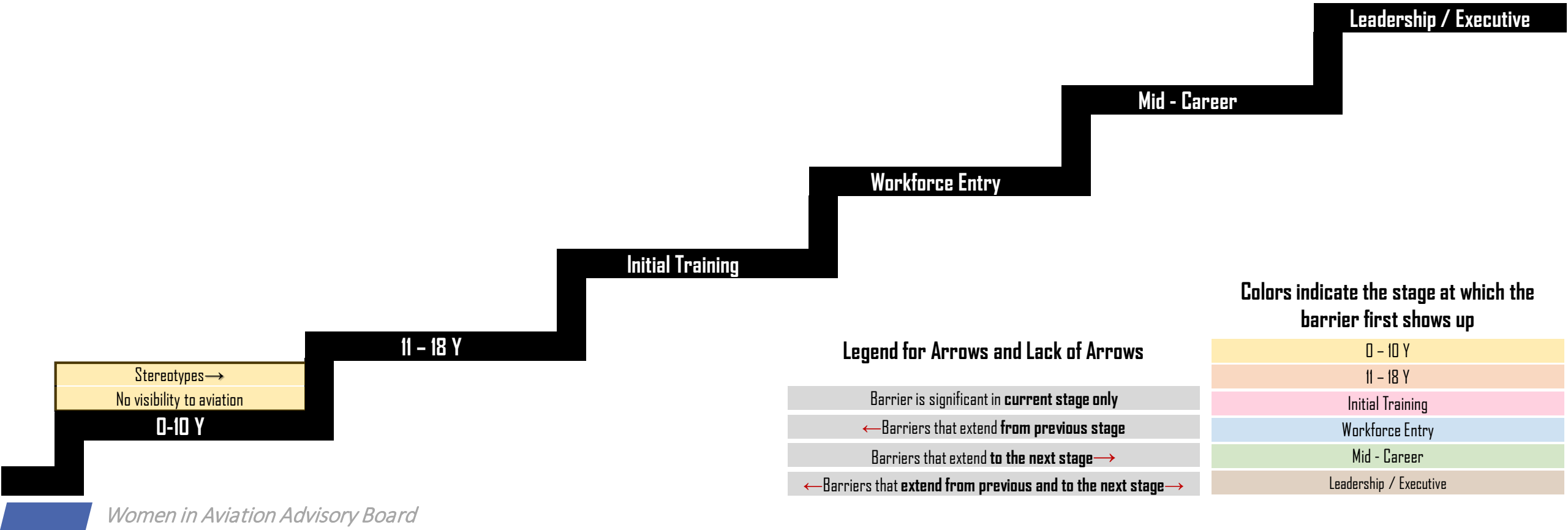
Identify barriers where they occur

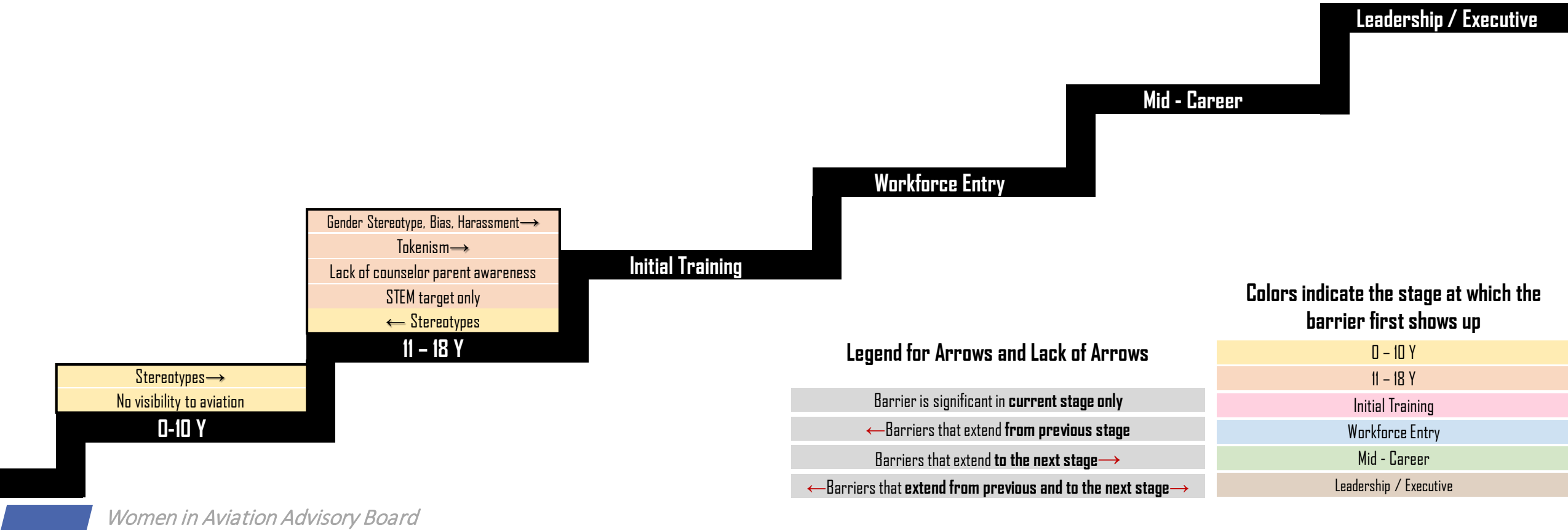
Identify interventions/solutions

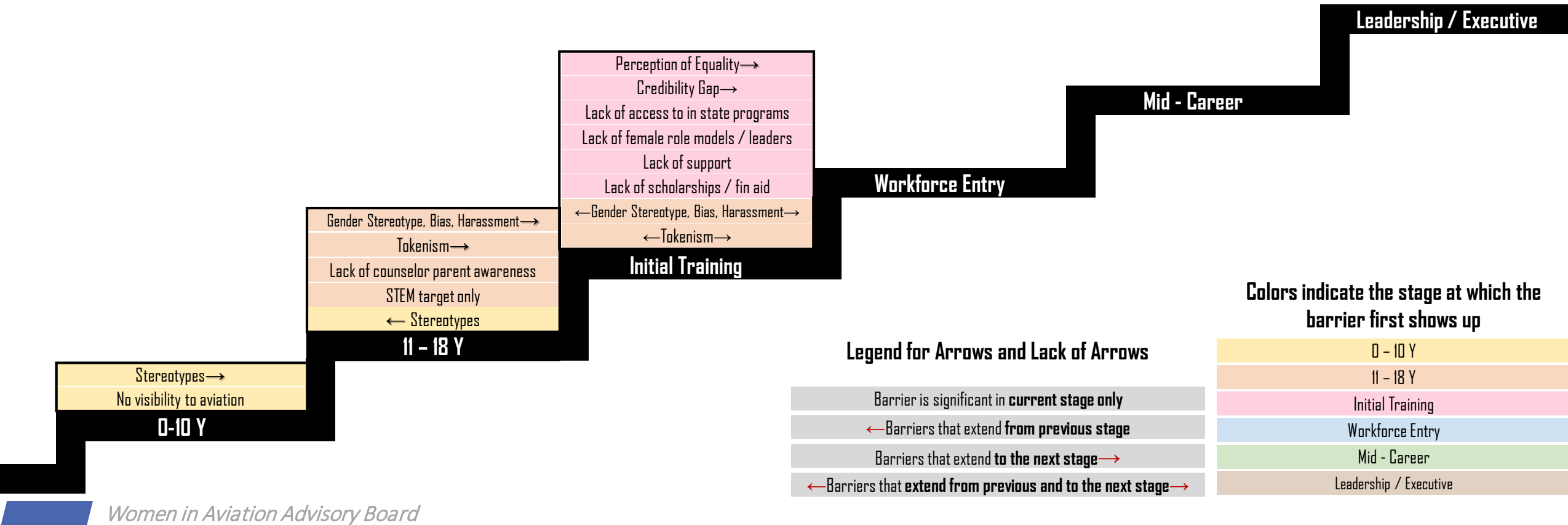


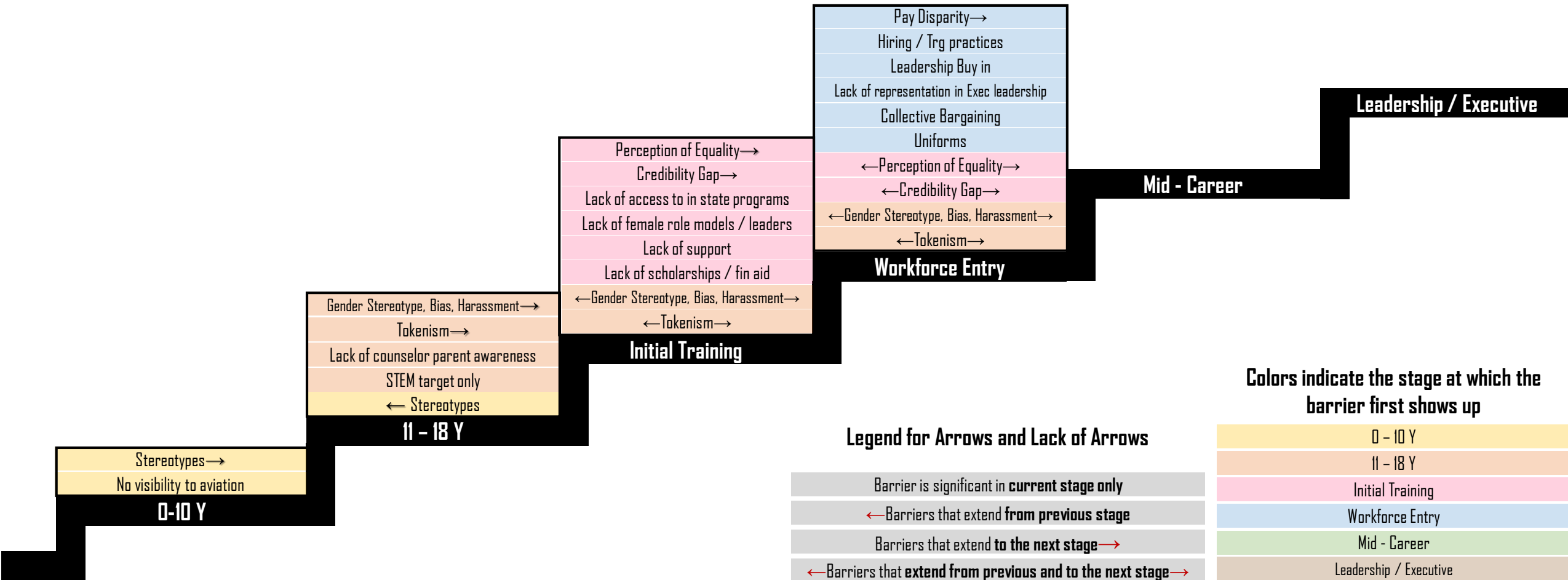
Barriers to the recruitment and retention of women in aviation

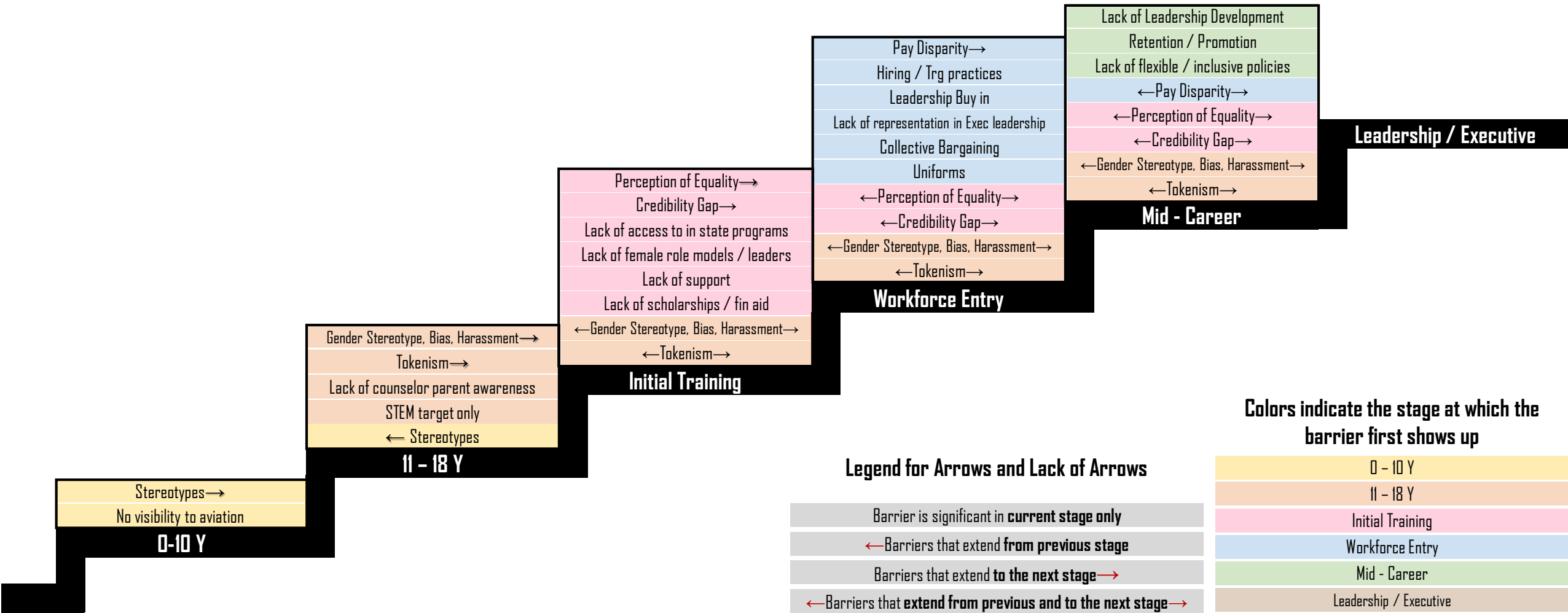
Bobbi Wells

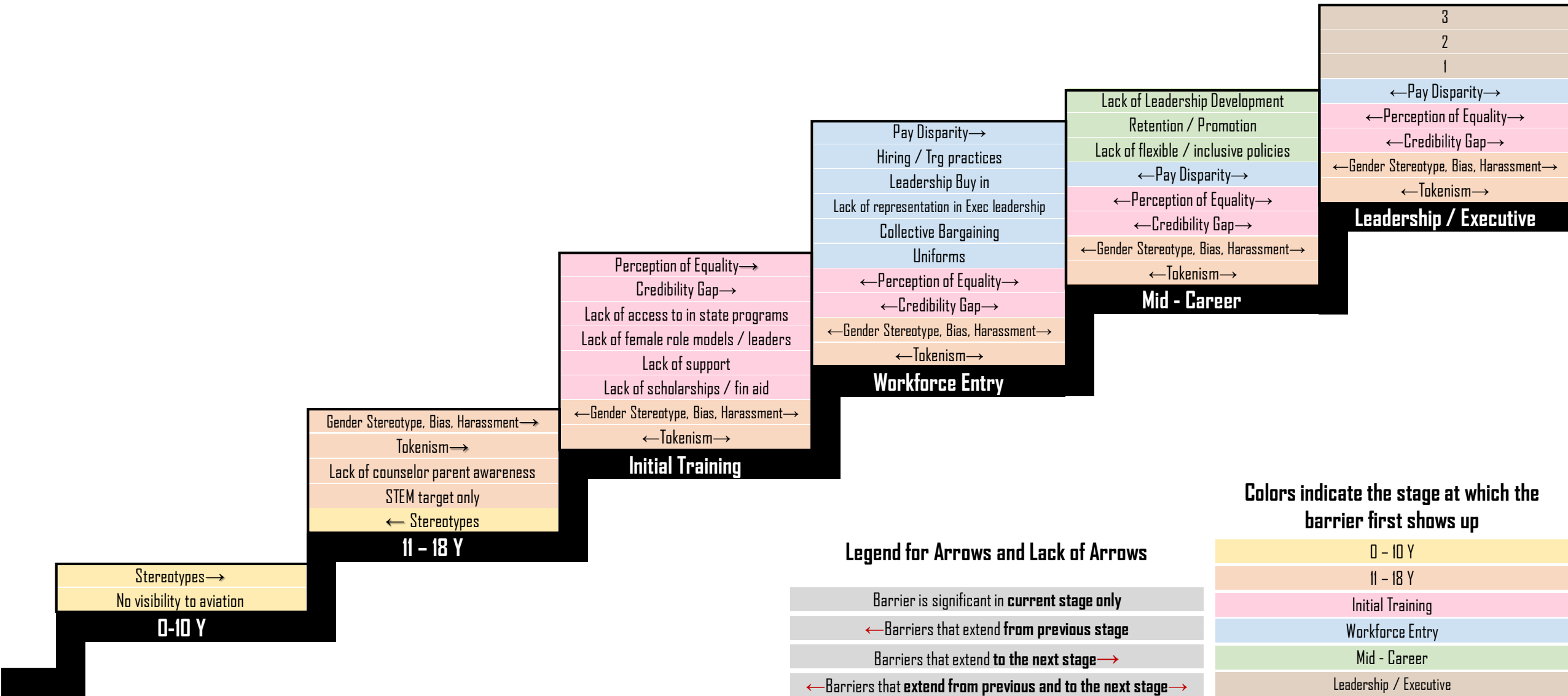


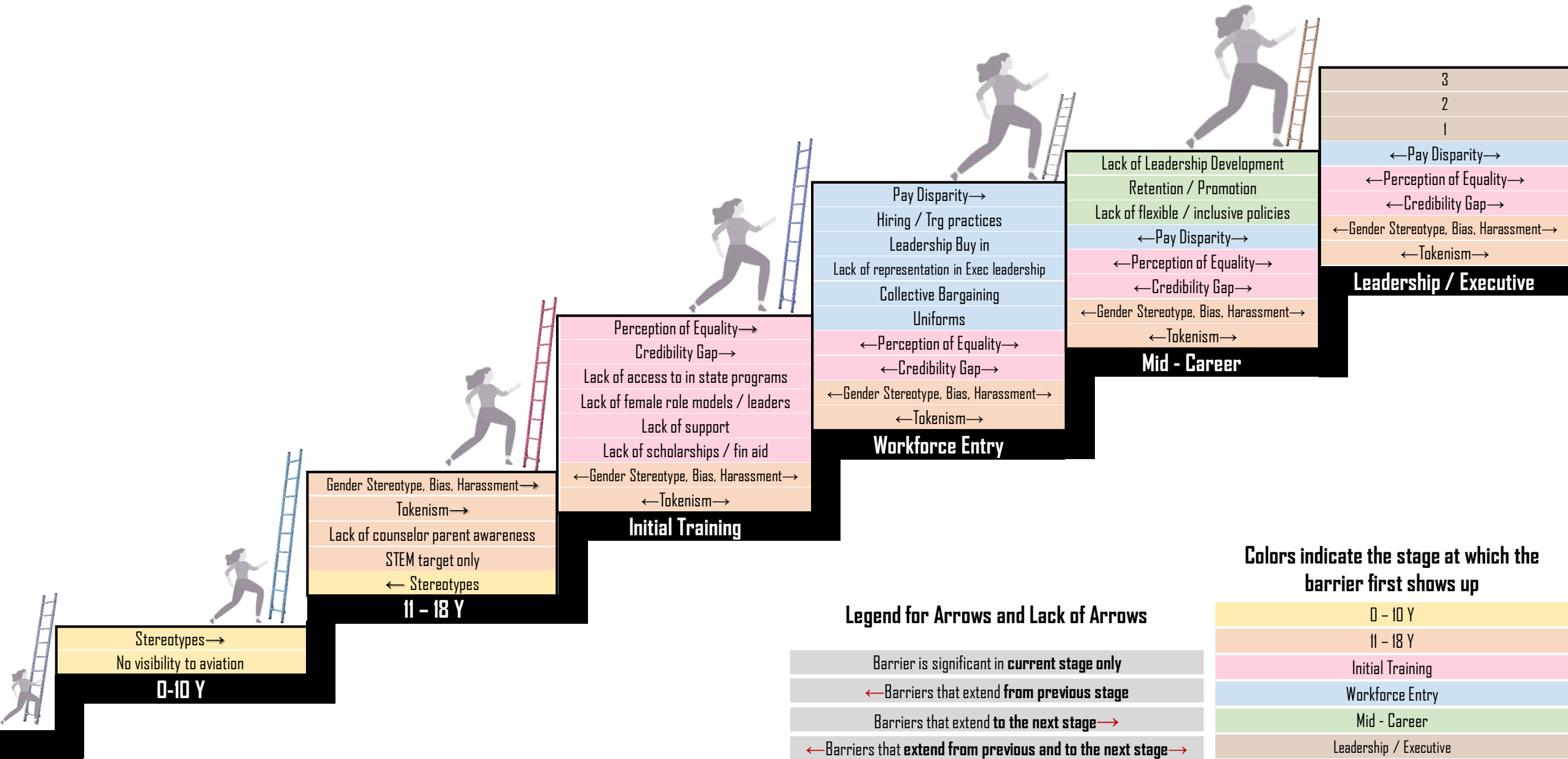






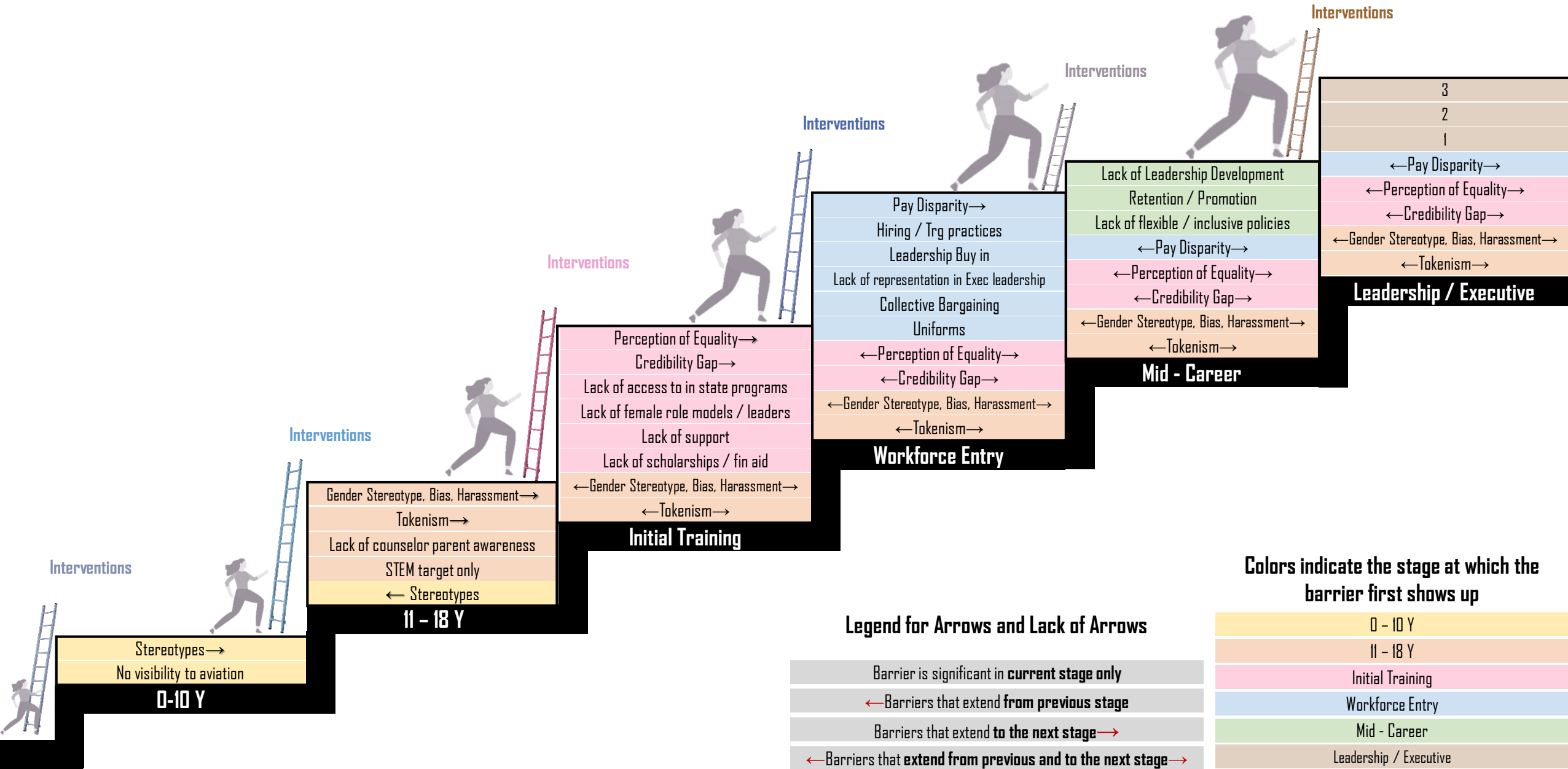






Recommendations for enhancing the recruitment and retention of women in aviation

Crystal Barrois



Educational Institutes and Educators / Counselors

Aviation Cadets Academy program

Creating aviation experiences starting in elementary school

i.e. ROTC

Aviation Cadets Academy program

FAA/DOT should develop Aviation Cadets Program similar to the AF JROTC Flight Academy program that sends around 400 AF JROTC cadets to partnering universities for an 8-week flight training.

Educating The Educator

FAA to train and educate Department of Workforce Development educational career coaches, 'Educating the Educator' Creating awareness in schools across the US.

Educator Immersion

- Grant funded Immersive teacher experiences (Liberty Univ, Embry Riddle, etc..)
- Geographically administered
- Non-profits

(CB) to FAA, Dept. Ed & Ind.

Internships

Create awareness and interest in aviation related careers and job opportunities through shorter "exposure" experiences using airports as the "hub".

- Target audience for awareness internships is high school juniors and seniors to create pathways that may not require a college degree. Internships are rotational between an airport authority role, airline role and 3rd party role (TSA, FAA, concessionaire, or other airport services provider)
- Target of 3 weeks (December/January holiday internship) or 6 week summer internships
- Use industry outreach events (L. Dreiling recommendation) or Office of Recruitment at Airports (K. Shortt)
- Create internship opportunities that are non-aircraft related for students 15 – 17 (administrative functions, passenger servicing and concession roles) and aircraft related for students over 18 (ramp service or ramp access related roles or roles related to aircraft)
- Roles would be funded by either a) the airport authority or b) through the expansion of the Aviation Workforce Development Grant program to allow for the payment of student wages for the internship.
- Students would be "employed" by the airport authority or a third party staffing company for the benefit of the airport authority.

States rec. CTEs

States to promote a percentage of aviation industry recognized certifications in CTEs. CTEs to create awareness and recruit girls into nontraditional aviation career pathways. Several states do not recognize industry certifications which eliminates funding for CTE programs and high school students.

Aviation-focused CTE programs

Universities and K-12 schools/school districts/DPI work together to develop/strengthen aviation-focused CTE programs.

Scholarship Toolkit

Provide an easy-to-follow Scholarship Program Toolkit for aviation entities to create their own scholarship program.

Flexibility in aviation curriculum

Expand flexibility in aviation curriculum and remove barriers to permit effective educational partnerships and credit transfer among high schools, secondary vocational schools, postsecondary technical schools, and colleges/universities.

Develop and release recommendations / templates for high school aviation program design

- Align coursework at this level to easily be reviewed by postsecondary aviation programs for transfer or bypass testing eligibility.
- Include provision within the model for Part 147 faculty to offer contact hours of instruction in high schools under the postsecondary institution's approval.
- Distribute this information to secondary school leadership and offer grants for the development and implementation of these programs.
- Include private pilot Part 141 or Part 61 certification within high school programs with postsecondary institutional support.

Role Model

Visual Representation

Increase representation of women in FAA publications, social media, marketing (photos).

Career Materials

Create aviation career info pack for mass distribution to guidance counselors/teachers/parents

See Be It

Campaign (grassroots)

- Online (Social media)
- Marketing Materials
- Industry partnership
- Mentoring "each one, reach one"
- Inspiring Educators
- Mobile Unit (Lift Acad.?) VR, Flight, Maintenance, ATC

Social Influencer

Develop a social influencer network that is FAA endorsed/sponsored to ensure girls and young women have visibility to a relatable community as they progress throughout their journey (attached is a partial list for consideration)

Marketing campaign & target messaging

- Social Media: YouTube channel/ tik tok/ Instagram / vsco / snap chat examples
- Female representation at recruiting and outreach events
- Photo representation in FAA books
- Inclusive language such as pilot/aircrew
- Highlight women professionals
- Billboards

Airports: Example, Dallas Love airport entry / airports representation / ad camp. Pushed to airports – QR codes to pathway where you can get training / X # of signs dedicated to aviation careers

Marketing

Identify opportunities to attract a variety of age groups to aviation by fueling their interest."

Work with organizations like the Ad Council (<https://www.adcouncil.org/>) to help market our WIAAB messages to our nation.

Marketing for Children

Encourage toy manufacturers, social and traditional media (cartoons) to enhance portrayal of girls and women succeeding in aviation (BJW)

Marketing

Establish marketing campaign demonstrating positive, strong women role models as past and current industry examples (a la Nike ad) (BJW)

Outreach / Awareness

Best Practices Engagement

Develop a list of best practices for groups to engage girls and young women in careers in aviation which include those outside the cockpit (flight deck).

Survey/Interview Data Collected by WIAAB

Create a list of best practices that can be used by informal educational institutions to create & sustain programs that engage girls & young women in aviation.

Customized Programming

The information provided by our research will allow museums, libraries, airports and others to customize programming that will best serve their local community, based on demographics, target audiences and financial concerns.

Customized Programs

Best practices will be tailored to suit a variety of available resources in differing communities allowing the newly developed program to reach their desired audience.

Highlight and Share

Highlight those trends which make programs successful and sustainable and to share that information with anyone interested in creating their own program.

Resource Dashboard or Website

Create online "one-stop shop" for career opportunities, scholarships, mentoring, aviation curricula for download, photo gallery
Better inform influencers of the career pathways (parents, counselors) (CB) to FAA

"One-Stop-Shop" resource center

For students, teachers, and aviation volunteers

- Ability to connect to network to have questions answered (i.e. question robot, database list, hotline to answer within 24 hours)
- Resource and connecting point – may not have the answers, but can connect to others (i.e. AME questions)
- Map out pathway programs
- List current elementary school, middle school, high school, college, and professional development opportunities
- Information on careers in aviation
- Connection to industry orgs
- Example: [Home - TryEngineering.org Powered by IEEE](https://www.faa.gov/e-tryengineering)

Marketing Military - Aviation

- Actively market aviation military opportunities to women while removing barriers to enable easier transition between military roles and private industry
- Actively market Skillbridge to the aviation industry
- Actively market RTAG to the aviation industry

Girl's Youth Groups

Partner with key non-aviation organizations that already have a broad and sustainable reach to young girls and women such as Girl Scouts through key curriculum and learning opportunities

Regional Recruitment

Identify an office of recruitment for the industry at key regional airports across the US where commercial travel is present and hold them accountable to carrying out exposure, learning and recruitment opportunities within their region.

CIP/SOC, High Demand Occupation List

Federal job demand to be recognized/considered at the state level in regard to High Demand Occupation Lists and associated CIP/SOC designations.

Confidence Camps

FAA to host confidence camps for girls around the careers in aviation. If girls learn about risk and safety at an early age while building confidence, they will be more likely to consider aviation careers in the future.

Credited Hrs for Presenting @

Advocate for aviation professionals to be able to count and obtain volunteer hours by presenting at schools and organizations with underrepresented populations as part of their continuing education or professional development requirements.

Aviation focused curriculum K-12

The FAA Education department/section (<https://www.faa.gov/education/>) of the website should be the central location where any and all nationally recommended aviation curriculum and related resources are housed.

Virtual comprehensive portal

Creation of an accessible virtual comprehensive portal that merges all available aviation and aerospace scholarship opportunities that is simple to navigate, publicly available and free to all users.

Cost

Financial Aid/Grants

Increase available amount of Pell Grants and financial aid for students to not only meet tuition needs but also cover added costs associated with aviation training

Financial Aid

Expand the Title IV Federal financial aid program to ensure students can cover additional flight training costs associated with flight education degrees.

FAA Grants

Expand the FAA Workforce Development Grant Program that currently includes programs for aircraft pilots and aviation maintenance technical workers as follows:

- Require one or more organizations selected for the grant to have a program focused on women
- Require one or more organizations selected for the grant to have a focus on women re-entering the workforce
- Include additional non-profits or other organizations that can provide professional development opportunities

FAA Grants

Use workforce development grants issued by the FAA to provide partial funding of private industry/union apprentice programs.

- Provide template of best practices for programs under the Workforce Development Grant programs from previous recipients.
- Expand and enhance the current Aviation Workforce Development Grant for Aviation Maintenance Technical Workers to other roles where women are underrepresented such as pilots, dispatchers, air traffic controllers, etc.
- Allow Aviation Workforce Development Grant funds to be used for scholarships for training related to roles where women are underrepresented.
- FAA can “claw back” grant if less than 50% of student population is not offered a role (Look @ 5 -yr trend to determine averages of company needs)

Federal Grants

Federal grant funds allocated for workforce development to support recruitment and mentoring programs at Colleges/Universities and Career Focused Training Programs to recruit more female aviation faculty/staff who can then encourage, lead, and mentor young women to become aviation professionals. New research studies conducted by faculty will identify factors that influence retention and attrition of women in collegiate aviation programs.

Federal Grants

Federal grant funding for Colleges/Universities and Career Focused Training Programs to focus on improving education / training models that can lead to pipelines of women entering the aviation workforce.

Funding opportunities aviation outreach programs

i.e. Women in Aviation: Girls in Aviation Day, AWAM, Scouts, Star Base, university, and industry programs, new programs? Sisters of the Skies, Online Communities, 4-H

GI Bill Benefits

Allow for American veterans to utilize GI Bill benefits for private pilot training as well as add on ratings.

CUA

Provide a Common Use Application (CUA) for females interested in applying for scholarships to effectively apply for aid.

Community

Networking

Create communities of support (online/in person)

Career Mentoring platform

(possibly a mobile app) where college and Career Focused Training Program students aspiring to be aviation professionals can connect with industry professionals, retiree professionals and alumni for exposure to a variety of career opportunities within the aviation industry.

Mentoring App

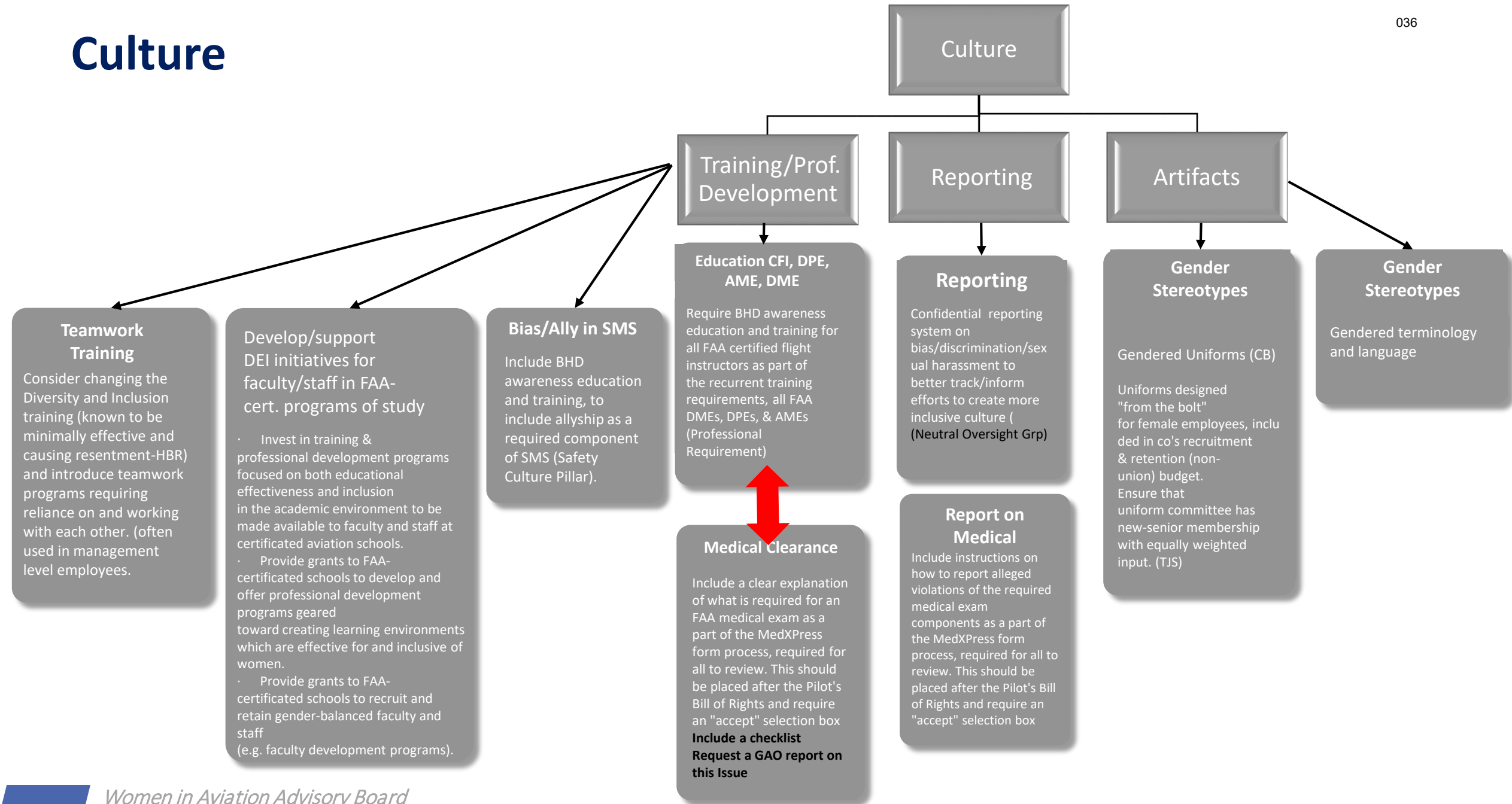
Deploy a Mentoring App designed specifically for the Aviation sector

Career Readiness Trng.

Creation of comprehensive career readiness training for scholarship awardees to support from school to job entry and beyond

Culture

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Family Friendly Policies

Family Leave

Provide paid family leave for all employees for organizations with employees of at least (XX?) to include paid maternity leave, paid paternity leave, (other wording?)

Nursing Mothers

Provide nursing/breastfeeding-while-flying guidance/best practices and education for leaders

Childcare

Childcare stipend

Schedules

Schedule Flexibility

- Part-time
- Job-Share
- Shift swaps

Data

Data Reporting

Require transparent diversity reporting from industry

Data Reporting

Gender pay gap reporting and transparency

DATA Reporting/Tracking

Require annual public reporting/tracking of number of women in aviation occupations and leadership positions

Student Interest

CTE and career exploratory programs required to report to DOT or FAA number of students and/or names of students interested in aviation careers (Transportation & Logistics career clusters)

Annual Review Gender Bal. Progress

FAA establish annual review of gender balance progress across major and cargo airlines. Eventually add review of MRO, supplier tiers, feeders and associated businesses. (BJW)

Leadership Commitment

WIAAB Continuance

WIAAB sunsets upon submission of the report. DAC is continuing (subject to renewal every 2 yrs) & NAC is continuing. Prepare recommendation in legislative language and ID congressional committees of jurisdiction.

Standing WIAAB could be resp. for *working with leaders, parents and school professionals to establish engagement points from early grade school throughout the career journey. These deliberate and focused connections will attract, advance and retain women in aviation. Further, the WIAAB will work with designated partners to measure and report on gender balance, pay equity and advancement opportunity. Finally, the WIAAB will develop messaging, structure, and values designed to create diversity, thereby elevating aviation safety.*

Continuous feedback & collaboration across aviation

Aviation Outreach Summit for Organizations, Colleges, and Industry and

Dedicated Longstanding National Board to focus on Women in Aviation
Note: safety conference example, good way to incorporate success stories

Rotating Industry Women's Committee

Establish rotating committee of aviation women to advise and guide the WIAAB/FAA (feedback loop). (BJW)

Aviation Safety

FAA should strongly and intentionally link diversity and gender balance to aviation safety (BJW)

Union Collaboration

Recommend collaboration w/ labor unions to develop work rules that are family friendly and provide schedule flexibility (unions must be involved unless companies are willing to do these things outside of negotiations)--publish list of best practices

Req. Mentoring Program

Require every company that holds any FAA certification with a minimum of 250 employees to have a company-wide mentoring program.

Mentoring Req.

Require mentoring hours in order to obtain an Airline Transport Pilot (ATP) license.

Woman in Aviation or Adv. Of WiA Award

Award to be given annually to recognize both achievements involving the distinguished career of a woman in aviation, or a significant contribution to the advancement of women in aviation.

Leadership Goals

Encourage industry to set diversity-in-leadership goals— incentives/rewards

Req. mentoring hrs as part of recurrent trng.

By an employer for the following:
- Airline Transport Pilot: A company that employs a person as an ATP must have a mentoring program within the flight department available to all pilots.
- Aircraft Dispatch Certificate: A company that employs aircraft dispatchers is required to have a mentoring program within the dispatch department.
- Airframe and Powerplant (A&P): A company that employs an A&P is required to have a mentoring program within the maintenance department

Spotlight Edu Insts, Co, Org, Union, gov't

Highlight companies whose values achieve a welcoming and diverse workforce in aviation careers.

Recognition/Awards

Create a yearly meeting to include an award which highlights individuals, companies or groups that advance aviation careers for women.

Mentoring Segment A&P

Require a mentoring segment for the addition of Certification of Inspection Authorization (IA) for A&P's.

Promote Success Stories

Explore and develop ways to make these stories public through creative and unconventional means and partnerships. Including reaching out to influencers in the digital space (Instagram, linkedin, You Tube) who are interested in or who are currently building aviation and aerospace skills and careers.

Mentoring ATC trng.

Require a mentoring program for Air Traffic Controllers to start from the time they leave initial training at the FAA Academy in OKC and arrive at their first station, to continue until they complete training and obtain their credential and are fully certified

Culture Change Model

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Aspects and Artifacts of Culture

Aspects (internal)

- Beliefs
- Values
- Attitudes



Artifacts (external)

- Structures
- Rituals and ceremonies
- Symbols
- Language

Actions and Behaviors associated with male dominated industry



Actions

- Women are isolated , strengths undervalued
- Lack of ownership to change
- Life balance
- Defending improper behavior
- Not seeing women as highest talent, selecting men for tough projects

Behaviors

- Expecting women to change to fit in
- Women are hired for men to received credit
- Men fear women
- Optics of male/female mentoring
- Use women as source of humor
- Refusal to pair up with women (training, travel, networking= fear of harassment, discrimination, bias)
- Imposter syndrome
- Women leave industry



Driving Change

