

Extension to Barrier Analysis of Air Traffic Control Centralized Hiring Process

**Prepared by:
FAA Office of Civil Rights (ACR)
and Office of Human Resources
(AHR)**

**Presented to:
National Employee
Association Forum**

June 20, 2013



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Overview of Briefing

- **Barrier Analysis Findings & Suggested Corrective Actions**
- **Building the Foundation for Change**
- **Suggested Recommendations**

This is part of a deliberative process focused on the Agency's hiring procedures for Air Traffic Controllers. This progress report, dated June 11, 2013, is based on ongoing analyses.



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Part I: Barrier Analysis Findings and Recommendations

Presented by: Outtz & Associates

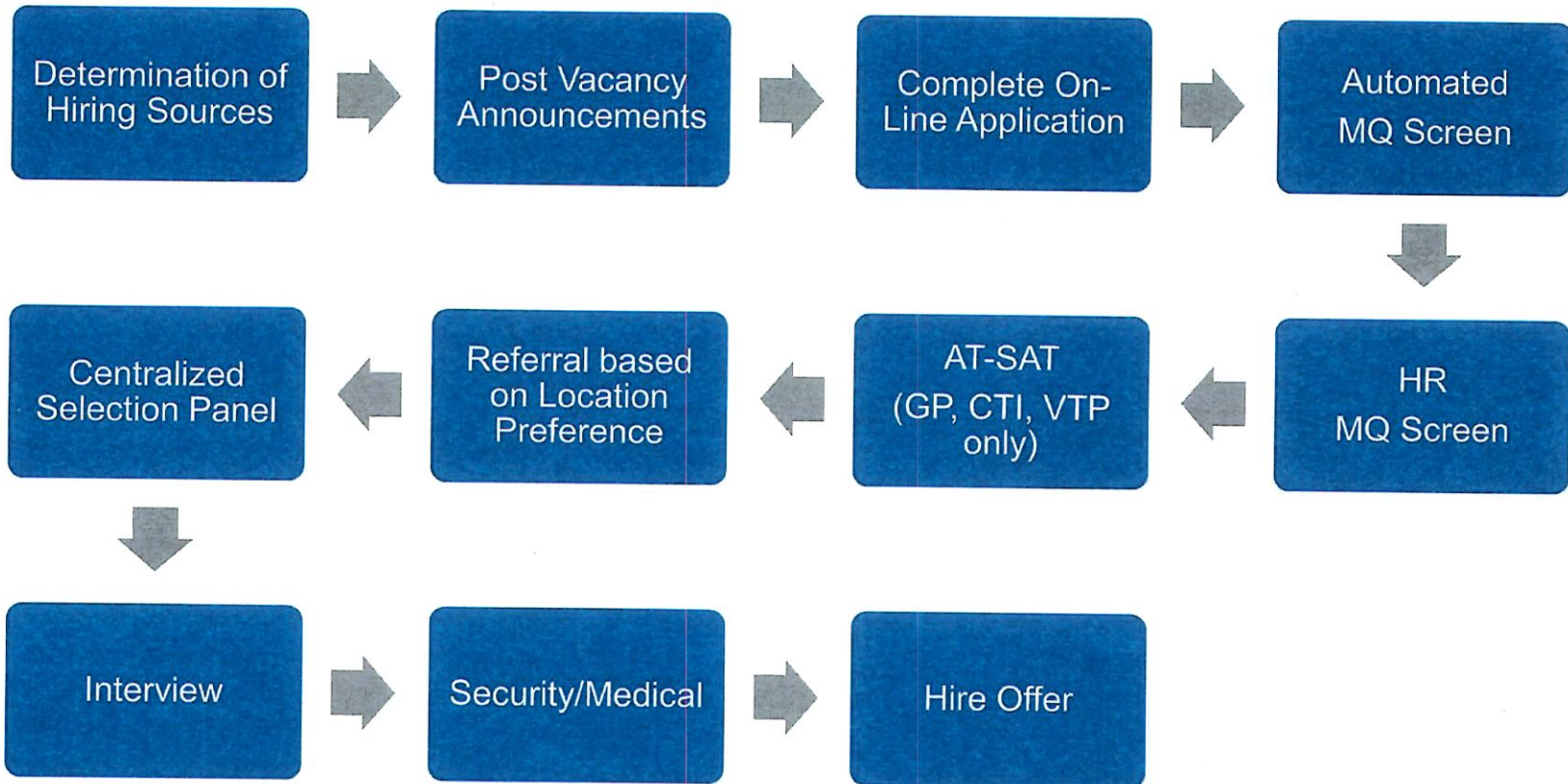
For: Office of Civil Rights

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Hiring Process Flowchart



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ATC Hiring Sources

- **Multi-path approach includes:**
 - Reinstatements/Transfers
 - Former FAA controllers
 - PATCO
 - DOD
 - Former military controllers
 - Veterans' Recruitment Appointment (VRA)
 - Retired Military Controllers (RMC)
 - Veterans Training Program (VTP)
 - Graduates from FAA accredited collegiate programs
 - Collegiate Training Initiative (CTI)
 - General Public
 - Control Tower Operators (CTO)

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Determine Qualifications

- **Air Traffic Selection and Training (AT-SAT)**
 - Applies to General Public, CTI and VTP applicants
 - Computer-based exam
 - Measures aptitude of becoming a successful ATCS
 - Passing score of 70 and above is required
- **Prior experience**
 - VRA, RMC, CTO, Reinstatement
 - ATC experience
 - CTO

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Generate Referral Lists

- **CTI/General Public/VTP – Category Grouping by AT-SAT Score (85 and above, 70 to 84.9)**
 - Applicants in random order within the two groups
- **VRA/RMC/CTO**
 - Priority Veterans Preferences
 - PATCO/Reinstatement
 - alpha order



Identify Candidates for Interview

- **Centralized Selection Panel (CSP)**
 - Management Representatives
 - Expertise in occupation
 - Knowledge of facilities
 - Review referral lists/applications
- **Make selections in compliance with:**
 - Merit System Principles
 - Veterans Preference
 - Agency Policy

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Merit System Principles

FAA PMS VII and 5 U.S.C. § 2301 (b)

- **Recruit qualified people to achieve a workforce that fairly represents our society**
- **Select and promote on the basis of relative knowledge, skills, and abilities as they relate to the requirements of the job to be filled**
- **Use fair and open competition to assure equal opportunity**
- **Treat employees and applicants fairly and equitably**
- **Maintain high standards of integrity, conduct, and concern for the public interest**

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Final Steps in Selection Process

- **Conduct Interview for Air Traffic Control Facility**
- **Tentative Offer Letter (TOL)**
 - *Starts the clearance process*
- **Complete Security Clearance Process**
- **Complete Medical Clearance Process**
- **Coordination with Air Traffic Organization on Entry On Duty dates**
 - Facility or Academy date
- **Firm offer letter (FOL) issued**

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Barrier Analysis Scope and Methodology

- **Guided by EEOC Management Directive 715 & *Uniform Guidelines on Employee Selection Procedures***
- **Analyses covered FY2006 – FY2011**
- **Key criteria applied to define a barrier (meeting 2 of the 3 indicated a barrier)**
 - Statistical significance
 - Effect size
 - Adverse impact ratio
- **Focused on 7 critical decision points within ATCS centralized hiring process**

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Seven Decision Points Evaluated

1. **Minimum Qualifications Determination**
2. **AT-SAT Testing**
3. **Preparation of Referral Lists**
4. **Centralized Selection Panel**
5. **Interview**
6. **Medical Clearance**
7. **Security Clearance**

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Decision Points	Evaluation Comments	Female	Asian	AA	Hispanic	Multi
1. Minimum Qualifications Determination	<ul style="list-style-type: none"> Non-standardized training for HR Specialists 	✓	✓	*	*	*
2. AT-SAT Testing	<ul style="list-style-type: none"> Decision to use well qualified band results in substantial reduction of RNO and gender representation Validity needs to be reestablished 	*	*	*	*	*
3. Preparation of Referral Lists	<ul style="list-style-type: none"> Use of the minimum qualifications in the referral process builds on adverse impact caused by the qualifications determination 	✓	✓	*	✓	✓
4. Centralized Selection Panel	<ul style="list-style-type: none"> CSP members do not receive formal training Inconsistent follow-up on references Applicant location preference has potential to create RNO issues Conflict of interests (candidates may be known to CSP panelists) 	✓	✓	*	✓	✓
5. Interview	<ul style="list-style-type: none"> Interview questions are available to candidates on public web site – candidates all well prepared as a result Interview not effective in current form 	✓	✓	✓	✓	✓
6. Medical Clearance		✓	✓	✓	✓	✓
7. Security Clearance		✓	✓	✓	✓	✓

*Statistical criteria indicate that selection decision point *is* a barrier

✓Statistical criteria indicate that selection decision point *is not* a barrier

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Corrective Actions For Consideration

- **Establish a steering group responsible for monitoring and improving the ATCS Hiring Process**
 - Establish greater coordination between stakeholders responsible for the ATCS Hiring Process
- **Consider RNO and Gender diversity a high priority when determining applicant sources**
 - Consider applicant diversity statistics in selecting schools for participation in the Collegiate Training Initiative (CTI)
- **Establish a national recruitment outreach and education program around the ATCS position**

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Corrective Actions for Consideration

- **Improve the technical quality of minimum qualifications determinations**
 - Standardize the process by which minimum qualifications are reviewed
 - Ensure that HR Specialists use the same criteria to define minimum qualifications
 - Institute standardized training for HR Specialists who make qualifications determinations

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Corrective Actions for Consideration

- **Revise or Replace the ATSAT**
 - Eliminate subtests that do not show incremental validity
 - Create alternate forms of the test to lessen practice effects or over exposure to test items
 - Reweight test components based on incremental validity and minimization of adverse impact
 - Use the test in a multiple hurdles process that minimizes adverse impact
 - Discontinue the practice of considering all applicants in the “highly qualified” band before considering any applicants in the “qualified” band
 - Combine the test with other predictors that are valid and have less adverse impact

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Corrective Actions for Consideration

- **Improve standardization of the Centralized Selection Panel Process (Examples)**
 - Ensure that all panel members have the same understanding of the purpose of the process
 - If the panel uses applicants' location preference for General Public candidates, ensure that all panel members use the information in the same manner
 - Implement standardized training for all panel members before they are allowed to participate in the evaluation process
 - Exercise greater control over the information panel members have about each applicant in making their evaluation



Part II: Building the Foundation for Change

Presented by: *APTMetrics*

**For: Office of Human Resources
(AHR)**

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Barrier Analysis Follow-up

- **Review undertaken to better understand root causes of ATCS decision point barriers**
 - Conducted subject matter expert interviews, on-site visit to training academy, policy and documentation review
 - Constructed a barrier analysis data base to pursue post hoc analyses and additional areas brought to light through interviews

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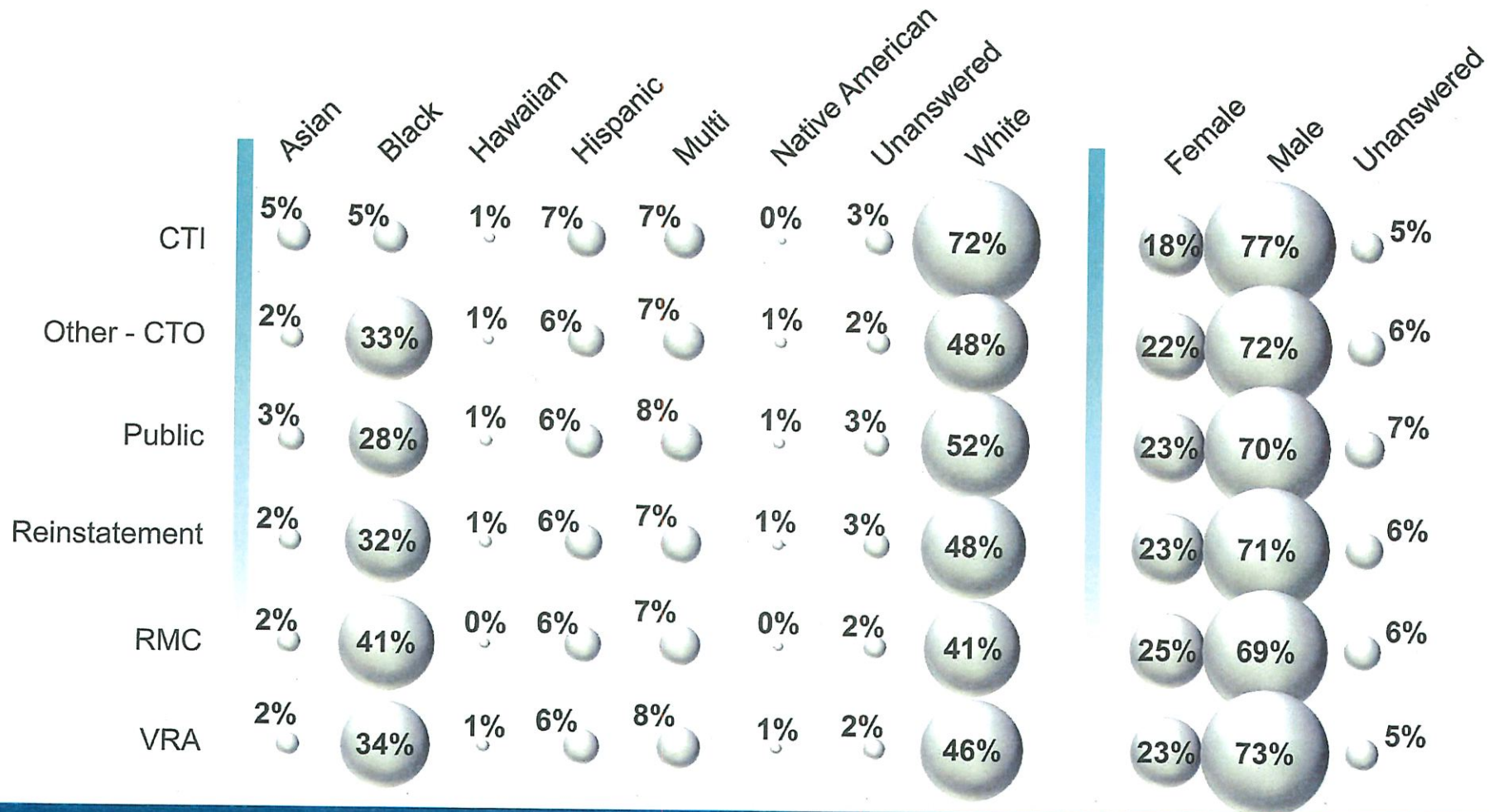
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Data Analysis – Applicant Survival

- **Understand the rates of applicant survival across ATCS decision points by race and applicant source**
 - Visually illustrate the flow of applicants within each racial subgroup across the hiring process
 - What parts of the hiring process are resulting in the largest percentage decrease of minority applicants?
 - Is a similar trend observed for white applicants?
 - What is the proportional racial representation among those surviving each phase in the hiring process? How does it compare to proportional representation within the initial applicant pool?



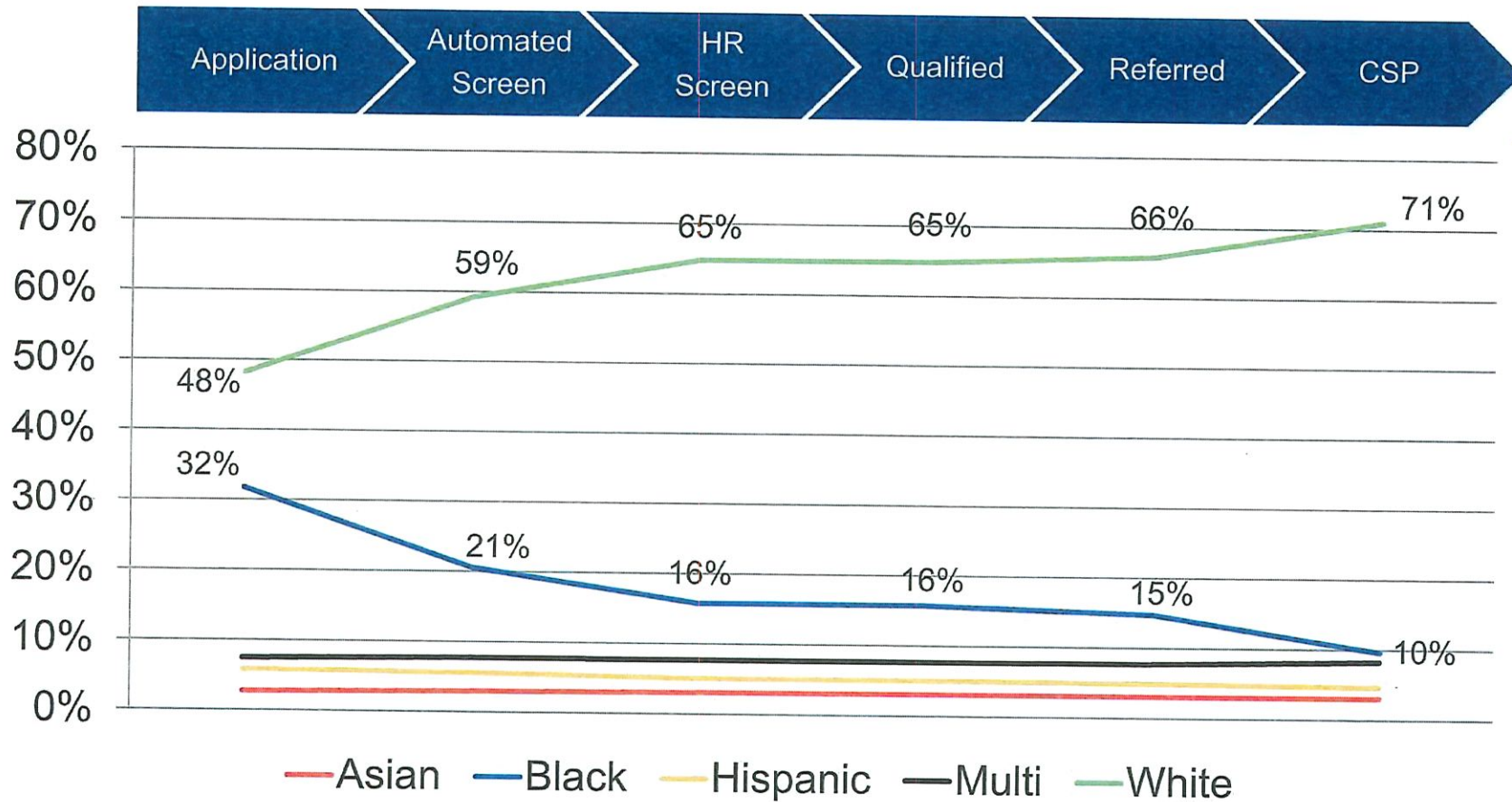
Applicant Source Demographics



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Candidate Pool Representation Through to CSP by Ethnicity

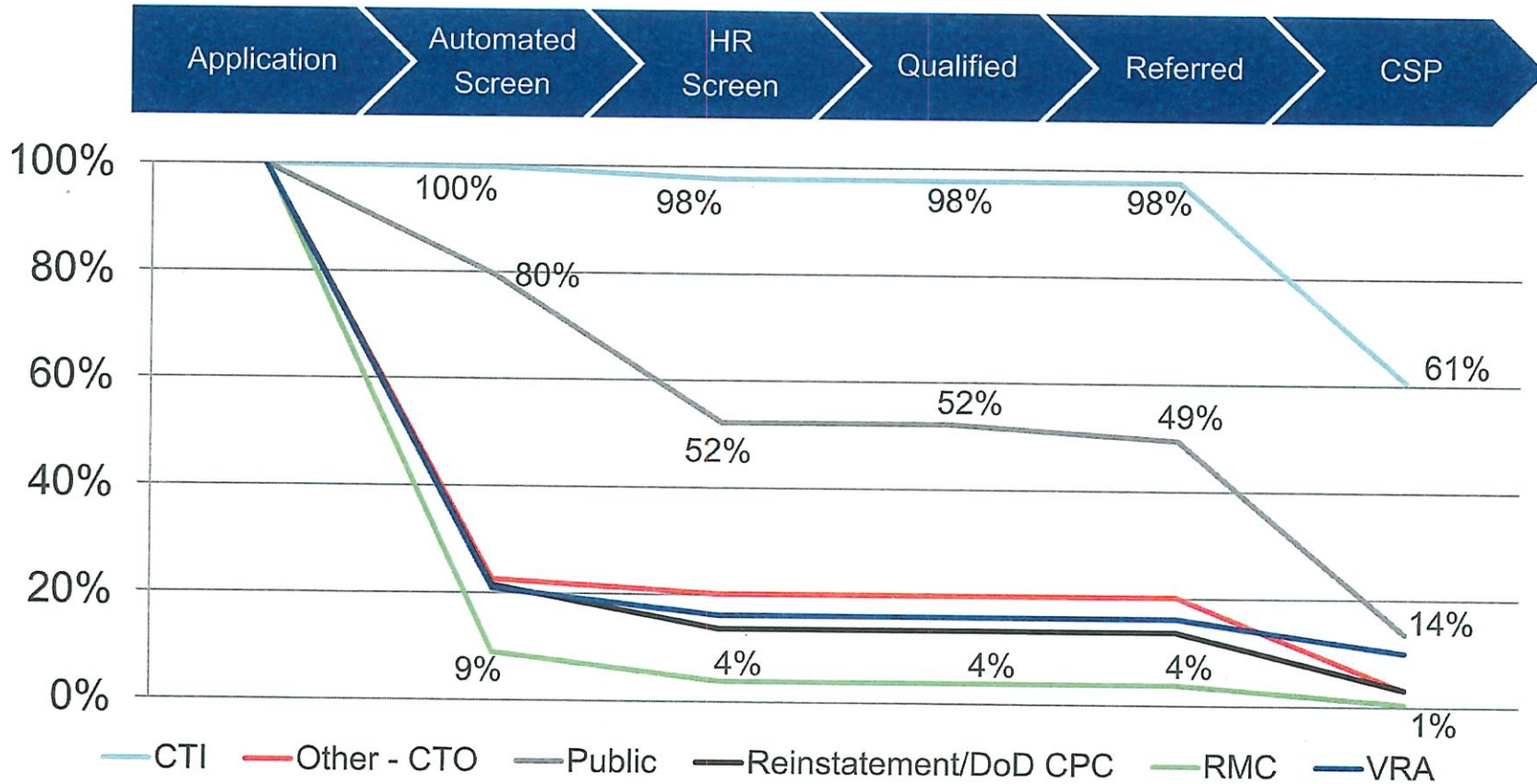


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Applicant Flow Through CSP by Applicant Source

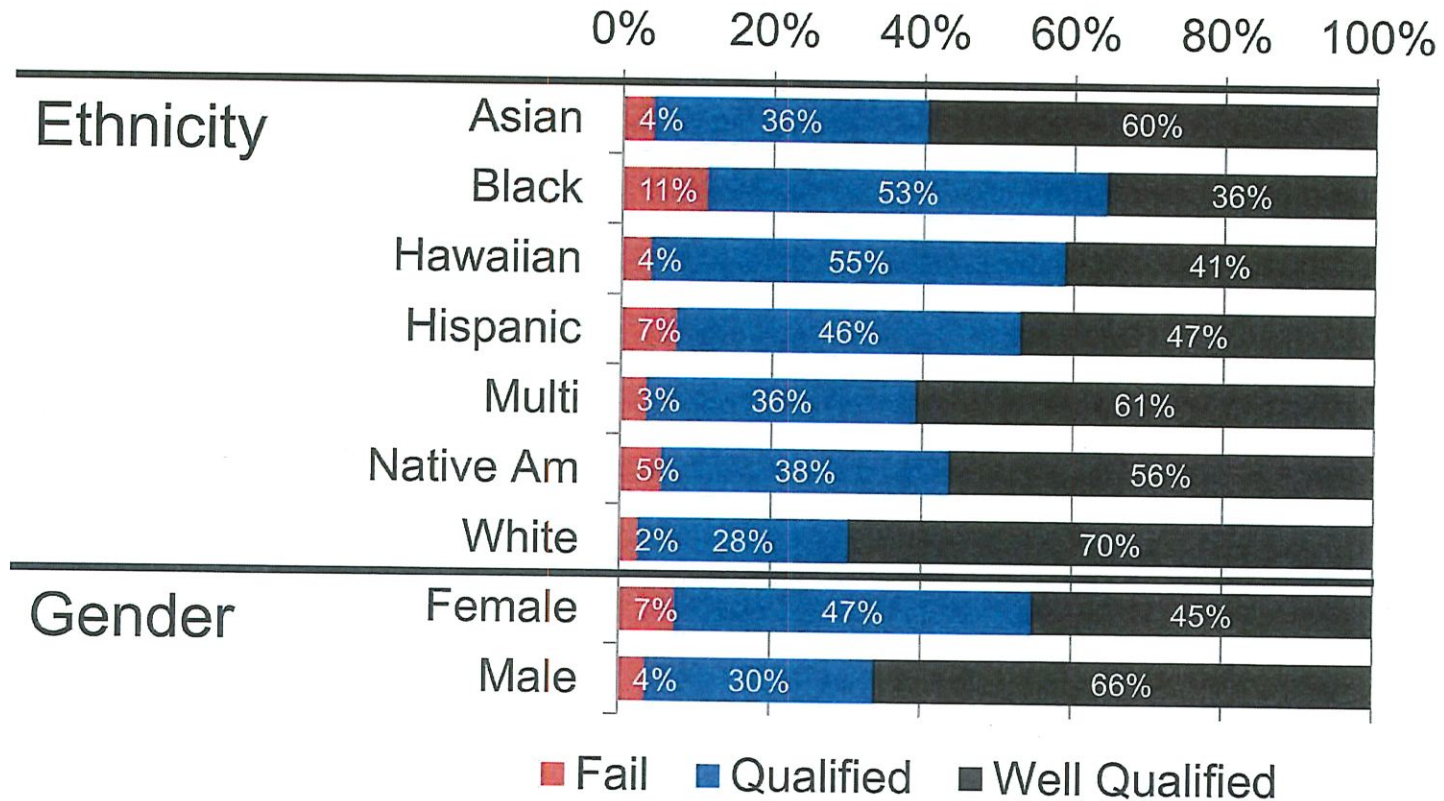


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AT-SAT Bands by Demographic



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CSP Event Analysis

CSP	Adverse Impact							Public Source Used	Public Announcement Type
	African American	Hispanic	Asian	Native American	Hawaiian	Multi	Female		
February 26-28, 2008								✓	State Specific
May 6-8, 2008								✓	State Specific
June 10-12, 2008	*	*	*		*	*	*	✓	Throughout US
September 8-10, 2008	*		*				*	✓	Throughout US
January 13-15, 2009	*			*		*	*	✓	Throughout US
April 28-30, 2009	*						*	✓	Throughout US
October 27-29, 2009	*		*				*	✓	Throughout US
March 23-25, 2010			*	*					
October 19-21, 2010	*							✓	Throughout US
March 8-10, 2011									
November 1-3, 2011						*			
March 6-8, 2012							*		

* = AI for minority

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Suggested Recommendations

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Vacancy Announcements

- **Establish criteria for determination of applicant sources**
 - Draw upon structured job analysis & ATO subject matter experts to determine and validate the differentiating criteria for ranking applicant sources
 - Work to ensure that applicant pool criteria explicitly serve to balance recruitment needs, operational issues, and commitment to diversity
- **Establish a national recruitment outreach and education program around the ATCS position**
- **Work with CTI schools to address the low retention rates of minority candidates in their programs**

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Minimum Qualifications

- **MQs should be reviewed against a current job analysis and revised and validated accordingly**
- **Every attempt should be made to build consistent MQs across recruitment sources**
 - MQs should be automated to the extent possible through the creation of a standardized application blank
 - Consideration should also be given to the use of preferred qualifications (PQs)
- **A tracking system should be established to evaluate MQ screening decisions for accuracy and adverse impact on an ongoing basis**



AT-SAT

- **Consider replacement of the AT-SAT within the CSP with a measure that can differentiate candidates without increasing adverse impact**
 - (e.g., Preferred Qualifications)
- **AT-SAT should be reviewed against a recent job analysis to ensure that it is still measuring the most important requirements for success in the ATCS position**
- **AT-SAT, or its revised form, should be revalidated**



Generation of Referral Lists

- **Air traffic controller application form should be changed so that applicants could select the “anywhere in the nation” location preference option**
- **Applicants should also be provided with information as to which facilities have openings**

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Centralized Selection Panels

- **CSP process design should be evaluated for efficiency, accuracy and fairness**
- **Criteria by which decisions are made during the CSPs should be firmly established and validated against the essential requirements of the job**
 - Develop clear policies, rating guidelines, and standardized processes for reviewing applicants and making decisions, including criteria that can and cannot be considered
- **CSP panelists should be trained and monitored in the application of these criteria**
- **Implement a rigorous evaluation of the CSP decision making process to ensure that the process is operating as intended**

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Interview

- **New interview content should be developed and validated, using the job analysis as the driver of which competencies need to be measured**
 - Multiple questions should be developed to assess each competency
 - Behavioral anchors should be established for each question
- **Training should be provided to all individuals involved in conducting the interviews**



ATCS Overall Design Considerations

- **A single organization should take charge of ATCS hiring process so that it can be centrally managed from announcement through to placement into the FAA Academy**
- **The organization best positioned to “own” and run this process is the Office of Human Resources**
- **A centralized process, housed in AHR, would enable:**
 - improved standardization and targeted outreach of the recruitment process,
 - an improved ability to track and evaluate the hiring process, and
 - enhanced coordination of the entire process

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Next Steps

- Meet with the newly established Executive Steering Committee to provide oversight regarding the new hiring process -- members represent ATO, AHR, ACR and AGC
- Establish a cross functional project team to implement the APT recommendations
 - Finalize the project plan with clear milestones and target date
 - Project lead will be Rickie Cannon, Director of HR Services
- Hold a 2-day conference with all team members to ensure internal alignment on the project and regular project team meeting schedule

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Next Steps

- Modify and standardize the minimum qualifications for ATC Positions
- Establish quality ranking factors to manage the applicant pool
- Revise AT-SAT use in CSP
- Finalize the recruitment strategy for the general public announcement

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Next Steps

- **Students who were selected via a CSP and who are awaiting a training slot at MMAC (~800) will continue under previous hiring process**
- **Applicants currently in the ATC pipeline (~3000) who would attend the next scheduled CSP will be subject to the revised CSP process**

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Back-up Slides

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ATCS Minimum Qualifications

	VRA	RMC	REIN	CTO	PUBLIC	CTI
Citizenship	U.S. citizen					
Language	Must be able to speak English clearly enough to be understood over radios, intercoms, and similar communications equipment					
Age	Maximum entry age of 31*					
Experience or Education	52 consecutive weeks of certified ATC experience		ATCS in FAA / DoD -CPC: Federal Civilian CPC or FPL -DOD: 52 wks certified ATC experience	Experience in a military or air traffic facility	3 yrs progressively responsible FT work experience OR Bachelor's degree OR Comb. of experience / education equal to 3 yrs OR Alternative requirements	Successful completion of FAA-approved curriculum w/ university recommendation
Ratings, Certifications, and/or Assessments	--	ATCS certification or facility rating according to FAA standards		Valid CTO certificate with facility rating of Tower/Cab	--	AT-SAT score of 70 or higher
Eligibility	Veterans' Recruitment Appointment eligibility	On terminal leave pending retirement from active duty military svc. or retired from active duty on or after 9/17/1999	--	--	--	Within eligibility time period from graduation

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