



Expanding STEM Talent in the Federal Workforce

11 July 2024

PCAST Reports

- Established by Executive Order, PCAST is an independent Federal Advisory Committee comprised of individuals from industry, academia, and non-profit sectors
- A PCAST Working Group studies the topic, solicits information from diverse stakeholders, and drafts a report
- To release a report, full Council must make the decision in public, which includes discussion and voting
- Recommendations must reflect the Council's independent judgment, and thus *PCAST reports are not subject to any interagency review or approval process*
- Reports are public, except if classified



PCAST Federal STEM Working Group Members

- **Dan Arvizu** (Former NMSU) **co-lead**
- **Kathy Sullivan** (Former NOAA, NASA) **co-lead**
- **Frances Colon** (CAP)
- **Paula Hammond** (MIT)
- **Phil Venable** (Google)
- **Maria Zuber *** (MIT)

* Active participant in group meetings



CONSULTS

- Kiran Ahuja, OPM Director (Biden Administration, through April 2024)
- Jason Barke, OPM Deputy Associate Director for Strategic Workforce Planning
- Beth Cobert, former Acting OPM Director (Obama Administration)
- Max Stier, Partnership for Public Service
- Olivia Zhu, OSTP (lead on AI talent surge efforts)
- Nafeesa Owens, OSTP (lead on STEM Education & Workforce)



FINDINGS

- The federal workforce is aging. In 2020, the Partnership for Public Service found that only 7% of the federal workforce was under the age of 30. In 2022, the White House found that a 15% of the Federal workforce was eligible to retire, rising to 30% over the subsequent five years.
- STEM-skilled talent needed well beyond so-called “STEM agencies.”
- Challenges in Federal recruitment and HR management are well documented (GAO, NASEM, NAPA, others). Continued follow-up on their recommendations is needed to meet future missions.
- National Security agencies tend to be more proactive in addressing STEM talent recruiting (e.g. USIC Comm.)



FINDINGS Continued

- Included among the highest priority issues are:
 - Slowness and complexity of hiring
 - Differentiating and professionalizing STEM marketing and recruiting (including segmenting the different type of employee assignments, early career civil servants, tour of duty and/or temporary roles for seasoned professionals, and other internships and special purpose hiring programs.)
 - Strategically managing the use of special authorities regarding conflict-of-interest provisions.
- Several pilot programs provide useful models for change (e.g. OPM Pathways Program, US Digital Service, Exec. Order on AI); encouraging but insufficient in scale and scope.
- Adopting novel and skills-based hiring approaches such as “pooled hiring,” and (SME-QA) appear promising (see graphic).
- **Many respondents urge PCAST to sound a clarion call for the needed improvement.**



SME-QA HIRING FLOW

DETERMINING WHICH APPLICANTS MEET THE MINIMUM REQUIREMENTS



RECOMMENDATIONS

- Expediently adopt initiatives that have been piloted by OPM, including leveraging the processes developed for the AI surge, and maximize the use of existing hiring flexibilities at scale across all agencies.



RECOMMENDATIONS

- Modernize recruiting and accelerate hiring processes. Differentiating and professionalizing STEM marketing and recruiting, and upskilling agency human resources offices through training or embeds from OPM or USDS, will enhance the effectiveness of these efforts. Consideration should be given to “pooled hiring” approaches and the use of the SME-QA hiring process.



RECOMMENDATIONS

- Agencies should ambitiously expand use of the Pathways program and the expedited hiring path it offers to expand pre-qualified candidate pools. Leverage the NSF and DOC regional innovation hubs to develop internships that introduce students at all levels to federal job opportunities that mirror the expertise they gain in the hub setting.



RECOMMENDATIONS

- Lower barriers to bringing on seasoned experts for "tours of duty," leveraging the less onerous conflict of interest mitigation approaches used in some defense-related agencies.



RECOMMENDATIONS

- Designate a senior or executive leader at each agency to identify and reduce headwinds to progress, partnering with OPM, agency Human Resources, and other stakeholders as needed. These leaders should report to the agency head within 90 days of assignment.



RECOMMENDATIONS



THE WHITE HOUSE
WASHINGTON

- Direct OPM to create a repository to share successful initiatives and best practices government wide.



Thank you!



THE WHITE HOUSE
WASHINGTON



REMAINING WORK

- STPI to provide the legal basis for current USA Jobs requirements and first-round screening parameters
- Further clarification on update to OPM PATHWAYS early career program
- Plan and execute socialization and outreach.

