

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

STRENGTHENING U.S. AIR FORCE HUMAN CAPITAL MANAGEMENT
BOARD ON HUMAN-SYSTEMS INTEGRATION

Overview

The U.S. Air Force (USAF) human capital management system has the responsibility to provide the service with leaders, innovators, and warriors who are capable and ready to pursue its mission to win in air, space, and cyberspace with excellence and integrity. This system is composed of interdependent tasks, objectives, and responsibilities that span the entire life cycle of an individual's military service—from recruitment and selection to training and retention. With the common goal to deliver operationally optimal and adaptable manpower levels, over time and across missions, to meet urgent needs within fiscal realities, the USAF human capital management system must seek opportunities to work smarter to coordinate its component pieces and appropriately leverage science-based technologies and tools for maximum effectiveness and efficiency.

Background

The human capital management of the USAF has its foundations established by law. In fact, all military services are required by the Department of Defense (DoD) to administer the Armed Services Vocational Aptitude Battery (ASVAB) to all applicants for enlistment.¹ Both law and DoD policy require minimum scores on a subset of tests in the battery, designated the Armed Forces Qualification Test (AFQT), as a condition for enlistment in any service (the individual services may set higher minimum scores on the AFQT or any other of the ASVAB's tests). In addition, the services create composites from all of the ASVAB tests to set minimum requirements for entry into technical training for every specialty in every service. The services supplement the ASVAB with additional tests and measures based on service-specific needs. These additional DoD and individual service special tests and screeners are designed to assess individual differences, abilities, and potential in additional domains such as personality (e.g., Tailored Adaptive Personality Assessment System [TAPAS]) and interests (e.g., Air Force Work Interest Navigator [AF-WIN]).

For many decades, the Air Force Research Laboratory (AFRL, and its predecessor organizations) managed the research, development, and implementation planning processes for USAF military personnel selection and classification testing. With the AFRL reorganization in the late 1990s, however, its manpower and personnel research division was jettisoned, and specific research and development support for that mission was eliminated.² In response, the Air Force personnel community (A1) added resources (both staff and contract dollars) to maintain the existing systems and to conduct limited research and development (R&D) as new opportunities arose. Throughout these developments, policy for USAF selection and classification testing policy remained the responsibility of the personnel staff at Air Force Headquarters (AF/A1). Several USAF organizations outside the purview of the AF/A1 staff also

¹In practice, the U.S. Military Entrance Processing Command (MEPCOM) administers the ASVAB, not the services. MEPCOM also provides medical screening exams.

²AFRL makes available limited staff support for consultation to Air Force policy-makers in this area.

maintain limited capability to conduct R&D in this domain. In addition, both the U.S. Army and U.S. Navy continue their long-standing selection and classification R&D programs. In many cases, products of other-service research have shown to have potential use for the USAF. The USAF's ability to capitalize on new knowledge and technologies has been improved through ongoing processes (e.g., Military Accessions Policy Working Group; Defense Advisory Committee on Military Personnel Testing; recent project on Unmanned Aerial Systems Interface, Selection, and Training Technologies) in which they coordinate activities with other services. Additional strategic focus that improves the process and outcomes of USAF's selection and classification system could further minimize duplication of effort, personnel time, contract dollars, and conflicting demands for research support within the training and operational commands.

Statement of Task

An ad hoc committee will conduct a consensus study to assess and strengthen the various U.S. Air Force (USAF) initiatives and programs working to improve person-job match and human capital management in coordinated support of optimal mission capability. The committee, informed by established professional principles and the best scientific evidence in appropriate domains, will consider the USAF human capital management system (including historical, cultural, and organizational contexts) to develop findings and recommendations (e.g., research, operational, technical, policy, or acquisition approaches) that would improve USAF personnel selection and classification and other critical system components across career trajectories. This activity will cover the broad spectrum of human capital management with a special emphasis on high visibility occupational specialties.

Specifically, the committee will:

1. Review current and emerging USAF personnel community research programs, policies, and processes and consider any relevant lessons to be learned from similar institutions (inside and outside the defense sector);
2. Consider state-of-the-art approaches in selection and testing contexts (e.g., data, methods, tools, analyses, and decisions) that would be relevant to USAF existing and future needs in recruiting, accession, and attrition processes in order to recommend appropriate operational application areas and vetting methods to ensure approaches are based on a strong scientific foundation and proven through rigorous validation;
3. Recommend a roadmap of goals and timeline for executing enhancements to include:
 - a. Operational improvements, new strategies, and outcome metrics that have a sound basis in science and practice;
 - b. Potential procedures, processes, and structures to optimize USAF collaboration, communication, integration, and operational implementation timeliness across the human capital management mission; and
 - c. Identification of resources necessary to implement the recommendations.

Committee Membership

The committee includes members with appropriate expertise in industrial and organizational psychology, especially selection and classification methods, clinical psychology, economics, human-systems integration, and broad knowledge of USAF personnel and human performance issues.

- ◆ **Julie J.C.H. Ryan**, *Co-Chair*, Wyndrose Technical Group, Pasadena, MD
- ◆ **William J. Strickland**, *Co-Chair*, Independent Consultant, San Antonio, TX
- ◆ **Terry A. Ackerman**, University of Iowa
- ◆ **David S.C. Chu**, Institute for Defense Analyses
- ◆ **David M. Corey**, Corey and Stewart Consulting Psychologists, Lake Oswego, OR
- ◆ **Lt. Gen. Gina M. Grosso, USAF (Ret.)**, Independent Consultant, Arlington, VA
- ◆ **Brig. Gen. Leon A. Johnson, USAFR (Ret.)**, Independent Consultant, Irving, TX
- ◆ **Judith S. Olson (NAE)**, University of California, Irvine (*Emerita*)
- ◆ **Dan J. Putka**, Human Resources Research Organization, Arlington, VA
- ◆ **Alvin Roth (NAS)**, Stanford University
- ◆ **Ann Marie Ryan**, Michigan State University
- ◆ **Stephen Stark**, University of South Florida

Staff Contacts

Cherie Chauvin Study Director 202-334-2096 cchauvin@nas.edu	Elizabeth T. Cady Sr. Program Officer 202-334-2064 ecady@nae.edu	Daniel E.J. Talmage, Jr. Program Officer 202-334-2326 dtalmage@nas.edu	Margaret Kelly Sr. Program Assistant 202-334-1529 mkelly@nas.edu
--	---	---	---