



# FY2022 Appropriations Priorities

## Defense

### DEPARTMENT OF DEFENSE (DoD)

#### SCIENCE AND TECHNOLOGY (S&T) (6.1 - 6.3)

**APLU FY2022 Request: \$17.885 billion**

**FY2022 PBR = \$14.685 B; FY2021 = \$16.873 B; FY2020 = \$16.074 B**

To advance the national security of the United States, it is critical our military remain on the leading edge of scientific and technological capabilities. The S&T program supports cutting-edge research that leads to the development of new defense and safety capabilities, warfare technologies, and weapon systems.

We must maintain a strong investment in our defense science and research efforts if we intend to stay ahead of our adversaries. Tomorrow’s military capabilities depend on the R&D investments we make today. Through partnerships with the research community, Department of Defense basic research is securing our nation’s future military capabilities in areas such as quantum computing, artificial intelligence, and advanced autonomous systems.

#### BASIC RESEARCH (6.1)

**APLU FY2022 Request: \$2.831 billion**

**FY2022 PBR = \$2.282 B; FY2021 = \$2.671 B; FY2020 = \$2.603 B**

Discoveries from defense basic research have led to paradigm shifts in military capabilities that are supporting the men and women in the military today. In addition to advocating for strong funding for all defense basic research efforts, APLU encourages a 6 percent increase from FY21 levels for each of the below basic research program elements. These requested funding levels are consistent with “Innovation: An American Imperative”<sup>1</sup> and the National Defense Strategy Commission’s 2018 report<sup>2</sup>, as well as the recent report from the American Academy of Arts and Sciences (AAAS). The AAAS report recommends a sustained real growth rate of *at least* 4% for basic research across the federal government, with commensurate growth in applied research investment trajectories, in order to maintain U.S. research and development leadership internationally.<sup>3</sup>

Agency/Account	Item	Program Element (PE)	APLU Request (in thousands)
Army RDT&E	Defense Research Sciences	601102A	389,504
Army RDT&E	University Research Initiatives	601103A	102,977
Army RDT&E	University and Industry Research Centers	601104A	129,190

<sup>1</sup> Innovation Imperative, 2018. Available at <https://innovation-imperative.herokuapp.com/index.html>

<sup>2</sup> Providing for the Common Defense: The Assessments and Recommendations of the National Defense Strategy Commission, 2018. Available at <https://www.usip.org/publications/2018/11/providing-common-defense>

<sup>3</sup> American Academy of Arts and Sciences, “Restoring the Foundation: The Vital Role of Research in Preserving the American Dream” 2014. Updated 2018. Available at <https://innovation-imperative.herokuapp.com/index.html>

Navy RDT&E	University Research Initiatives	601103N	153,505
Navy RDT&E	Defense Research Sciences	601153N	519,383
Air Force RDT&E	Defense Research Sciences	601102F	344,869
Air Force RDT&E	University Research Initiatives	601103F	208,673
Defense-Wide RDT&E	DTRA Basic Research Initiatives	601000BR	15,494
Defense-Wide RDT&E	Basic Research Initiatives	601110D8Z	80,099
Defense-Wide RDT&E	National Defense Education Program	601120D8Z	145,475

APLU urges Congress to provide robust funding for the Minerva Research Initiative (MRI), which is DoD's signature social science basic research program that funds university-led teams to address problems of strategic importance to U.S. national security. We are grateful that Congress authorized this program in the FY2021 NDAA and allocated \$17 million for MRI last fiscal year. Through MRI grants, university researchers help DoD better understand complex issues such as statecraft, influence, and regional power balances; alliances and burden sharing; economic interdependence and security; and autonomy, artificial intelligence, machine ethics, and social interactions. Thanks to university research funded through the MRI, DoD personnel have the tools to better understand sociopolitical implications in various regions that impact national security and will be more adaptable to future technological capabilities such as artificial intelligence. In FY2019, Minerva only funded 15 projects but received approximately 180 applications. By only funding 8 percent of applications, DoD is missing out on new ideas that will enable the U.S. to maintain military superiority with competitor nations and better prepare our armed forces both at home and abroad. With increased appropriations in FY21, the Department will be able to fund more strong MRI proposals. **APLU requests \$17 million for the Minerva Research Initiative in FY2022 within the Basic Research Initiatives line.**

APLU also requests support of the applied program elements delineated below. The Defense-Wide Manufacturing Science and Technology Program supports the Manufacturing USA network. Manufacturing USA is a network of 16 manufacturing institutes where universities, industry, and government partners collaborate to develop and accelerate the commercialization of innovative manufacturing technologies. Currently, the DoD sponsors eight of the 16 institutes. The goal of DoD investments in the Manufacturing USA network is to support regional hubs to accelerate technological innovation into commercial application and concurrently develop the educational competencies and production processes via shared public-private sectors. Manufacturing leadership is essential to sustaining the U.S. military's technical superiority and global dominance.

Healthy soldiers and families lead to a strong military. It is imperative for DoD to contribute to curing diseases that affect not only men and women in the military, but also the public since we have an all-volunteer force. The Undistributed Medical Research/Peer-Reviewed programs play a vital role in ensuring the U.S. has the medical technologies necessary to enable military readiness and serve those who have been wounded on the battlefield. CDMRP grants are awarded to universities to study illnesses and therapeutic remedies to areas such as Alzheimer's Disease, kidney and lung cancer, and ALS.

Agency/Account	Item	Program Element (PE)	APLU Request (in thousands)
Defense Wide RDT&E	Defense-Wide Manufacturing S&T Technology Program	603680D8z	260,566
DHP RDT&E	Undistributed Medical Research/ Peer-Reviewed (CDMRPs)	N/A	1,869,734

## **DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (DARPA)**

**APLU FY2022 Request: \$3.712 billion**

**FY2022 PBR = \$3.528 B; FY2021 = \$3.501 B; FY2020 = \$3.458 B**

DARPA has a singular and important mission: to make pivotal investments in breakthrough technologies for national security. DARPA funds high-risk, high-reward research at universities and with industry members which has led to many significant defense technologies, some of which have also evolved into remarkable civilian applications. For example, DARPA funded projects have led to military capabilities such as precision weapons and stealth technology, but also such icons of modern civilian society such as the Internet, automated voice recognition and language translation, and Global Positioning System (GPS) receivers small enough to embed in numerous consumer devices.

DARPA searches for and funds potentially transformational projects by working within an innovation ecosystem that includes academic, corporate, and governmental partners, with a constant focus on the nation's military needs. As Congress seeks to optimally allocate limited resources, cutting-edge national security research should remain a top priority.

### **About the Association of Public and Land-grant Universities**

*APLU is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities. With a membership of 201 U.S. public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, its 201 U.S. member campuses enroll 4.2 million undergraduates and 1.2 million graduate students, award 1.2 million degrees, employ 1.1 million faculty and staff, and conduct \$46.8 billion in university-based research.*