

Research and development (R&D) has been a significant part of DOD's work since 1949 when military departments were consolidated under the Secretary of Defense and the newly named "Department of Defense." In 1958, President Dwight D. Eisenhower oversaw the creation of the Defense Advanced Research Projects Agency (DARPA), an independent R&D agency within DOD, in response to the Soviet launch of the Sputnik satellite in 1957 and the "strategic technical surprise" it represented to military leaders and scientific innovators. Today, DOD is the biggest recipient of federal research funds (46% of all federal R&D as of FY25), and receives over 60% more funding than the next largest recipient (the Department of Health and Human Services). Congressional appropriations support what is called Research, Development, Test, and Evaluation (RDT&E), including five accounts by organization: Army, Navy, Air Force/Space Force, Defense-wide, and Director, Operational Test and Evaluation. Programmatic activities to promote national security and defense include:

- the development of specific weapons systems;
- management support for RDT&E facilities; and
- health care for DOD personnel and their families and medical research on issues deemed important to Congress.

The findings and products supported by DOD research entities shape modern civilian life of those outside the military as well, including the development of small GPS receivers that shape how everyday Americans navigate from work, home, and school, and discover new experiences in their home community and beyond (DARPA 2025). In addition, the Defense Health Program includes the Congressional Directed Medical Research Program fund (CRMRP) (created in 1992), as well as dedicated funds for peer reviewed research in other fields, including cancer research, traumatic brain injuries, and ALS. While funded research priorities vary each year based on the findings of an expert panel convened by the U.S. Army Medical Research and Development Command (MRDC), CRMRP has been particularly important as part of Congress's efforts to expand research into women's health, including breast and ovarian cancer.³

In FY2025, RDT&E comprised approximately **15%** of the total DOD budget. Supported research is performed internally at DOD laboratories, and externally at academic institutions and businesses of all sizes. In FY2023, the most recent year for which comprehensive data is available, approximately **31.2%** of DOD research was performed internally by federal agencies while the remainder was performed externally by universities, non-profit organizations, businesses, and state and local governments.⁴

Science & Technology related research – basic research, applied research, and advanced technology development, which comprise three of the seven research activities supported by DOD – are only a plurality of all RDT&E appropriations (15% in FY23, 12% in FY24), but are especially significant in several science policy areas. For example, while DOD provides far less funding for basic research than the National Institutes of Health or the National Science Foundation, it provides more than half of all basic research funding for aerospace, aeronautical and astronautical engineering, electrical, electronic, and communications engineering, and industrial and manufacturing engineering at universities across the country.

¹ <u>Department of Defense Research, Development, Test, and Evaluation (RDT&E): Appropriations Structure, Congressional Research Service, 2022.</u>

² About DARPA, Defense Advanced Research Projects Agency.

³ Department of Defense Congressionally Directed Medical Research Programs, National Health Council.

⁴ Survey of Federal Funds for Research and Development, FYs 2023–24, National Center for Science and Engineering Statistics.

RESEARCH FUNDING

Research, Development, Test & Evaluation (RDT&E) Funding Trends



- Total RDT&E: 81% increase from FY17 to FY25
- Individual RDT&E accounts vary. From FY21 to FY25:
 - o Defense-wide: +20%
 - o Navy: +12.5%
 - o Army: -60%
 - o Air Force & Space Force: +85%
 - Operational Test and Evaluation, Defense: +6%
- In FY24, Defense-wide received the largest proportion of RDT&E funds (34%), followed by the Navy (25%), the Army (23%), the Air Force (17%), and Operational Test and Evaluation, Defense (<1%).

Source: USAspending.gov.

Note: Congress often allows defense organizations to have access to appropriations for more than one year (typically two fiscal years), which means unobligated balances – not already committed to a grantee or contractors – roll over. As a result, DOD RDT&E does not always reflect a given year's appropriations levels. FY2025 are estimates.

Economic Impact

- A 2024 study commissioned by the Florida Defense Support Commission, a subsidiary of the Florida State Government, found that military and defense related activities including, but not limited to R&D comprised 7.3% of the state's total economy, directly and indirectly supporting 865,937 jobs annually, and \$102.6 billion in economic impact.
- According to a DOD study, from 1995-2018, the <u>Department's SBIR/STTR</u> Program had a **22:1** return on its investment, producing **\$347 billion** in economic activity, and supported **1,508,295** full-time jobs averaging **\$73,461** in annual income. 58% of Phase II SBIR/STTR contracts resulted in sales of new products and services based on innovations developed through the program's contract, including **\$28 billion** in sales of new products to the U.S. Military.

See Spending in Your Community

Communities in all 50 states receive the economic benefits of defense research spending. Track RDT&E awards in your home state at USAspending.gov: <u>Defense-wide</u>; <u>Navy</u>; <u>Army</u>; <u>Air Force & Space Force</u>; and <u>Operational Test and Evaluation</u>, <u>Defense</u>.

Learn More About Defense R&D from the Congressional Research Service

- Defense Primer: Research, Development, Test, and Evaluation
- <u>Department of Defense Research, Development, Test, and Evaluation (RDT&E): Appropriations Structure</u>
- Congressionally Directed Medical Research Programs Funding for Fiscal Year 2025: Considerations for Congress