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The Department of Defense (DOD) Budget: An Orientation

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The Department of Defense (DOD) Budget: An Orientation

This report uses the FY2022 budget request for the Department of Defense (DOD) to provide a general orientation to the composition and activities of that agency.

The report divides the budget request into sections that largely correspond to the major divisions (or “titles”) of the annual defense authorization and appropriations bills. Using DOD budget data, the report identifies several categories of activity funded within each of those parts of the budget and—in some cases—provides more specific, selected examples.

The report is not designed to provide detailed analysis of elements of the budget request, but it incorporates cross-references to many CRS products intended for that purpose.

R46965

November 12, 2021

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This report presents a concise but comprehensive description of the Department of Defense (DOD) budget, outlining the agency’s major activities as identified in its annual funding request.

Because of DOD’s size and the scope and scale of its activities, a baseline of information about the agency may be of use to Members of Congress whose focus is on other aspects of federal policy. DOD’s annual budget typically accounts for about half of the federal government’s discretionary spending in a fiscal year, often making it a factor in congressional deliberations about spending for other activities of the federal government. Moreover, in the course of its routine operations, DOD engages with—or has a considerable impact on—a broad range of public policy issues as diverse as natural resource management, national science and technology policy, regional economic development, and labor relations.

This report reviews elements of the FY2022 DOD budget request released by the executive branch on May 28, 2021. CRS’s analysis uses data and categories of funds included in publicly available documents released by the Undersecretary of Defense (Comptroller).¹

Overview

The Biden Administration requested \$715.0 billion in discretionary budget authority for DOD in FY2022.² This amounts to 49% of all discretionary spending requested for that fiscal year.³

In general, the following analysis divides the budget request into groupings that correspond to major sections (or “titles”) of the annual defense authorization and appropriations bills: military personnel, operation and maintenance, procurement, and research and development (R&D). A fifth section incorporates funding for the Defense Health Program and several smaller components of the DOD budget that the defense appropriation bill treats in two separate titles. The budget for military construction, the sixth section of this analysis, is covered by a separate appropriations bill, which also funds the Department of Veterans Affairs and other agencies.⁴

The report discusses each of those aspects of the budget, explores their constituent parts, and cites relevant CRS products that elaborate on those subjects.

All dollar amounts cited in this report are in discretionary budget authority.

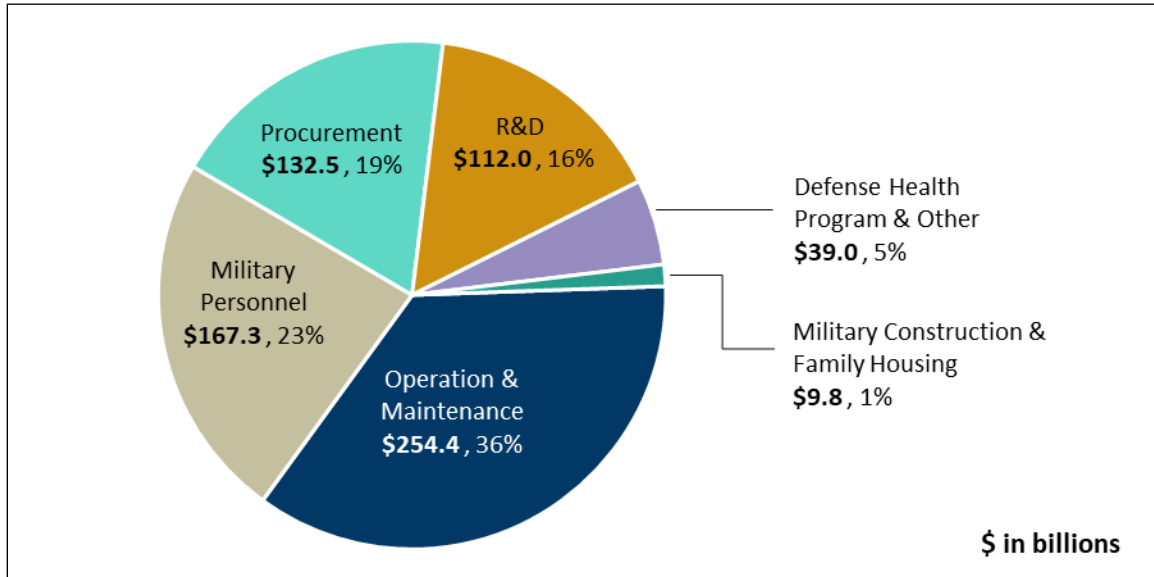
¹ The details of DOD’s budget request and the associated unclassified justification material are available at <https://comptroller.defense.gov/Budget-Materials/>.

² For the most part, discretionary spending consists of funds provided by appropriations bills enacted annually by Congress. Mandatory spending, on the other hand, occurs each year on the basis of permanent law.

³ The Office of Management and Budget (OMB) organizes the federal budget into categories or “functions” each of which is intended to include all government activities conducted for a particular purpose regardless of the agency performing the activity. The DOD budget accounts for 95% if the FY2022 budget request for the National Defense budget function. That remainder of the budget in that function would cover defense-related work by the Department of Energy, the FBI, and other agencies.

⁴ In defense budget discussions, the term “acquisition” refers to the sum of funding for procurement, R&D, and (in some cases) military construction.

Figure I. FY2022 Department of Defense (DOD) Budget Request
In discretionary budget authority



Source: CRS analysis of *Defense Budget Overview, United States Department of Defense FY2022 Budget Request*, Table A-1, p. A-1, at <https://comptroller.defense.gov/Budget-Materials/>.

Notes: Some data from the source cited are reorganized as follows: Most of the funding represented by the chart segment entitled “Defense Health Program, etc.” is included in the Operation & Maintenance category of the source table. The chart segment entitled “Defense Health Program, etc.” also includes funding categorized by the source table as Defense Working Capital Funds and \$1.1 billion for destruction of chemical weapons, which the source table includes in the Procurement category. See below under the heading “Defense Health Agency, Defense Working Capital Funds, and Other DOD Activities.”

Totals may not sum due to rounding.

Military Personnel

The budget for military personnel includes funding for cash compensation, deferred (i.e., post-retirement) compensation, and travel reimbursements. It is allocated across 10 accounts: one for the active component of each of the four armed services (Army, Navy, Marine Corps, and Air Force), one for each service’s reserve component, and one for each of the two National Guard components (Army and Air Force). These accounts fund the major elements of cash compensation for military personnel, including basic pay, housing allowances (which are linked to housing costs in the locale where a servicemember is stationed), and special pays and bonuses for which some personnel are eligible. The Military Personnel budget also funds deferred compensation, including military retired pay, Thrift Savings Plan contributions, and the retiree health care plan known as TRICARE for Life.

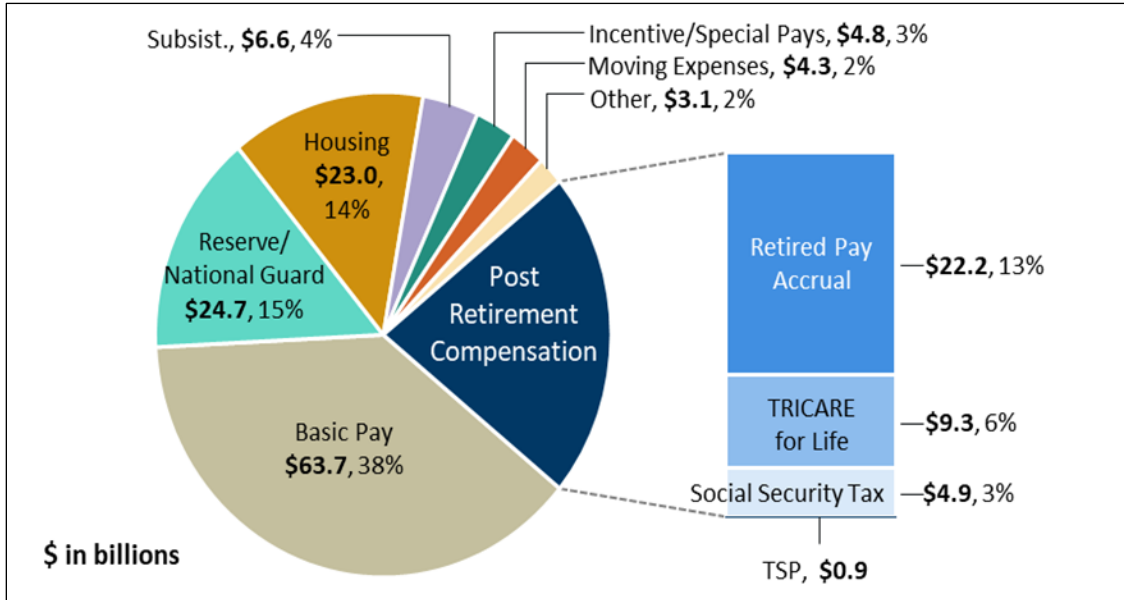
The Military Personnel budget does not cover the cost of various other benefits (i.e., noncash compensation) to military personnel, including health care, subsidized supermarkets (called commissaries) and child day care, all of which are funded in various other parts of the DOD budget.⁵

⁵ For additional information, see CRS Report RL33446, *Military Pay: Key Questions and Answers*, by Lawrence Kapp and Barbara Salazar Torreon.

For FY2022, the Administration requested \$167.3 billion for military personnel accounts (see Table 1).

Figure 2. FY2022 Military Personnel Budget Request

In discretionary budget authority



Source: CRS analysis of *Military Personnel Programs (M-I)*, Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Note: Totals may not sum due to rounding.

Table 1. FY2022 Military Personnel Budget Request

All portions cover active component personnel, except the one labelled “Reserve and National Guard”

\$63.7 billion	Basic pay	Linked to rank (grade) and years of service, this typically accounts for about 60% of the cash compensation paid to the approximately 237,000 officers and 1.1 million enlisted members of the four active components of the armed services. ^a
\$24.7 billion	Reserve and National Guard	Includes \$11.2 billion for compensation of nearly 90,000 Reserve and National Guard members on duty full-time in support roles. ^b
\$23.0 billion	Basic Allowance for Housing (BAH)	Linked to housing costs in locale to which a servicemember is assigned; this varies with the servicemember’s rank (grade) and whether the servicemember has dependents.
\$22.2 billion	Retired pay accrual	An actuarially calculated payment into the military retirement trust fund to cover anticipated future retired pay to servicemembers currently on active duty. ^c
\$9.3 billion	TRICARE-for-Life accrual	An actuarially calculated payment into the Medicare Eligible Retiree Trust Fund to cover anticipated future benefits for Medicare-eligible military retirees. ^d
\$6.6 billion	Subsistence allowance (meals)	Pays for a cash allowance to servicemembers and for meals provided in lieu of the allowance (e.g., during basic training).

\$4.9 billion	Social Security contribution	Employer contributions by the U.S. government.
\$4.8 billion	Incentive pays and special pays	Includes bonuses for enlistment (\$423 million) and reenlistment (\$1.1 billion) as well as extra pay for critical or hard-to-fill skills including, for example, \$834 million for medical professionals and \$627 million for personnel assigned to flight duty.
\$4.3 billion	Moving expenses (“Permanent change of station” or PCS)	Pays for all movement of personnel (and dependents) being transferred to or from an assigned duty station, including \$2.5 billion for movement of household goods.
\$857 million	Thrift Savings Plan contribution	Employer contributions by the U.S. government.
\$3.1 billion	Other	Includes \$804 million for issue of uniforms and clothing allowances and \$451 million for pay and allowances for officer cadets enrolled in the national service academies and in ROTC programs.

Source: CRS analysis of *Military Personnel Programs (M-1)*, Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Notes: Totals may not sum due to rounding.

- a. For additional information, see CRS In Focus IF10685, *Defense Primer: Military Officers*, by Lawrence Kapp, and CRS In Focus IF10684, *Defense Primer: Military Enlisted Personnel*, by Lawrence Kapp.
- b. For additional information, see CRS In Focus IF10540, *Defense Primer: Reserve Forces*, by Lawrence Kapp.
- c. For additional information, see CRS In Focus IF10483, *Defense Primer: Military Retirement*, by Kristy N. Kamarck.
- d. The health care program for military retirees is funded through the Medicare Eligible Retiree Health Fund. DOD makes an annual contribution to this fund based on actuarial calculations of projected future benefits to military personnel currently on active duty. Congress scored this payment, which is authorized annually by the National Defense Authorization Act, as discretionary spending. However, it is provided automatically, by a provision of permanent law (37 U.S.C. §1009), and therefore is not included in the annual defense appropriation bill.

Operation and Maintenance

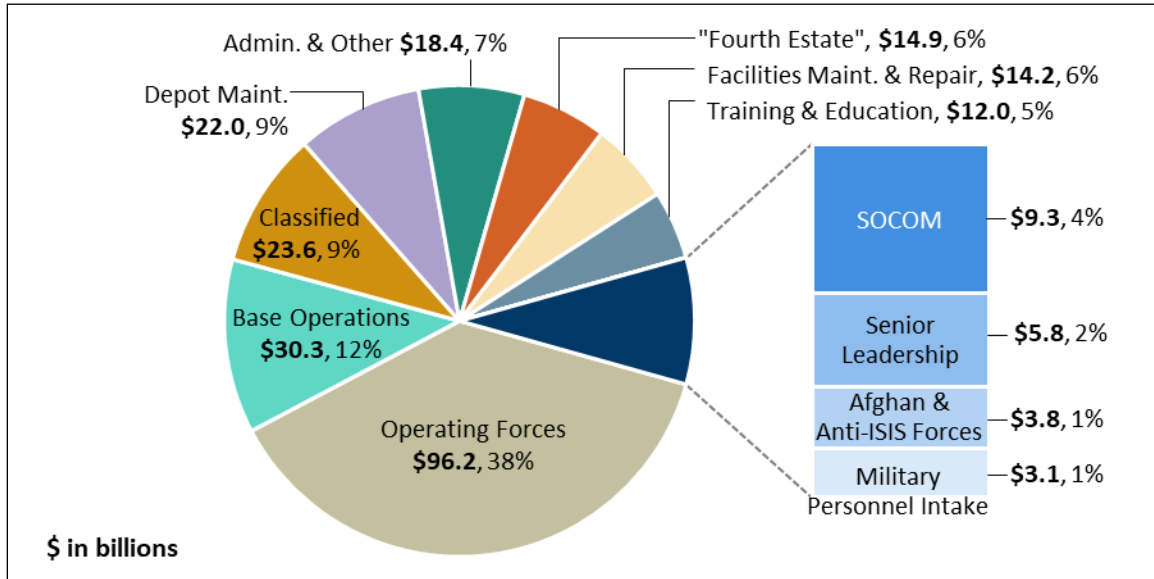
The bulk of the funding in the Operation and Maintenance (O&M) title of the annual defense appropriations bill covers the operating costs of the 10 active duty and reserve service components as well as Defense Department management and support costs.

O&M funds pay for fuel, supplies, consumable spare parts, and routine maintenance and major overhauls of aircraft, ships, ground vehicles, electronic equipment and facilities. The O&M accounts also pay for recruiting, training, professional education, administrative activities, and headquarters and supply operations.

Upwards of 20% of the O&M budget covers pay and benefits for civilian federal employees. This does not include compensation for military personnel performing these O&M-funded activities; their pay and benefits are provided through the Military Personnel accounts.

For FY2022, the Administration requested \$253.6 billion for O&M funding, excluding funds for the Defense Health Agency (DHA) and certain other activities treated in the following section of this report. Funding for those excluded activities is included with O&M funds in some DOD budget documents, but Congress addresses them separately from O&M funds and programs in the annual National Defense Authorization Act (NDAA) and defense appropriations bills.

Figure 3. FY2022 DOD Operation and Maintenance (O&M) Budget Request
In discretionary budget authority



Source: CRS analysis of Operation and Maintenance Programs (O-I), Department of Defense FY2022 Budget Request, at <https://comptroller.defense.gov/Budget-Materials/>.

Note: Special Operations forces specialize in conducting relatively low-profile—sometimes clandestine—operations in relatively small units.

Table 2. FY2022 Operation and Maintenance (O&M) Budget Request

\$96.2 billion	Operating Forces	Funds operating costs of units in the field, including fuel and other consumables and routine maintenance.
\$30.3 billion	Base Operations	Funds the cost of public utilities, local transportation, food services, personnel management, and family support activities on military bases. (This amount excludes \$1.9 billion for base operations in the Defense Health Program budget).
\$23.6 billion	Classified	
\$22.0 billion	Depot Maintenance	Funds periodic overhauls of ships, aircraft, vehicles, and their complex components that entail the items being taken out of service for months or years and partly dismantled at a specialized maintenance facility to allow inspection and repair or replacement of worn or damaged parts. ^b
\$18.4 billion	Administration and Other	Includes funding for routine administrative functions not directly related to combat missions, including management of personnel and real estate, communications, supply, and transportation. Also includes \$1.0 billion for environmental restoration of current and formerly used DOD sites and miscellaneous other costs.
\$14.9 billion	"Fourth Estate"	Funds support agencies overseen directly by the Office of the Secretary of Defense, rather than by one of the three service departments (Army, Navy, and Air Force); the total includes \$2.2 billion for the network of 106 elementary and secondary schools enrolling nearly 70,000 military dependents overseas and on domestic bases in relatively isolated areas; ^c \$1.4 billion for the Defense Contract Management Agency; and \$834 million for the Defense Human Resources Agency.

\$14.2 billion	Facilities Maintenance and Repair	Funds day-to-day maintenance of DOD’s inventory of more than 500,000 structures, ^d including upgrades and repairs as well as demolition of those structures deemed unneeded or unusable.
\$12.0 billion	Training and Education	Funds training and educational activities ranging from recruit training (\$140 million) to mid-career professional development training at war colleges and other schools (\$1.2 billion) and flight training (\$3.0 billion).
\$9.3 billion	Special Operations Command (SOCOM)	Funds the combatant command in charge of the more than 70,000 Special Operations personnel distributed across the four armed forces. Special Operations forces specialize in conducting relatively low-profile—sometimes clandestine—operations in relatively small units. ^a
\$5.8 billion	Senior Leadership	Funds the civilian and military leadership of DOD, including the Office of the Secretary of Defense (\$1.8 billion); the Joint Chiefs of Staff and their supporting Joint Staff (\$1.1 billion); and the headquarters of the combatant commands (other than Special Operations Command) that command all U.S. forces that operate in a particular region (e.g., European Command – \$294 million) or perform a particular function (e.g., Strategic Command – \$475 million). ^e
\$3.8 billion	Support for Afghan and anti-ISIS forces	Includes \$3.3 billion to equip, supply, and train the Afghan Army, Air Force, National Police, and Special Security Forces, plus \$522 million to equip, train, and supply counter-ISIS forces in Syria and Iraq. ^f
\$3.1 billion	Military Personnel Intake	Includes \$1.3 billion to bring into the service new officers through the service academies, ROTC, and officer candidate schools, and \$1.6 billion to recruit enlisted personnel (including the cost of advertising). ^g

Source: CRS analysis of Operation and Maintenance Programs (O-I), Department of Defense FY2022 Budget Request, at <https://comptroller.defense.gov/Budget-Materials/>.

Notes: Totals may not sum due to rounding.

- a. For additional information, see CRS In Focus IF10545, *Defense Primer: Special Operations Forces*, by Barbara Salazar Torreon and Andrew Feickert.
- b. For additional information, see CRS In Focus IF11466, *Defense Primer: Department of Defense Maintenance Depots*, by Tyler F. Hacker and G. James Herrera. The amount listed in the table (\$22.0 billion) is the total amount requested for FY2022 in budget line-items specifically identified by title as being associated with depot-level maintenance. Some other DOD documents, using a broader definition of depot maintenance, report a larger total.
- c. For additional information, see CRS In Focus IF10335, *DOD Domestic School System: Background and Issues*, by Kristy N. Kamarck.
- d. Department of Defense, Base Structure Report – Fiscal Year 2018 Baseline, p. 2, at https://www.acq.osd.mil/eie/BSI/BEI_Library.html.
- e. For additional information, see CRS In Focus IF10542, *Defense Primer: Commanding U.S. Military Operations*, by Kathleen J. McInnis.
- f. Several months after the FY2022 DOD budget request was sent to Congress, the U.S.-supported Afghan government collapsed. For additional information, see CRS Report R46879, *U.S. Military Withdrawal and Taliban Takeover in Afghanistan: Frequently Asked Questions*, coordinated by Clayton Thomas.
- g. For additional information, see CRS In Focus IF11147, *Defense Primer: Active Duty Enlisted Recruiting*, by Lawrence Kapp; CRS In Focus IF11788, *Defense Primer: Military Service Academies*, by Kristy N. Kamarck and Hibbah Kaileh; and CRS In Focus IF11235, *Defense Primer: Senior Reserve Officer Training Corps*, by Kristy N. Kamarck.

Defense Health Agency, Defense Working Capital Funds, and Other DOD Activities

Some DOD summary budget documents include the budgets for the Defense Health Agency (DHA) and certain other DOD component in the presentation of Operation and Maintenance funding. This arises because these components’ budgets include O&M funding in addition to

funding for procurement and for research and development (R&D). Congress usually addresses these components of the budget in separate titles in the National Defense Authorization Act (NDAA) and Defense Appropriations Act, as does this report.

The Defense Health Agency is the largest entity in this category of agencies: it serves 9.6 million eligible beneficiaries including servicemembers, retirees, and dependents.⁶ For FY2022, the Administration requested \$35.6 billion for the Defense Health Program. This amount does not include \$8.5 billion for pay and benefits of servicemembers who staff DOD health care facilities, funding for which is included in the Military Personnel accounts.⁷ The budget request for the Defense Health Program also does not include \$9.3 billion appropriated in the Military Personnel budget as accrual payments to fund anticipated health care benefits for military retirees under the so-called TRICARE-for-Life program.

Defense Working Capital Funds

This category also includes several defense working capital funds (WCFs) through which the armed services and other DOD organizations spend tens of billions of dollars annually to purchase from commercial suppliers goods (such as fuel) and services (such as vehicle overhauls). These funds are intended to let DOD organizations plan and budget for such commercial purchases despite the fact that their prices can fluctuate between the time of DOD budget enactment and the time of the purchases.

To provide price stability for budgeting purposes, Congress authorized the creation of several WCFs, each of which was given an initial appropriation (or *cash corpus*) with which to make commercial purchases of goods or services. In turn, the armed services and other DOD organizations buy those items with appropriated funds from the WCFs. The funds charge their DOD customers prices that are fixed for a fiscal year but that can change from year to year, or even within a given year. In theory, the funds can be managed so as to break even, over time. If a fund's balance declines during a year, it can increase its prices for a future year or seek a direct appropriation from Congress.⁸

An exception to this general rule is the WCF that funds the Defense Commissary Agency (DeCA). This agency manages a network of 236 commissaries, essentially supermarkets, at which military personnel and other qualified beneficiaries can purchase food and household goods for prices that amount to cost plus a 5% surcharge. The 5% surcharge pays for construction and maintenance of commissary facilities. Congress makes an annual appropriation to the DeCA fund to cover salaries and other operating costs of the system.

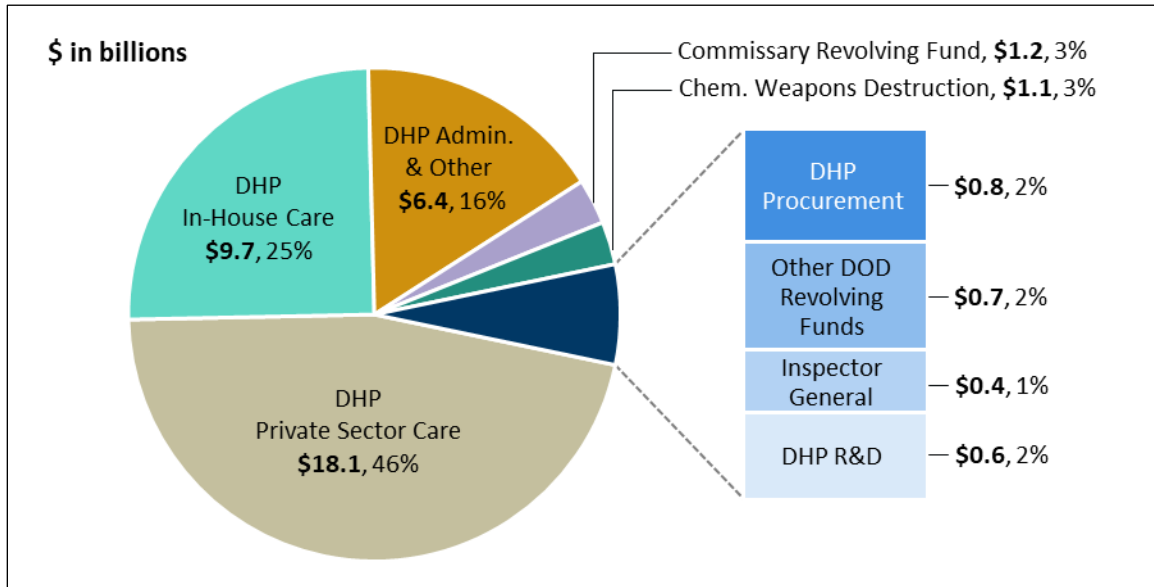
⁶ For additional information, see CRS In Focus IF10530, *Defense Primer: Military Health System*, by Bryce H. P. Mendez.

⁷ Department of Defense, *Defense Budget Overview*, FY2022, p. 5-5, Figure 5-2, "Military Health Care Funding."

⁸ For additional information, see CRS In Focus IF11233, *Defense Primer: Defense Working Capital Funds*, by G. James Herrera.

Figure 4. FY2022 DOD Budget Request for Defense Health Program (DHP) and Other DOD Activities

In discretionary budget authority



Source: CRS analysis of Operation and Maintenance Programs (O-1) and Revolving and Management Fund (RF-1), Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Notes: DHP is the Defense Health Program; R&D is research and development.

Table 3. FY2022 Budget Request for Defense Health Program (DHP) and Other DOD Programs

\$18.1 billion	DHP Private Sector Care	Funds medical and dental care and pharmaceuticals for eligible beneficiaries through DOD's TRICARE health care insurance program.
\$9.7 billion	DHP In-House Care	Funds inpatient and outpatient treatment of beneficiaries in any of the 721 Military Treatment Facilities (MTFs), which range in size from major medical centers to medical and dental clinics.
\$6.4 billion	DHP Admin. and other	
\$779 million	DHP procurement	
\$631 million	DHP R&D	In recent years, Congress typically has added to this request a total of approximately \$1 billion for several specific medical research projects that DOD manages as the Congressionally-Directed Medical Research Program. ^a
\$1.2 billion	Defense Commissary Agency (DeCA) Working Capital Fund	Funds salaries, transportation, and other operating costs of DeCA's network of 236 supermarket-like commissaries at which military personnel and their dependents can purchase items for cost plus a 5% surcharge. ^b
\$740 million	Other Working Capital Funds	Funds the Army, Navy, Air Force, and Defense-wide WCFs.
\$1.1 billion	Chemical Weapons Destruction	Funds the destruction of the U.S. stockpile of lethal chemical weapons pursuant to the Chemical Weapons Convention, a treaty ratified by the United States in 1997.
\$438 million	DOD Inspector General	Funds independent investigative agency to detect fraud, waste, and abuse in DOD operations.

Source: CRS analysis of *Operation and Maintenance Programs (O-I)* and *Revolving and Management Fund (RF-I)*, Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Notes: Totals may not sum due to rounding.

- a. For additional information, see CRS Report R46599, *Congressionally Directed Medical Research Programs: Background and Issues for Congress*, by Bryce H. P. Mendez.
- b. For additional information, see CRS In Focus IF11089, *Defense Primer: Military Commissaries and Exchanges*, by Barbara Salazar Torreon and Kristy N. Kamarck.

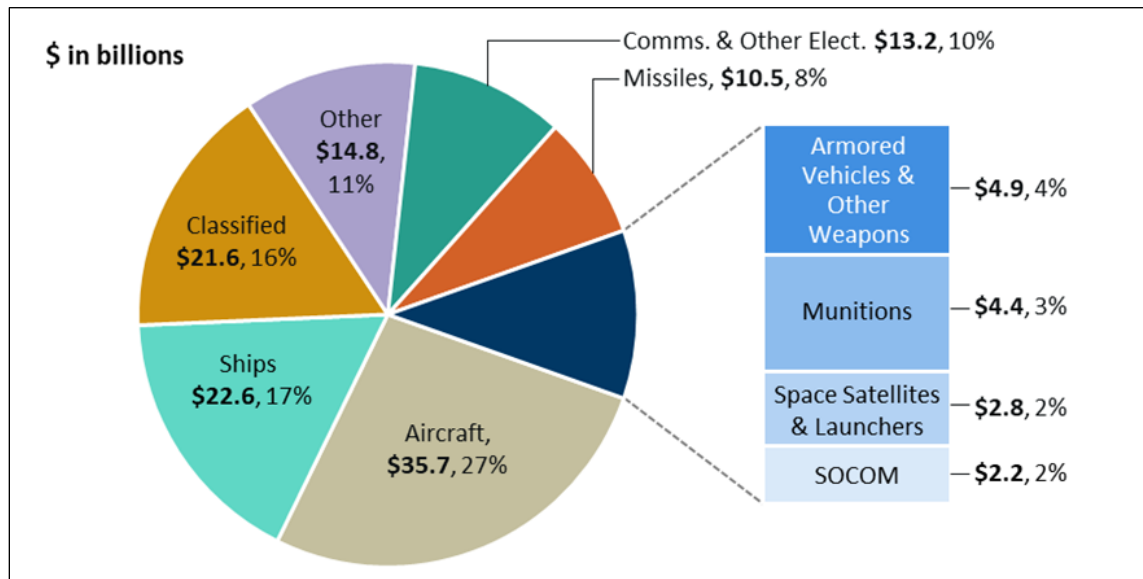
Procurement

The procurement accounts fund the purchase of new equipment and modifications to weapons already in service. Each of the three service Departments (Army, Navy, and Air Force) has several procurement accounts. The Defense-Wide Procurement account supports Special Operations Command (SOCOM), the Missile Defense Agency, and various other agencies that report directly to the Office of the Secretary of Defense.⁹

For FY2022, the Administration requested \$132.5 billion in procurement accounts, excluding funds for chemical weapons demilitarization treated in the preceding section of this report. Funding for this excluded activity is included with procurement funds in some DOD budget documents, but Congress addresses it separately from procurement funding in the annual National Defense Authorization Act (NDAA) and defense appropriations bills.

Figure 5. FY2022 Budget Request

In discretionary budget authority



Source: CRS analysis of *Procurement Programs (P-I)*, Department of Defense FY2022 Budget Request, at <https://comptroller.defense.gov/Budget-Materials/>.

Note: SOCOM is the acronym of Special Operations Command.

⁹ For additional information, see CRS In Focus IF10599, *Defense Primer: Procurement*, by Heidi M. Peters and Brendan W. McGarry.

Table 4. FY2022 Procurement Budget Request

\$35.7 billion	Aircraft ^a	Funds procurement and modification of manned and unmanned airplanes and helicopters (except modifications for Special Operations aircraft), including a total of \$10.0 billion for procurement and modification of F-35 fighters, variants of which are being used by the Air Force, Navy, and Marine Corps.
\$22.6 billion	Ships ^b	Funds procurement of all Navy ships but not smaller watercraft purchased by other services and Special Operations units. Includes \$6.3 billion for construction of Virginia-class attack submarines and \$4.6 billion for Columbia-class ballistic missile subs. Funds refueling and modernization of nuclear-powered aircraft carriers, but not modifications to other types of ships.
\$21.6 billion	Classified	
\$13.2 billion	Communications and Other Electronics	Funds procurement of electronic equipment such as the Navy's CANES data network (\$412 million), Army night-vision equipment (\$1.1 billion), and an Air Force program to stockpile specialized computer chips used in many DOD items (\$885 million).
\$10.5 billion	Missiles	Funds procurement of ballistic and guided missiles, including \$1.2 billion for anti-ballistic missile interceptors and supporting hardware for the Missile Defense Agency (MDA).
\$4.9 billion	Armored Combat Vehicles and Other Weapons ^c	Funds procurement and modification of armored vehicles, artillery, and small arms, including \$981 million for upgrades to M-1 tanks.
\$4.4 billion	Munitions	Funds aerial bombs, artillery shells, small arms ammunition, and Navy torpedoes; includes \$681 million for Army-owned munitions production plants.
\$2.8 billion	Space Satellites and Launchers ^d	Funds military satellites and support equipment; includes \$1.34 billion to procure satellite launch services.
\$2.2 billion	Special Operations Command (SOCOM)	Funds procurement of equipment unique to Special Operations forces, including \$1 billion for modifications to airplanes and helicopters purchased by the Army and Air Force.
\$14.8 billion	Other	Funds procurement of other durable goods, including engineering and construction equipment and noncombat vehicles.

Source: CRS analysis of *Procurement Programs (P-1)*, Department of Defense FY2022 Budget Request, at <https://comptroller.defense.gov/Budget-Materials/>.

Notes: Totals may not sum due to rounding.

- a. For additional information, see CRS In Focus IF10546, *Defense Primer: United States Airpower*, by Jeremiah Gertler.
- b. For additional information, see CRS In Focus IF10486, *Defense Primer: Naval Forces*, by Ronald O'Rourke.
- c. For additional information, see CRS Report R46216, *The Army's Modernization Strategy: Congressional Oversight Considerations*, by Andrew Feickert and Brendan W. McGarry.
- d. For additional information, see CRS In Focus IF11531, *Defense Primer: National Security Space Launch*, by Stephen M. McCall.

Research and Development

The research and development (R&D) appropriations fund research ranging from highly speculative (but potentially high-payoff) basic research to the development of improvements to be installed on weapons already in service. Congress addresses more than 99% of DOD-funded R&D in single bill titles in both the National Defense Authorization Act (NDAA) and the Defense

Appropriations Act. Relatively small amounts for R&D related to medical care and other activities are included in other parts of the annual DOD funding legislation (as discussed above).¹⁰

Each of DOD's four R&D appropriation accounts (Army, Navy, Air Force, and Defense-wide) includes upwards of 200 program elements (commonly called "PEs"), each of which may incorporate several projects. The PEs are organized into eight budget activities (BAs), each of which is identified both by a title—for instance, "Basic Research"—and by a numerically designated budget activity—in the case of Basic Research, budget activity 6.1 (typically referred to simply by the numerical designation).

BA's 6.1 through 6.5 are organized in a sequence progressing from basic research through progressively more production-oriented development activities, to the prototyping of items intended for procurement.¹¹ BA 6.6 funds DOD's R&D management support and infrastructure—the laboratories and test ranges. BA 6.7 funds development of modifications to equipment already in service. BA 6.8 funds a number of pilot programs being managed under modified procedures designed to accommodate IT-dominated projects.¹²

DOD identifies BAs 6.1 through 6.3 as comprising its Science and Technology (S&T) budget, developing intellectual property that activities in BAs 6.4, 6.5, and 6.7 use to generate technology intended to address DOD's current or near-term operational needs.

DOD's R&D budget request uses code names such as Pilot Fish and Retract Juniper for several programs for which most information other than the amount requested is classified.¹³ The budget also requests a total of \$27.4 billion for six PEs labelled "Classified Programs," for which all information is classified.¹⁴

For FY2022, DOD requested a total of about \$112 billion in R&D funding. OMB's assessment of the federal government's total R&D investment counts only DOD funding in budget activities 6.1-6.5. This amounted to \$63 billion—slightly more than one-third of all federal R&D funding requested for FY2022.¹⁵

¹⁰ For additional information, see CRS In Focus IF10553, *Defense Primer: RDT&E*, by John F. Sargent Jr.

¹¹ In the case of complex systems such as airplanes, there may be a relatively small number of items manufactured using R&D funding (rather than Procurement funding). Such a *Low-Rate Initial Production (LRIP)* run is intended to provide production-representative articles for operational testing before the item is put into full-scale production. In addition, there are certain missile-defense systems purchased only in relatively small numbers, for which all (or most) production is funded through the R&D accounts.

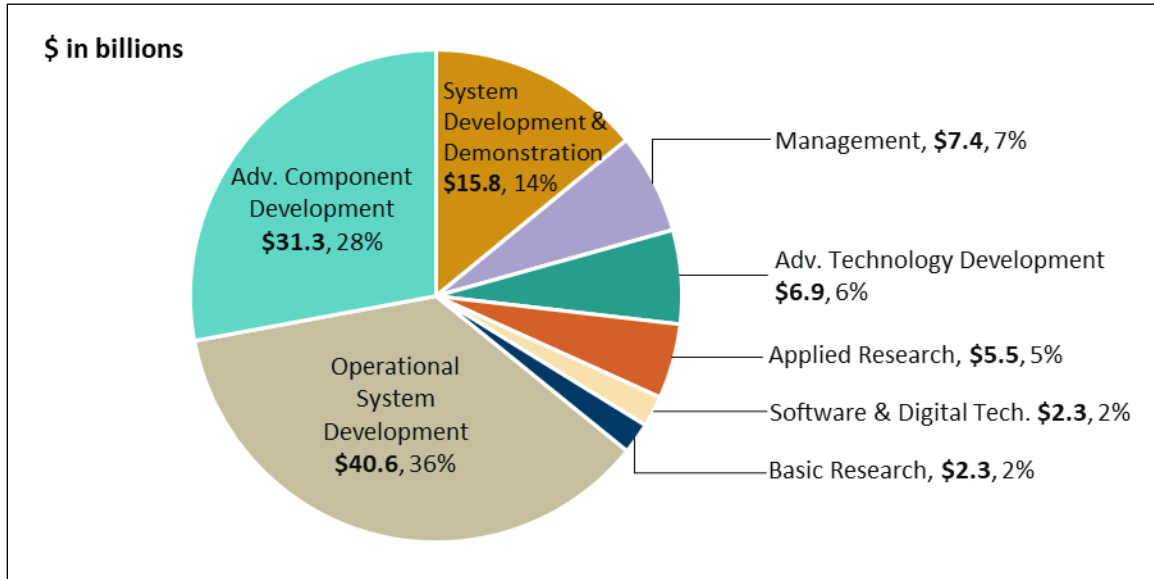
¹² For additional information, see CRS Report R44711, *Department of Defense Research, Development, Test, and Evaluation (RDT&E): Appropriations Structure*, by John F. Sargent Jr.

¹³ For FY2022, the budget request includes \$408.08 million for Pilot Fish and \$144.54 million for Retract Juniper. In the publicly available DOD budget justification books, the entry for each of these code-named programs states: "In accordance with Title 10, United States Code, Section 119(a)(1) [the program in question is described] in the [classified] Special Access Program Annual Report to Congress."

¹⁴ Roughly three-quarters of this total, included in the Air Force and Space Force R&D requests, are widely referred to as a "pass-through" accounts through which funds are provided to highly classified activities of agencies in the intelligence community. See, for example, Jon Harper, "Can the Air Force Ditch the Pass-Through Budget?" *National Defense*, September 13, 2021, at <https://www.nationaldefensemagazine.org/articles/2021/9/13/can-the-air-force-ditch-the-pass-through-budget>.

¹⁵ Office of Management and Budget, *Analytical Perspectives, Budget of the U.S. Government, FY2022*, Table 14-1, p. 178.

Figure 6. FY2022 DOD Research and Development (R&D) Budget Request
In discretionary budget authority



Source: CRS analysis of Research, Development, Test & Evaluation Programs, (R-1), Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Table 5. FY2021 R&D Budget Request

\$2.3 billion	6.1 Basic research	Funds study and experimentation to increase understanding in physical, engineering, and life sciences related to long-term defense requirements; about half of this work is contracted to universities.
\$5.5 billion	6.2 Applied research	Funds research into the basic feasibility of a particular technological approach to solving a specific military problem (but not directly associated with development of a specific piece of hardware).
\$6.9 billion	6.3 Advanced technology development	Funds research involving development of components and efforts to integrate components into system prototypes, as well as field testing of hardware to demonstrate technological feasibility.
\$31.3 billion	6.4 Advanced component development and prototypes	Funds testing in realistic operating environments of technologies integrated into functioning systems; includes \$7.1 billion for ballistic missile defense projects, accounting for 99% of the Missile Defense Agency's R&D budget.
\$15.8 billion	6.5 System development and demonstration	Funds engineering development of specific systems slated for production, the two most expensive of which are a missile launch detection satellite designated Next Generation OPIR (\$2.5 billion) and a new presidential jet (\$681 million).
\$7.4 billion	6.6 Management support	Funds overhead costs, including operation of DOD laboratories and test ranges and some training of acquisition personnel.
\$40.6 billion	6.7 Operational systems development	Funds development of improvements to systems already in service. Includes a total of \$2.1 billion (distributed across four PEs) to fund improvements to the F-35 fighter and \$716 million to upgrade B-52 bombers built in the 1960s and slated to remain in service beyond 2040.
\$2.3 billion	6.8 Software and Digital Technology Pilot Programs	First appearing in the FY2021 budget request, this category consolidates funding for software programs that previously was divided between O&M and R&D accounts.

Source: CRS analysis of *Research, Development, Test & Evaluation Programs, (R-1)*, Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Note: Totals may not sum due to rounding.

For additional analysis and the text of the DOD definitions of the funding categories, see CRS Report R44711, *Department of Defense Research, Development, Test, and Evaluation (RDT&E): Appropriations Structure*, by John F. Sargent Jr.

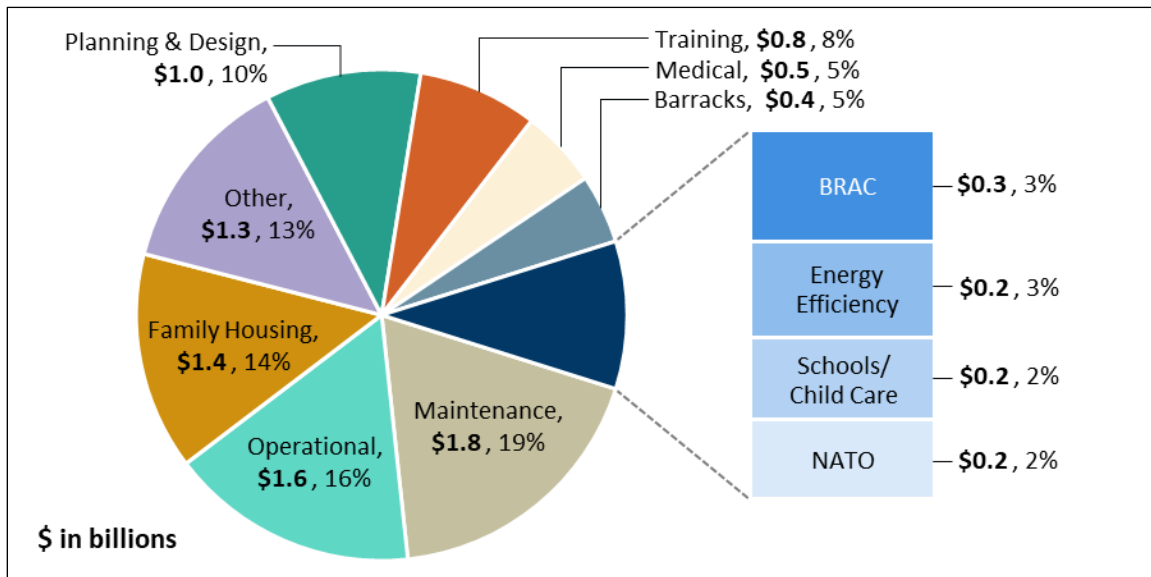
Military Construction

The military construction accounts fund acquisition of new construction projects, significant facilities improvements (going beyond routine maintenance), land acquisition for DOD facilities, and the operation and maintenance of military family housing built and owned by contractors. They also fund construction mandated by base closure and realignment commission (BRAC) decisions and environmental cleanup required for the disposal of DOD property required by the base closure process (BRAC).

For FY2022, the Administration requested \$9.8 billion in military construction and related funding.

Figure 7. FY2022 Military Construction Budget Request

In discretionary budget authority



Source: CRS analysis of *Military Construction, Family Housing, and Base Realignment and Closure Program (C-1)*, Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Table 6. FY2022 Military Construction Budget

\$1.8 billion	Maintenance Facilities	Includes \$250 million to enlarge a dry dock at Portsmouth Naval Shipyard; \$208 million for a Maintenance facility at the Marine Corps' Cherry Point, NC, airbase; and a total of \$333 million for facilities to support the new B-21 bomber slated for basing at Ellsworth Air Force Base in South Dakota.
\$1.6 billion	Operational Facilities	Funds airfield facilities, docks, warehouses, and munitions magazines.

\$1.4 billion	Military Family Housing	\$1.35 billion for furnishing, maintenance, and leasing costs for military family housing built and owned by contractors, and \$92 million to build new government-owned housing in Vicenza, Italy.
\$1.0 billion	Planning and Design	
\$773 million	Training Facilities	Includes \$270 million for National Guard and Army Reserve facilities.
\$500 million	Medical Facilities	Includes \$313 million for increments of multistage plans to rebuild major medical centers in Bethesda, MD, and at Ft. Leonard Wood, MO.
\$444 million	Barracks	Includes funding for eight housing complexes for unaccompanied enlisted personnel.
\$285 million	Base Realignment and Closure (BRAC)	Funds construction projects required as a result of BRAC decisions; also funds environmental cleanup of DOD-owned sites that are divested as a result of BRAC process.
\$247 million	Energy Efficiency	
\$212 million	Dependents' Schools and Child Daycare	Funds schools in Germany and Puerto Rico, an administrative headquarters in Belgium, and a day-care center at Sheppard Air Force Base in Texas.
\$1.3 billion	Administration and Other	Includes \$313 million to fund, without specific prior congressional authorization projects estimated to cost no more than \$6 million each.
\$206 million	NATO	Funds the U.S. contribution to NATO-funded common-use facilities in Europe.

Source: CRS analysis of *Military Construction, Family Housing, and Base Realignment and Closure Program (C-1)*, Department of Defense FY2022 Budget, at <https://comptroller.defense.gov/Budget-Materials/>.

Note: Totals may not sum due to rounding.

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