**Table 5. U.S. experimental development expenditures, by performer and source of funds: 1953–2024**

(Millions of current and of constant 2017 dollars)

| | All performers | All federal | Federal intramural[a] | FFRDCs | | Nonfederal government | | Business | | | | | | | Higher education | | | | | | Nonprofit | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | All funding sources | Total | Federal | Total | Federal | Total | Federal | Total | Own domestic | Federal | Nonfederal government | Other domestic business | Foreign business | Other | Total | Federal | Nonfederal government | Business | Higher education | Nonprofit | Total | Federal | Business | Nonprofit |
| | | | | | | | | | | | Current $millions | | | | | | | | | | | | | |
| 1953 | 3,412 | 614 | 567 | 48 | 48 | NA | NA | 2,753 | 1,630 | 1,123 | NA | NA | NA | NA | 16 | 9 | 3 | 1 | 3 | 1 | 29 | 17 | 6 | 6 |
| 1954 | 3,734 | 599 | 537 | 62 | 62 | NA | NA | 3,090 | 1,685 | 1,405 | NA | NA | NA | NA | 17 | 9 | 3 | 1 | 3 | 1 | 29 | 15 | 7 | 7 |
| 1955 | 4,113 | 713 | 543 | 171 | 171 | NA | NA | 3,352 | 1,738 | 1,614 | NA | NA | NA | NA | 21 | 12 | 4 | 2 | 3 | 1 | 27 | 12 | 8 | 7 |
| 1956 | 5,854 | 978 | 631 | 348 | 348 | NA | NA | 4,826 | 2,267 | 2,559 | NA | NA | NA | NA | 25 | 14 | 4 | 2 | 4 | 2 | 26 | 11 | 8 | 7 |
| 1957 | 6,681 | 1,157 | 728 | 429 | 429 | NA | NA | 5,474 | 2,174 | 3,300 | NA | NA | NA | NA | 26 | 12 | 5 | 3 | 4 | 2 | 25 | 9 | 8 | 8 |
| 1958 | 7,213 | 1,227 | 842 | 386 | 386 | NA | NA | 5,932 | 2,241 | 3,691 | NA | NA | NA | NA | 28 | 13 | 6 | 3 | 4 | 2 | 26 | 9 | 8 | 9 |
| 1959 | 8,463 | 1,417 | 940 | 477 | 477 | NA | NA | 6,983 | 2,557 | 4,426 | NA | NA | NA | NA | 31 | 16 | 6 | 3 | 5 | 2 | 33 | 14 | 9 | 10 |
| 1960 | 9,360 | 1,562 | 1,003 | 559 | 559 | NA | NA | 7,734 | 2,935 | 4,799 | NA | NA | NA | NA | 35 | 19 | 6 | 3 | 5 | 2 | 30 | 10 | 10 | 10 |
| 1961 | 9,930 | 1,760 | 1,090 | 670 | 670 | NA | NA | 8,106 | 3,189 | 4,917 | NA | NA | NA | NA | 37 | 22 | 7 | 2 | 5 | 2 | 28 | 4 | 10 | 14 |
| 1962 | 10,114 | 1,845 | 1,227 | 618 | 618 | NA | NA | 8,196 | 3,246 | 4,950 | NA | NA | NA | NA | 40 | 23 | 8 | 2 | 6 | 2 | 34 | 5 | 11 | 18 |
| 1963 | 11,539 | 2,133 | 1,465 | 668 | 668 | NA | NA | 9,330 | 3,535 | 5,795 | NA | NA | NA | NA | 40 | 22 | 8 | 2 | 6 | 2 | 37 | 6 | 11 | 20 |
| 1964 | 12,506 | 2,419 | 1,680 | 739 | 739 | NA | NA | 10,004 | 3,848 | 6,156 | NA | NA | NA | NA | 49 | 30 | 8 | 2 | 7 | 3 | 35 | 6 | 11 | 18 |
| 1965 | 13,215 | 2,463 | 1,789 | 674 | 674 | NA | NA | 10,637 | 4,419 | 6,218 | NA | NA | NA | NA | 71 | 48 | 9 | 2 | 8 | 4 | 45 | 13 | 12 | 20 |
| 1966 | 14,490 | 2,540 | 1,886 | 654 | 654 | NA | NA | 11,810 | 4,961 | 6,849 | NA | NA | NA | NA | 87 | 61 | 9 | 2 | 10 | 5 | 53 | 16 | 14 | 23 |
| 1967 | 15,332 | 2,649 | 1,943 | 706 | 706 | NA | NA | 12,539 | 5,744 | 6,795 | NA | NA | NA | NA | 93 | 66 | 9 | 3 | 10 | 7 | 51 | 12 | 15 | 24 |
| 1968 | 16,154 | 2,628 | 1,904 | 724 | 724 | NA | NA | 13,370 | 6,326 | 7,044 | NA | NA | NA | NA | 102 | 72 | 8 | 4 | 9 | 9 | 55 | 13 | 16 | 26 |
| 1969 | 17,051 | 2,807 | 2,016 | 792 | 792 | NA | NA | 14,071 | 7,127 | 6,944 | NA | NA | NA | NA | 110 | 80 | 7 | 5 | 8 | 10 | 63 | 17 | 18 | 28 |
| 1970 | 16,925 | 3,047 | 2,258 | 790 | 790 | NA | NA | 13,698 | 7,466 | 6,232 | NA | NA | NA | NA | 112 | 84 | 6 | 5 | 7 | 10 | 68 | 20 | 18 | 30 |
| 1971 | 17,399 | 3,313 | 2,473 | 841 | 841 | NA | NA | 13,924 | 7,757 | 6,167 | NA | NA | NA | NA | 98 | 69 | 8 | 4 | 9 | 9 | 64 | 12 | 19 | 33 |
| 1972 | 18,743 | 3,502 | 2,639 | 863 | 863 | NA | NA | 15,043 | 8,510 | 6,533 | NA | NA | NA | NA | 101 | 63 | 12 | 4 | 14 | 9 | 98 | 44 | 19 | 35 |
| 1973 | 20,197 | 3,517 | 2,657 | 860 | 860 | NA | NA | 16,394 | 9,773 | 6,621 | NA | NA | NA | NA | 126 | 71 | 18 | 5 | 20 | 13 | 160 | 102 | 20 | 38 |
| 1974 | 21,504 | 3,748 | 2,765 | 983 | 983 | NA | NA | 17,421 | 10,868 | 6,553 | NA | NA | NA | NA | 141 | 75 | 20 | 7 | 25 | 15 | 195 | 131 | 22 | 42 |
| 1975 | 22,706 | 3,993 | 2,890 | 1,103 | 1,103 | NA | NA | 18,352 | 11,569 | 6,783 | NA | NA | NA | NA | 156 | 83 | 22 | 8 | 27 | 16 | 205 | 135 | 23 | 47 |
| 1976 | 25,085 | 4,286 | 2,972 | 1,315 | 1,315 | NA | NA | 20,412 | 12,890 | 7,522 | NA | NA | NA | NA | 182 | 100 | 24 | 12 | 31 | 16 | 205 | 128 | 25 | 52 |
| 1977 | 27,667 | 4,606 | 3,188 | 1,418 | 1,418 | NA | NA | 22,603 | 14,328 | 8,275 | NA | NA | NA | NA | 254 | 153 | 28 | 15 | 40 | 19 | 204 | 119 | 27 | 58 |
| 1978 | 31,056 | 5,261 | 3,676 | 1,584 | 1,584 | NA | NA | 25,216 | 16,460 | 8,756 | NA | NA | NA | NA | 373 | 254 | 32 | 15 | 49 | 24 | 207 | 113 | 30 | 64 |
| 1979 | 35,445 | 5,697 | 3,944 | 1,753 | 1,753 | NA | NA | 29,033 | 19,145 | 9,888 | NA | NA | NA | NA | 469 | 336 | 34 | 16 | 56 | 28 | 246 | 143 | 32 | 71 |
| 1980 | 40,748 | 6,081 | 4,072 | 2,009 | 2,009 | NA | NA | 33,848 | 22,891 | 10,957 | NA | NA | NA | NA | 518 | 362 | 38 | 19 | 68 | 31 | 301 | 187 | 35 | 79 |
| 1981 | 46,305 | 6,705 | 4,530 | 2,175 | 2,175 | NA | NA | 38,547 | 25,756 | 12,791 | NA | NA | NA | NA | 568 | 386 | 44 | 24 | 80 | 35 | 485 | 360 | 37 | 88 |
| 1982 | 51,879 | 7,348 | 5,178 | 2,170 | 2,170 | NA | NA | 43,434 | 29,219 | 14,215 | NA | NA | NA | NA | 597 | 397 | 46 | 27 | 88 | 39 | 500 | 362 | 40 | 98 |
| 1983 | 57,771 | 8,491 | 6,106 | 2,385 | 2,385 | NA | NA | 48,064 | 32,542 | 15,522 | NA | NA | NA | NA | 617 | 399 | 47 | 31 | 97 | 43 | 599 | 447 | 44 | 109 |
| 1984 | 66,461 | 9,651 | 7,078 | 2,572 | 2,572 | NA | NA | 55,371 | 37,731 | 17,640 | NA | NA | NA | NA | 677 | 435 | 51 | 37 | 108 | 47 | 762 | 594 | 47 | 120 |
| 1985 | 74,522 | 10,916 | 8,011 | 2,906 | 2,906 | NA | NA | 62,020 | 41,762 | 20,258 | NA | NA | NA | NA | 756 | 486 | 57 | 43 | 120 | 49 | 829 | 644 | 51 | 134 |
| 1986 | 75,855 | 11,376 | 8,275 | 3,101 | 3,101 | NA | NA | 62,871 | 41,354 | 21,517 | NA | NA | NA | NA | 818 | 513 | 65 | 50 | 136 | 53 | 790 | 587 | 55 | 149 |
| 1987 | 79,929 | 11,496 | 8,176 | 3,321 | 3,321 | NA | NA | 66,789 | 42,667 | 24,122 | NA | NA | NA | NA | 945 | 599 | 73 | 57 | 155 | 61 | 698 | 474 | 60 | 165 |
| 1988 | 84,567 | 12,460 | 8,864 | 3,596 | 3,596 | NA | NA | 70,353 | 46,634 | 23,719 | NA | NA | NA | NA | 1,098 | 698 | 83 | 66 | 180 | 71 | 655 | 407 | 65 | 183 |

**Table 5. U.S. experimental development expenditures, by performer and source of funds: 1953–2024**

(Millions of current and of constant 2017 dollars)

| | All performers | All federal | Federal intramural[a] | FFRDCs | | Nonfederal government | | Business | | | | | | | Higher education | | | | | | Nonprofit | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | All funding sources | Total | Federal | Total | Federal | Total | Federal | Total | Own domestic | Federal | Nonfederal government | Other domestic business | Foreign business | Other | Total | Federal | Nonfederal government | Business | Higher education | Nonprofit | Total | Federal | Business | Nonprofit |
| 1989 | 87,723 | 12,991 | 9,355 | 3,635 | 3,635 | NA | NA | 72,725 | 51,676 | 21,049 | NA | NA | NA | NA | 1,227 | 773 | 91 | 76 | 205 | 81 | 780 | 507 | 70 | 203 |
| 1990 | 94,067 | 13,363 | 9,700 | 3,663 | 3,663 | NA | NA | 78,376 | 59,410 | 18,966 | NA | NA | NA | NA | 1,407 | 910 | 99 | 83 | 226 | 89 | 920 | 619 | 75 | 226 |
| 1991 | 95,105 | 12,230 | 8,778 | 3,452 | 3,452 | NA | NA | 80,286 | 63,030 | 17,256 | NA | NA | NA | NA | 1,534 | 1,012 | 103 | 86 | 239 | 94 | 1,054 | 722 | 82 | 251 |
| 1992 | 99,811 | 12,521 | 9,098 | 3,423 | 3,423 | NA | NA | 84,569 | 67,388 | 17,181 | NA | NA | NA | NA | 1,596 | 1,055 | 105 | 91 | 246 | 100 | 1,125 | 758 | 88 | 279 |
| 1993 | 99,705 | 12,058 | 9,071 | 2,986 | 2,986 | NA | NA | 84,757 | 68,674 | 16,083 | NA | NA | NA | NA | 1,700 | 1,127 | 109 | 97 | 259 | 107 | 1,191 | 787 | 95 | 309 |
| 1994 | 102,938 | 11,970 | 8,823 | 3,147 | 3,147 | NA | NA | 87,890 | 71,681 | 16,209 | NA | NA | NA | NA | 1,816 | 1,213 | 114 | 102 | 276 | 112 | 1,261 | 815 | 103 | 343 |
| 1995 | 113,079 | 12,689 | 9,262 | 3,427 | 3,427 | NA | NA | 97,342 | 79,518 | 17,824 | NA | NA | NA | NA | 1,812 | 1,180 | 123 | 108 | 288 | 113 | 1,236 | 744 | 111 | 381 |
| 1996 | 121,377 | 12,481 | 9,033 | 3,448 | 3,448 | NA | NA | 105,863 | 88,797 | 17,066 | NA | NA | NA | NA | 1,791 | 1,128 | 128 | 115 | 305 | 115 | 1,241 | 698 | 120 | 423 |
| 1997 | 128,661 | 12,407 | 9,077 | 3,331 | 3,331 | NA | NA | 113,184 | 95,063 | 18,121 | NA | NA | NA | NA | 1,693 | 1,041 | 120 | 113 | 306 | 112 | 1,378 | 687 | 155 | 536 |
| 1998 | 144,669 | 12,528 | 9,214 | 3,314 | 3,314 | NA | NA | 129,041 | 110,589 | 18,452 | NA | NA | NA | NA | 1,584 | 943 | 113 | 112 | 306 | 110 | 1,516 | 760 | 164 | 592 |
| 1999 | 154,315 | 12,600 | 9,265 | 3,335 | 3,335 | NA | NA | 138,807 | 122,236 | 16,571 | NA | NA | NA | NA | 1,362 | 686 | 117 | 116 | 325 | 118 | 1,546 | 727 | 178 | 641 |
| 2000 | 169,414 | 12,859 | 9,377 | 3,482 | 3,482 | NA | NA | 153,745 | 140,235 | 13,510 | NA | NA | NA | NA | 1,265 | 545 | 123 | 119 | 352 | 127 | 1,545 | 580 | 195 | 771 |
| 2001 | 167,975 | 14,693 | 11,062 | 3,631 | 3,566 | NA | NA | 149,952 | 137,410 | 12,542 | NA | NA | NA | NA | 1,409 | 646 | 128 | 117 | 381 | 136 | 1,921 | 874 | 197 | 850 |
| 2002 | 176,971 | 15,607 | 11,800 | 3,807 | 3,763 | NA | NA | 157,788 | 144,727 | 13,061 | NA | NA | NA | NA | 1,472 | 639 | 140 | 116 | 425 | 151 | 2,104 | 937 | 191 | 976 |
| 2003 | 175,559 | 16,639 | 12,646 | 3,993 | 3,964 | NA | NA | 155,060 | 143,121 | 11,939 | NA | NA | NA | NA | 1,799 | 897 | 155 | 118 | 467 | 162 | 2,060 | 743 | 195 | 1,122 |
| 2004 | 177,030 | 17,233 | 12,746 | 4,487 | 4,454 | NA | NA | 155,034 | 140,615 | 14,419 | NA | NA | NA | NA | 2,140 | 1,211 | 161 | 120 | 481 | 167 | 2,623 | 1,300 | 199 | 1,123 |
| 2005 | 195,621 | 18,664 | 13,994 | 4,670 | 4,611 | NA | NA | 172,208 | 156,696 | 15,512 | NA | NA | NA | NA | 2,098 | 1,146 | 158 | 122 | 501 | 170 | 2,651 | 1,211 | 212 | 1,228 |
| 2006 | 212,857 | 20,720 | 16,089 | 4,630 | 4,547 | 7 | 2 | 188,112 | 171,392 | 16,720 | NA | NA | NA | NA | 1,902 | 927 | 156 | 126 | 520 | 173 | 2,116 | 603 | 226 | 1,287 |
| 2007 | 227,740 | 23,154 | 18,016 | 5,137 | 5,037 | 9 | 3 | 200,429 | 185,569 | 14,860 | NA | NA | NA | NA | 1,917 | 894 | 163 | 133 | 540 | 186 | 2,231 | 568 | 240 | 1,423 |
| 2008 | 259,579 | 23,743 | 17,566 | 6,177 | 6,078 | 11 | 4 | 231,447 | 180,724 | 29,488 | 223 | 8,882 | 11,799 | 330 | 1,965 | 841 | 179 | 148 | 589 | 209 | 2,412 | 562 | 250 | 1,600 |
| 2009 | 255,959 | 23,484 | 17,245 | 6,239 | 6,147 | 14 | 5 | 226,554 | 179,841 | 30,435 | 144 | 7,041 | 8,732 | 361 | 3,376 | 1,555 | 283 | 282 | 895 | 363 | 2,531 | 550 | 241 | 1,740 |
| 2010 | 251,259 | 25,848 | 18,844 | 7,004 | 6,909 | 16 | 6 | 217,700 | 170,036 | 28,089 | 114 | 8,035 | 10,779 | 648 | 4,961 | 2,467 | 398 | 409 | 1,190 | 499 | 2,734 | 638 | 242 | 1,855 |
| 2011 | 270,816 | 28,751 | 21,879 | 6,872 | 6,786 | 16 | 6 | 233,886 | 187,794 | 26,228 | 230 | 7,966 | 11,264 | 403 | 5,220 | 2,610 | 392 | 416 | 1,282 | 521 | 2,943 | 790 | 256 | 1,896 |
| 2012 | 273,095 | 26,666 | 19,941 | 6,725 | 6,632 | 15 | 6 | 238,202 | 192,828 | 25,840 | 102 | 7,578 | 11,543 | 310 | 5,489 | 2,638 | 368 | 445 | 1,458 | 580 | 2,723 | 518 | 263 | 1,942 |
| 2013 | 287,020 | 26,436 | 19,767 | 6,668 | 6,572 | 14 | 6 | 252,007 | 207,537 | 22,137 | 126 | 8,729 | 12,947 | 531 | 5,694 | 2,607 | 387 | 484 | 1,597 | 621 | 2,869 | 474 | 280 | 2,115 |
| 2014 | 301,460 | 27,084 | 20,303 | 6,781 | 6,681 | 13 | 6 | 265,377 | 223,186 | 18,065 | 87 | 8,312 | 15,103 | 624 | 5,935 | 2,576 | 400 | 538 | 1,729 | 693 | 3,051 | 471 | 296 | 2,284 |
| 2015 | 313,003 | 26,132 | 18,961 | 7,171 | 7,063 | 14 | 6 | 277,557 | 230,629 | 18,850 | 90 | 10,295 | 16,907 | 786 | 6,132 | 2,547 | 401 | 555 | 1,855 | 775 | 3,168 | 422 | 307 | 2,439 |
| 2016 | 324,758 | 23,438 | 15,838 | 7,600 | 7,479 | 18 | 7 | 291,605 | 243,056 | 16,790 | 129 | 9,940 | 20,930 | 760 | 6,407 | 2,595 | 420 | 564 | 1,966 | 863 | 3,290 | 520 | 386 | 2,228 |
| 2017 | 350,147 | 23,995 | 15,848 | 8,147 | 8,021 | 22 | 9 | 316,136 | 258,151 | 17,736 | 92 | 11,792 | 27,805 | 560 | 6,773 | 2,687 | 447 | 609 | 2,101 | 930 | 3,221 | 626 | 400 | 2,047 |
| 2018 | 387,841 | 27,556 | 18,856 | 8,701 | 8,567 | 23 | 9 | 349,771 | 285,863 | 17,301 | 85 | 13,745 | 32,029 | 747 | 7,042 | 2,814 | 484 | 628 | 2,204 | 913 | 3,450 | 977 | 420 | 1,910 |
| 2019 | 430,332 | 30,347 | 21,253 | 9,094 | 8,962 | 31 | 13 | 389,418 | 323,854 | 15,058 | 112 | 14,704 | 35,073 | 616 | 7,323 | 3,094 | 490 | 637 | 2,225 | 878 | 3,214 | 714 | 468 | 1,886 |
| 2020 | 472,533 | 31,870 | 22,356 | 9,514 | 9,379 | 44 | 19 | 428,479 | 356,724 | 21,666 | 134 | 14,329 | 35,007 | 618 | 7,727 | 3,412 | 491 | 661 | 2,279 | 886 | 4,413 | 1,824 | 533 | 1,904 |
| 2021 | 526,415 | 33,791 | 23,728 | 10,064 | 9,915 | 44 | 20 | 479,072 | 402,485 | 18,690 | 211 | 16,658 | 40,435 | 593 | 8,239 | 3,668 | 501 | 721 | 2,437 | 913 | 5,269 | 1,890 | 651 | 2,598 |
| 2022 | 600,025 | 34,785 | 24,095 | 10,690 | 10,544 | 42 | 19 | 551,217 | 469,375 | 24,227 | 152 | 17,373 | 39,474 | 614 | 9,115 | 4,091 | 527 | 821 | 2,693 | 985 | 4,867 | 1,368 | 766 | 2,551 |
| 2023[b] | 625,019 | 37,760 | 25,891 | 11,869 | 11,722 | 45 | 19 | 571,681 | 483,922 | 25,071 | 168 | 18,058 | 43,904 | 559 | 10,240 | 4,567 | 600 | 888 | 3,084 | 1,102 | 5,295 | 1,613 | 809 | 2,669 |
| 2024[c] | 668,183 | 46,831 | 33,667 | 12,920 | 12,767 | 46 | 19 | 604,715 | 514,075 | 27,246 | 164 | 17,545 | 45,143 | 544 | 11,037 | 4,881 | 654 | 920 | 3,404 | 1,178 | 5,553 | 1,692 | 848 | 2,799 |

Constant 2017 $millions

**Table 5. U.S. experimental development expenditures, by performer and source of funds: 1953–2024**

(Millions of current and of constant 2017 dollars)

| | All performers | All federal | Federal intramural[a] | FFRDCs | | Nonfederal government | | Business | | | | | | | Higher education | | | | | | Nonprofit | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | All funding sources | Total | Federal | Total | Federal | Total | Federal | Total | Own domestic | Federal | Nonfederal government | Other domestic business | Foreign business | Other | Total | Federal | Nonfederal government | Business | Higher education | Nonprofit | Total | Federal | Business | Nonprofit |
| 1953 | 25,371 | 4,566 | 4,213 | 353 | 353 | NA | NA | 20,473 | 12,122 | 8,352 | NA | NA | NA | NA | 119 | 63 | 21 | 7 | 20 | 7 | 212 | 123 | 45 | 45 |
| 1954 | 27,517 | 4,411 | 3,957 | 453 | 453 | NA | NA | 22,771 | 12,417 | 10,354 | NA | NA | NA | NA | 125 | 63 | 25 | 7 | 23 | 7 | 210 | 107 | 52 | 52 |
| 1955 | 29,804 | 5,166 | 3,931 | 1,235 | 1,235 | NA | NA | 24,290 | 12,593 | 11,697 | NA | NA | NA | NA | 152 | 83 | 28 | 11 | 23 | 7 | 196 | 87 | 58 | 51 |
| 1956 | 41,019 | 6,853 | 4,418 | 2,435 | 2,435 | NA | NA | 33,812 | 15,884 | 17,928 | NA | NA | NA | NA | 175 | 95 | 31 | 14 | 25 | 11 | 179 | 74 | 56 | 49 |
| 1957 | 45,319 | 7,844 | 4,935 | 2,910 | 2,910 | NA | NA | 37,132 | 14,746 | 22,386 | NA | NA | NA | NA | 176 | 81 | 36 | 17 | 29 | 14 | 166 | 58 | 54 | 54 |
| 1958 | 47,835 | 8,137 | 5,581 | 2,557 | 2,557 | NA | NA | 39,343 | 14,862 | 24,481 | NA | NA | NA | NA | 182 | 83 | 37 | 20 | 29 | 13 | 172 | 60 | 53 | 60 |
| 1959 | 55,355 | 9,265 | 6,148 | 3,117 | 3,117 | NA | NA | 45,674 | 16,725 | 28,949 | NA | NA | NA | NA | 203 | 101 | 39 | 20 | 30 | 13 | 213 | 88 | 59 | 65 |
| 1960 | 60,404 | 10,077 | 6,469 | 3,607 | 3,607 | NA | NA | 49,911 | 18,941 | 30,970 | NA | NA | NA | NA | 223 | 123 | 41 | 16 | 30 | 13 | 194 | 65 | 65 | 65 |
| 1961 | 63,411 | 11,236 | 6,957 | 4,278 | 4,278 | NA | NA | 51,760 | 20,364 | 31,396 | NA | NA | NA | NA | 239 | 137 | 44 | 13 | 33 | 13 | 176 | 22 | 64 | 89 |
| 1962 | 63,811 | 11,640 | 7,741 | 3,899 | 3,899 | NA | NA | 51,707 | 20,480 | 31,228 | NA | NA | NA | NA | 252 | 142 | 49 | 13 | 37 | 13 | 211 | 28 | 69 | 114 |
| 1963 | 71,971 | 13,304 | 9,137 | 4,166 | 4,166 | NA | NA | 58,191 | 22,048 | 36,143 | NA | NA | NA | NA | 249 | 137 | 49 | 12 | 38 | 12 | 228 | 34 | 69 | 125 |
| 1964 | 76,832 | 14,861 | 10,321 | 4,540 | 4,540 | NA | NA | 61,461 | 23,641 | 37,820 | NA | NA | NA | NA | 298 | 181 | 49 | 12 | 40 | 15 | 212 | 34 | 68 | 111 |
| 1965 | 79,732 | 14,857 | 10,791 | 4,067 | 4,067 | NA | NA | 64,177 | 26,662 | 37,516 | NA | NA | NA | NA | 425 | 290 | 52 | 12 | 47 | 24 | 272 | 78 | 72 | 121 |
| 1966 | 85,040 | 14,904 | 11,069 | 3,835 | 3,835 | NA | NA | 69,314 | 29,116 | 40,197 | NA | NA | NA | NA | 511 | 358 | 55 | 12 | 57 | 29 | 311 | 94 | 82 | 135 |
| 1967 | 87,441 | 15,105 | 11,082 | 4,024 | 4,024 | NA | NA | 71,515 | 32,760 | 38,754 | NA | NA | NA | NA | 530 | 374 | 48 | 14 | 57 | 37 | 291 | 68 | 86 | 137 |
| 1968 | 88,364 | 14,373 | 10,415 | 3,958 | 3,958 | NA | NA | 73,138 | 34,605 | 38,533 | NA | NA | NA | NA | 555 | 391 | 42 | 22 | 51 | 49 | 298 | 68 | 88 | 142 |
| 1969 | 88,916 | 14,639 | 10,512 | 4,128 | 4,128 | NA | NA | 73,378 | 37,166 | 36,212 | NA | NA | NA | NA | 571 | 415 | 37 | 26 | 41 | 52 | 329 | 89 | 94 | 146 |
| 1970 | 83,834 | 15,095 | 11,184 | 3,911 | 3,911 | NA | NA | 67,851 | 36,981 | 30,869 | NA | NA | NA | NA | 555 | 414 | 32 | 25 | 35 | 50 | 334 | 97 | 89 | 149 |
| 1971 | 82,018 | 15,618 | 11,656 | 3,962 | 3,962 | NA | NA | 65,638 | 36,567 | 29,072 | NA | NA | NA | NA | 462 | 325 | 37 | 19 | 41 | 40 | 299 | 54 | 90 | 156 |
| 1972 | 84,697 | 15,824 | 11,926 | 3,897 | 3,897 | NA | NA | 67,976 | 38,455 | 29,521 | NA | NA | NA | NA | 456 | 282 | 56 | 16 | 61 | 41 | 441 | 197 | 86 | 158 |
| 1973 | 86,522 | 15,068 | 11,383 | 3,684 | 3,684 | NA | NA | 70,232 | 41,867 | 28,364 | NA | NA | NA | NA | 538 | 302 | 75 | 21 | 86 | 54 | 685 | 437 | 86 | 163 |
| 1974 | 84,522 | 14,731 | 10,870 | 3,862 | 3,862 | NA | NA | 68,473 | 42,717 | 25,757 | NA | NA | NA | NA | 552 | 293 | 79 | 26 | 96 | 59 | 766 | 515 | 85 | 166 |
| 1975 | 81,677 | 14,363 | 10,395 | 3,968 | 3,968 | NA | NA | 66,016 | 41,616 | 24,400 | NA | NA | NA | NA | 561 | 297 | 80 | 29 | 99 | 58 | 737 | 484 | 84 | 169 |
| 1976 | 85,529 | 14,614 | 10,132 | 4,482 | 4,482 | NA | NA | 69,595 | 43,949 | 25,646 | NA | NA | NA | NA | 621 | 339 | 82 | 39 | 106 | 55 | 698 | 435 | 86 | 178 |
| 1977 | 88,815 | 14,786 | 10,234 | 4,553 | 4,553 | NA | NA | 72,558 | 45,994 | 26,564 | NA | NA | NA | NA | 815 | 491 | 89 | 47 | 129 | 59 | 655 | 382 | 88 | 186 |
| 1978 | 93,140 | 15,777 | 11,026 | 4,752 | 4,752 | NA | NA | 75,625 | 49,365 | 26,260 | NA | NA | NA | NA | 1,118 | 761 | 96 | 43 | 147 | 70 | 619 | 338 | 89 | 193 |
| 1979 | 98,162 | 15,776 | 10,922 | 4,855 | 4,855 | NA | NA | 80,403 | 53,020 | 27,384 | NA | NA | NA | NA | 1,300 | 932 | 95 | 43 | 155 | 76 | 682 | 396 | 89 | 198 |
| 1980 | 103,496 | 15,446 | 10,344 | 5,103 | 5,103 | NA | NA | 85,971 | 58,141 | 27,830 | NA | NA | NA | NA | 1,315 | 919 | 97 | 49 | 172 | 78 | 764 | 475 | 88 | 201 |
| 1981 | 107,446 | 15,559 | 10,512 | 5,047 | 5,047 | NA | NA | 89,444 | 59,764 | 29,680 | NA | NA | NA | NA | 1,317 | 895 | 101 | 55 | 185 | 81 | 1,126 | 835 | 87 | 204 |
| 1982 | 113,373 | 16,058 | 11,316 | 4,742 | 4,742 | NA | NA | 94,918 | 63,853 | 31,064 | NA | NA | NA | NA | 1,304 | 869 | 100 | 58 | 193 | 85 | 1,094 | 792 | 88 | 214 |
| 1983 | 121,493 | 17,856 | 12,840 | 5,016 | 5,016 | NA | NA | 101,079 | 68,436 | 32,643 | NA | NA | NA | NA | 1,298 | 840 | 99 | 65 | 205 | 90 | 1,261 | 940 | 92 | 228 |
| 1984 | 134,899 | 19,588 | 14,367 | 5,221 | 5,221 | NA | NA | 112,389 | 76,584 | 35,805 | NA | NA | NA | NA | 1,375 | 882 | 104 | 75 | 219 | 94 | 1,547 | 1,207 | 96 | 245 |
| 1985 | 146,621 | 21,478 | 15,761 | 5,717 | 5,717 | NA | NA | 122,025 | 82,167 | 39,858 | NA | NA | NA | NA | 1,488 | 956 | 113 | 85 | 236 | 97 | 1,631 | 1,267 | 101 | 263 |
| 1986 | 146,301 | 21,941 | 15,959 | 5,982 | 5,982 | NA | NA | 121,258 | 79,759 | 41,499 | NA | NA | NA | NA | 1,577 | 990 | 126 | 97 | 263 | 102 | 1,524 | 1,131 | 107 | 287 |
| 1987 | 150,429 | 21,637 | 15,387 | 6,250 | 6,250 | NA | NA | 125,700 | 80,301 | 45,399 | NA | NA | NA | NA | 1,778 | 1,127 | 138 | 107 | 292 | 114 | 1,315 | 892 | 112 | 311 |
| 1988 | 153,736 | 22,652 | 16,114 | 6,538 | 6,538 | NA | NA | 127,897 | 84,777 | 43,119 | NA | NA | NA | NA | 1,996 | 1,269 | 150 | 120 | 326 | 130 | 1,191 | 741 | 117 | 333 |
| 1989 | 153,456 | 22,725 | 16,366 | 6,359 | 6,359 | NA | NA | 127,220 | 90,398 | 36,822 | NA | NA | NA | NA | 2,147 | 1,353 | 160 | 133 | 358 | 142 | 1,365 | 887 | 122 | 356 |

**Table 5. U.S. experimental development expenditures, by performer and source of funds: 1953–2024**

(Millions of current and of constant 2017 dollars)

| | All performers | All federal | Federal intramural[a] | FFRDCs | | Nonfederal government | | Business | | | | | | | Higher education | | | | | | Nonprofit | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | All funding sources | Total | Federal | Total | Federal | Total | Federal | Total | Own domestic | Federal | Nonfederal government | Other domestic business | Foreign business | Other | Total | Federal | Nonfederal government | Business | Higher education | Nonprofit | Total | Federal | Business | Nonprofit |
| 1990 | 158,618 | 22,534 | 16,357 | 6,177 | 6,177 | NA | NA | 132,159 | 100,178 | 31,981 | NA | NA | NA | NA | 2,373 | 1,534 | 168 | 140 | 382 | 150 | 1,552 | 1,044 | 127 | 381 |
| 1991 | 155,121 | 19,948 | 14,317 | 5,631 | 5,631 | NA | NA | 130,951 | 102,805 | 28,145 | NA | NA | NA | NA | 2,502 | 1,650 | 168 | 140 | 391 | 153 | 1,720 | 1,178 | 133 | 409 |
| 1992 | 159,169 | 19,967 | 14,508 | 5,459 | 5,459 | NA | NA | 134,863 | 107,464 | 27,399 | NA | NA | NA | NA | 2,546 | 1,682 | 168 | 145 | 392 | 159 | 1,794 | 1,209 | 140 | 444 |
| 1993 | 155,319 | 18,783 | 14,131 | 4,652 | 4,652 | NA | NA | 132,033 | 106,979 | 25,054 | NA | NA | NA | NA | 2,648 | 1,756 | 170 | 152 | 404 | 167 | 1,856 | 1,225 | 148 | 482 |
| 1994 | 157,003 | 18,258 | 13,457 | 4,800 | 4,800 | NA | NA | 134,052 | 109,329 | 24,722 | NA | NA | NA | NA | 2,770 | 1,850 | 173 | 155 | 420 | 170 | 1,924 | 1,243 | 157 | 524 |
| 1995 | 168,929 | 18,956 | 13,837 | 5,120 | 5,120 | NA | NA | 145,420 | 118,792 | 26,627 | NA | NA | NA | NA | 2,706 | 1,762 | 183 | 162 | 430 | 169 | 1,847 | 1,111 | 166 | 570 |
| 1996 | 178,066 | 18,311 | 13,252 | 5,059 | 5,059 | NA | NA | 155,306 | 130,269 | 25,037 | NA | NA | NA | NA | 2,628 | 1,655 | 188 | 169 | 448 | 168 | 1,821 | 1,023 | 176 | 621 |
| 1997 | 185,551 | 17,893 | 13,090 | 4,803 | 4,803 | NA | NA | 163,230 | 137,096 | 26,133 | NA | NA | NA | NA | 2,441 | 1,502 | 174 | 163 | 442 | 161 | 1,987 | 990 | 223 | 774 |
| 1998 | 206,320 | 17,867 | 13,141 | 4,727 | 4,727 | NA | NA | 184,032 | 157,716 | 26,315 | NA | NA | NA | NA | 2,259 | 1,345 | 161 | 159 | 436 | 157 | 2,162 | 1,084 | 234 | 844 |
| 1999 | 217,005 | 17,719 | 13,029 | 4,690 | 4,690 | NA | NA | 195,196 | 171,893 | 23,303 | NA | NA | NA | NA | 1,916 | 965 | 165 | 163 | 457 | 166 | 2,174 | 1,022 | 250 | 901 |
| 2000 | 232,958 | 17,682 | 12,894 | 4,788 | 4,788 | NA | NA | 211,412 | 192,835 | 18,577 | NA | NA | NA | NA | 1,739 | 749 | 168 | 163 | 484 | 174 | 2,125 | 797 | 268 | 1,060 |
| 2001 | 225,895 | 19,760 | 14,876 | 4,883 | 4,796 | NA | NA | 201,658 | 184,791 | 16,867 | NA | NA | NA | NA | 1,894 | 869 | 173 | 158 | 512 | 183 | 2,583 | 1,175 | 265 | 1,143 |
| 2002 | 234,351 | 20,668 | 15,626 | 5,042 | 4,983 | NA | NA | 208,948 | 191,653 | 17,296 | NA | NA | NA | NA | 1,949 | 846 | 185 | 154 | 563 | 200 | 2,786 | 1,240 | 253 | 1,293 |
| 2003 | 227,980 | 21,608 | 16,422 | 5,185 | 5,148 | NA | NA | 201,359 | 185,856 | 15,504 | NA | NA | NA | NA | 2,337 | 1,165 | 202 | 153 | 606 | 211 | 2,676 | 965 | 254 | 1,457 |
| 2004 | 223,871 | 21,793 | 16,119 | 5,674 | 5,632 | NA | NA | 196,055 | 177,821 | 18,234 | NA | NA | NA | NA | 2,706 | 1,532 | 204 | 151 | 608 | 211 | 3,317 | 1,645 | 252 | 1,420 |
| 2005 | 239,860 | 22,885 | 17,159 | 5,726 | 5,654 | NA | NA | 211,153 | 192,133 | 19,020 | NA | NA | NA | NA | 2,572 | 1,406 | 194 | 150 | 614 | 208 | 3,250 | 1,484 | 260 | 1,506 |
| 2006 | 253,184 | 24,645 | 19,138 | 5,508 | 5,408 | 9 | 3 | 223,752 | 203,864 | 19,888 | NA | NA | NA | NA | 2,262 | 1,102 | 186 | 150 | 618 | 206 | 2,517 | 717 | 269 | 1,531 |
| 2007 | 263,743 | 26,814 | 20,864 | 5,950 | 5,833 | 10 | 4 | 232,114 | 214,905 | 17,209 | NA | NA | NA | NA | 2,221 | 1,036 | 189 | 154 | 626 | 216 | 2,584 | 657 | 278 | 1,648 |
| 2008 | 294,933 | 26,977 | 19,959 | 7,019 | 6,906 | 13 | 5 | 262,969 | 205,338 | 33,504 | 254 | 10,092 | 13,406 | 374 | 2,233 | 956 | 203 | 168 | 669 | 237 | 2,740 | 639 | 284 | 1,818 |
| 2009 | 289,037 | 26,519 | 19,474 | 7,045 | 6,941 | 16 | 6 | 255,831 | 203,082 | 34,368 | 162 | 7,951 | 9,861 | 407 | 3,813 | 1,756 | 319 | 318 | 1,010 | 410 | 2,858 | 621 | 272 | 1,965 |
| 2010 | 280,323 | 28,837 | 21,023 | 7,814 | 7,708 | 18 | 7 | 242,883 | 189,705 | 31,338 | 127 | 8,965 | 12,026 | 723 | 5,535 | 2,752 | 443 | 456 | 1,327 | 557 | 3,051 | 711 | 270 | 2,069 |
| 2011 | 296,036 | 31,429 | 23,917 | 7,512 | 7,418 | 18 | 7 | 255,666 | 205,282 | 28,670 | 251 | 8,708 | 12,313 | 441 | 5,706 | 2,853 | 429 | 455 | 1,401 | 570 | 3,217 | 864 | 280 | 2,073 |
| 2012 | 293,069 | 28,617 | 21,400 | 7,217 | 7,117 | 17 | 7 | 255,624 | 206,931 | 27,730 | 110 | 8,132 | 12,388 | 333 | 5,890 | 2,830 | 395 | 478 | 1,565 | 622 | 2,922 | 556 | 283 | 2,084 |
| 2013 | 302,858 | 27,894 | 20,858 | 7,036 | 6,935 | 15 | 6 | 265,913 | 218,989 | 23,359 | 133 | 9,211 | 13,661 | 560 | 6,008 | 2,750 | 408 | 511 | 1,685 | 655 | 3,027 | 500 | 295 | 2,232 |
| 2014 | 312,650 | 28,089 | 21,056 | 7,033 | 6,929 | 14 | 6 | 275,228 | 231,471 | 18,736 | 90 | 8,621 | 15,663 | 647 | 6,155 | 2,672 | 414 | 557 | 1,793 | 718 | 3,165 | 489 | 307 | 2,369 |
| 2015 | 321,636 | 26,853 | 19,484 | 7,369 | 7,258 | 14 | 6 | 285,212 | 236,990 | 19,370 | 92 | 10,579 | 17,374 | 808 | 6,301 | 2,617 | 412 | 570 | 1,906 | 796 | 3,256 | 434 | 316 | 2,506 |
| 2016 | 330,574 | 23,858 | 16,122 | 7,736 | 7,612 | 18 | 7 | 296,828 | 247,410 | 17,090 | 132 | 10,118 | 21,305 | 774 | 6,521 | 2,641 | 427 | 574 | 2,001 | 878 | 3,349 | 529 | 392 | 2,268 |
| 2017 | 350,147 | 23,995 | 15,848 | 8,147 | 8,021 | 22 | 9 | 316,136 | 258,151 | 17,736 | 92 | 11,792 | 27,805 | 560 | 6,773 | 2,687 | 447 | 609 | 2,101 | 930 | 3,221 | 626 | 400 | 2,047 |
| 2018 | 379,155 | 26,939 | 18,433 | 8,506 | 8,375 | 22 | 9 | 341,938 | 279,461 | 16,914 | 83 | 13,437 | 31,312 | 730 | 6,884 | 2,751 | 473 | 613 | 2,154 | 892 | 3,372 | 955 | 411 | 1,867 |
| 2019 | 413,864 | 29,186 | 20,440 | 8,746 | 8,619 | 30 | 13 | 374,515 | 311,461 | 14,482 | 107 | 14,141 | 33,731 | 592 | 7,043 | 2,976 | 471 | 612 | 2,140 | 844 | 3,091 | 687 | 451 | 1,814 |
| 2020 | 448,419 | 30,244 | 21,215 | 9,028 | 8,900 | 42 | 18 | 406,613 | 338,521 | 20,560 | 128 | 13,597 | 33,220 | 587 | 7,333 | 3,237 | 465 | 627 | 2,162 | 840 | 4,188 | 1,731 | 506 | 1,807 |
| 2021 | 477,753 | 30,668 | 21,534 | 9,133 | 8,998 | 40 | 18 | 434,786 | 365,280 | 16,963 | 191 | 15,118 | 36,697 | 538 | 7,477 | 3,328 | 454 | 654 | 2,212 | 829 | 4,782 | 1,715 | 591 | 2,358 |
| 2022 | 508,397 | 29,473 | 20,415 | 9,058 | 8,934 | 35 | 16 | 467,042 | 397,699 | 20,527 | 129 | 14,720 | 33,446 | 520 | 7,723 | 3,466 | 446 | 696 | 2,281 | 834 | 4,124 | 1,159 | 649 | 2,161 |
| 2023[b] | 510,679 | 30,852 | 21,155 | 9,697 | 9,577 | 37 | 16 | 467,098 | 395,394 | 20,485 | 137 | 14,755 | 35,872 | 457 | 8,366 | 3,732 | 490 | 725 | 2,519 | 900 | 4,326 | 1,318 | 661 | 2,180 |
| 2024[c] | 532,722 | 37,337 | 26,842 | 10,300 | 10,179 | 37 | 15 | 482,121 | 409,857 | 21,722 | 131 | 13,988 | 35,991 | 433 | 8,799 | 3,891 | 522 | 733 | 2,714 | 939 | 4,427 | 1,349 | 676 | 2,232 |

NA = not available.

FFRDC = federally funded research and development center.

[a] See table 2, footnote a–g, for details on R&D performers.
[b] Some data for 2023 are preliminary and may be revised later.
[c] The data for 2024 include estimates and are likely to be revised later.

**Note(s):**
For detail on type-of-R&D data, see table 3, footnotes b–f. Detail may not add to total because of rounding. Constant-dollar estimates are derived from unrounded data. For trend comparisons, use only the historical data reported in this table because some back-year data may have been revised. Data are based on reports by performers in the National Center for Science and Engineering Statistics annual surveys on R&D expenditures: Business Enterprise Research and Development Survey, Annual Business Survey, Higher Education Research and Development Survey, Survey of Federal Funds for Research and Development, Federal Facilities Research and Development Survey, FFRDC Research and Development Survey, and Survey of State Government Research and Development. R&D expenditures by business performers—and, before 2001, also industry-administered FFRDCs—were collected on a calendar year basis. Expenditures for other performers are calendar year approximations based on fiscal year data. For federal performers in 1977 and afterward, the approximation equals 75% of the amount reported in the same fiscal year plus 25% of the amount reported in the subsequent fiscal year. Prior to 1977, the federal fiscal year began on 1 July, not 1 October, and the approximation is 50% of the amount reported in the same fiscal year plus 50% of the amount reported in the subsequent fiscal year. The fiscal year for higher education performers and state government performers generally begins 1 July, and the calendar year approximation is 50% of the amount reported in the same fiscal year plus 50% of the amount reported in the subsequent fiscal year.

**Source(s):**
National Center for Science and Engineering Statistics, *National Patterns of R&D Resources* (annual series).