TABLE 5

U.S. experimental development expenditures, by performing sector and source of funds: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All performers	All federal	Federal intramural[a]	FFRDCs		Nonfederal government		Business							Higher education						NPOs			
	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	NPO	Total	Federal	Business	NPO
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

TABLE 5

U.S. experimental development expenditures, by performing sector and source of funds: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All performers	All federal	Federal intramural[a]	FFRDCs		Nonfederal government		Business							Higher education						NPOs			
	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	NPO	Total	Federal	Business	NPO
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
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	255,945	23,484	17,245	6,239	6,147	14	5	226,554	179,841	30,435	144	7,041	8,732	361	3,362	1,545	283	281	892	362	2,531	550	241	1,740
2010	251,239	25,848	18,844	7,004	6,909	16	6	217,700	170,036	28,089	114	8,035	10,779	647	4,941	2,452	397	408	1,186	498	2,734	638	242	1,854
2011	270,804	28,751	21,879	6,872	6,786	16	6	233,886	187,794	26,228	230	7,966	11,264	403	5,208	2,600	392	416	1,280	521	2,943	790	256	1,897
2012	273,078	26,666	19,941	6,725	6,632	15	6	238,202	192,828	25,840	102	7,578	11,543	310	5,472	2,626	368	445	1,455	579	2,723	518	263	1,941
2013	286,998	26,436	19,767	6,668	6,572	14	6	252,007	207,537	22,137	126	8,729	12,947	532	5,672	2,592	387	484	1,592	619	2,869	474	280	2,115
2014	301,441	27,084	20,303	6,781	6,681	13	6	265,377	223,186	18,065	87	8,312	15,103	624	5,916	2,562	400	537	1,726	692	3,052	471	296	2,284
2015	312,983	26,132	18,961	7,171	7,063	14	6	277,557	230,629	18,850	90	10,295	16,907	786	6,112	2,533	401	555	1,850	774	3,169	422	307	2,440
2016	324,729	23,438	15,838	7,600	7,479	18	7	291,605	243,056	16,790	129	9,940	20,930	760	6,378	2,580	420	562	1,957	861	3,290	520	386	2,228
2017	350,115	23,995	15,848	8,147	8,021	22	9	316,136	258,151	17,736	92	11,792	27,805	560	6,742	2,670	447	607	2,091	927	3,221	626	400	2,047

TABLE 5

U.S. experimental development expenditures, by performing sector and source of funds: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All performers	All federal	Federal intramural[a]	FFRDCs		Nonfederal government		Business							Higher education						NPOs			
	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	NPO	Total	Federal	Business	NPO
2018	387,805	27,556	18,856	8,701	8,567	23	9	349,771	285,863	17,301	85	13,745	32,029	748	7,006	2,796	485	625	2,191	910	3,450	977	420	1,910
2019	430,291	30,347	21,253	9,094	8,962	31	13	389,418	323,854	15,058	112	14,704	35,073	617	7,282	3,074	491	634	2,211	874	3,214	714	468	1,886
2020	472,492	31,870	22,356	9,514	9,379	44	19	428,479	356,724	21,666	134	14,329	35,007	618	7,686	3,389	491	659	2,266	882	4,413	1,824	533	1,904
2021	526,382	33,791	23,728	10,064	9,915	44	20	479,072	402,485	18,690	211	16,658	40,435	592	8,206	3,647	501	720	2,429	911	5,269	1,890	651	2,598
2022[b]	599,959	34,785	24,095	10,690	10,544	42	19	551,217	469,375	24,227	152	17,373	39,474	616	9,051	4,045	525	820	2,681	982	4,865	1,368	766	2,550
2023[c]	630,985	35,239	23,643	11,595	11,450	43	19	580,894	493,671	25,759	162	18,723	41,917	662	9,919	4,416	566	904	2,949	1,084	4,890	1,375	770	2,563
Constant 2017 $millions																								
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

TABLE 5

U.S. experimental development expenditures, by performing sector and source of funds: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All performers	All federal	Federal intramural[a]	FFRDCs		Nonfederal government		Business							Higher education						NPOs			
	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	NPO	Total	Federal	Business	NPO
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
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	375	2,233	956	203	168	669	237	2,740	639	284	1,818
2009	289,021	26,519	19,474	7,045	6,941	16	6	255,831	203,082	34,368	162	7,951	9,861	408	3,797	1,745	319	318	1,007	408	2,858	621	272	1,965
2010	280,301	28,837	21,023	7,814	7,708	18	7	242,883	189,705	31,338	127	8,965	12,026	722	5,513	2,736	443	455	1,323	556	3,050	711	270	2,069

TABLE 5

U.S. experimental development expenditures, by performing sector and source of funds: 1953–2023

(Millions of current and of constant 2017 dollars)

Year	All performers	All federal	Federal intramural[a]	FFRDCs		Nonfederal government		Business							Higher education						NPOs			
	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	NPO	Total	Federal	Business	NPO
2011	296,022	31,429	23,917	7,512	7,418	18	7	255,666	205,282	28,670	251	8,708	12,313	441	5,692	2,842	428	455	1,399	569	3,217	864	280	2,073
2012	293,051	28,617	21,400	7,217	7,117	17	7	255,624	206,931	27,730	110	8,132	12,388	333	5,872	2,818	395	478	1,561	621	2,922	556	283	2,083
2013	302,835	27,894	20,858	7,036	6,935	15	6	265,913	218,989	23,359	133	9,211	13,661	561	5,985	2,735	408	510	1,679	653	3,027	500	295	2,232
2014	312,631	28,089	21,056	7,033	6,929	14	6	275,228	231,471	18,736	90	8,621	15,663	647	6,136	2,657	414	557	1,790	717	3,165	489	307	2,369
2015	321,615	26,853	19,484	7,369	7,258	14	6	285,212	236,990	19,370	92	10,579	17,374	808	6,280	2,602	412	570	1,901	795	3,256	434	316	2,507
2016	330,545	23,858	16,122	7,736	7,612	18	7	296,828	247,410	17,090	132	10,118	21,305	773	6,492	2,626	427	572	1,992	876	3,349	529	392	2,268
2017	350,115	23,995	15,848	8,147	8,021	22	9	316,136	258,151	17,736	92	11,792	27,805	560	6,742	2,670	447	607	2,091	927	3,221	626	400	2,047
2018	379,120	26,939	18,433	8,506	8,375	22	9	341,938	279,461	16,914	83	13,437	31,312	731	6,849	2,733	474	611	2,142	889	3,372	955	411	1,867
2019	413,824	29,186	20,440	8,746	8,619	30	13	374,515	311,461	14,482	107	14,141	33,731	593	7,003	2,956	472	609	2,126	840	3,091	687	451	1,814
2020	448,452	30,249	21,219	9,030	8,902	42	18	406,678	338,574	20,564	128	13,600	33,226	587	7,295	3,217	466	625	2,151	837	4,189	1,732	506	1,807
2021	477,783	30,671	21,537	9,134	8,999	40	18	434,841	365,325	16,965	191	15,120	36,702	537	7,448	3,310	454	653	2,204	826	4,783	1,715	591	2,358
2022[b]	508,326	29,472	20,415	9,057	8,934	35	16	467,028	397,686	20,527	129	14,719	33,445	522	7,669	3,427	444	694	2,271	832	4,122	1,159	649	2,160
2023[c]	516,045	28,820	19,336	9,483	9,364	35	16	475,078	403,744	21,067	133	15,312	34,281	542	8,112	3,612	463	740	2,411	887	3,999	1,125	630	2,096

NA = not available.

FFRDC = federally funded research and development center; NPO = nonprofit organization.

[a] See table 2, footnote a–f, for details on sectoral R&D.

[b] Some data for 2022 are preliminary and may be revised later.

[c] The data for 2023 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, 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).