

TABLE 5. U.S. development expenditures, by performing sector and source of funds: 1953–2012

Year	All performers		Industry					U&C				Other nonprofit				Nonprofit			
	Performer:	Federal	Industry <sup>a</sup>		FFRDCs <sup>b</sup>	U&C <sup>c</sup>			FFRDCs	Other nonprofit			FFRDCs <sup>d</sup>						
	Funding source:	All sources	Total	Federal <sup>b</sup>	Industry <sup>e</sup>	Total	Total	Federal	Other government <sup>f</sup>	Industry	U&C	Other nonprofit	Total	Total	Federal <sup>d</sup>	Industry <sup>g</sup>	Other nonprofit <sup>g</sup>	Total	
	Current \$millions																		
1953		3,412	567	2,753	1,123	1,630	NA	16	9	3	1	3	1	48	29	17	6	6	NA
1954		3,734	537	3,090	1,405	1,685	NA	17	9	3	1	3	1	59	32	18	7	7	NA
1955		4,189	543	3,523	1,785	1,738	NA	21	12	4	2	3	1	69	34	19	8	7	NA
1956		5,855	631	5,084	2,817	2,267	NA	25	14	4	2	4	2	81	35	20	8	7	NA
1957		6,681	728	5,790	3,616	2,174	NA	26	12	5	3	4	2	101	37	21	8	8	NA
1958		7,214	842	6,183	3,942	2,241	NA	28	13	6	3	4	2	120	42	25	8	9	NA
1959		8,463	940	7,307	4,750	2,557	NA	31	16	6	3	5	2	134	51	32	9	10	NA
1960		9,360	1,003	8,104	5,169	2,935	NA	35	19	6	3	5	2	151	69	49	10	10	NA
1961		9,930	1,090	8,536	5,347	3,189	NA	38	22	7	2	5	2	170	97	73	10	14	NA
1962		10,115	1,227	8,526	5,280	3,246	NA	40	23	8	2	6	2	190	132	103	11	18	NA
1963		11,540	1,465	9,651	6,116	3,535	NA	40	22	8	2	6	2	219	165	134	11	20	NA
1964		12,506	1,680	10,004	6,156	3,848	359	49	30	8	2	7	3	227	188	159	11	18	NA
1965		13,215	1,789	10,637	6,218	4,419	298	71	48	9	2	8	4	207	215	183	12	20	NA
1966		14,490	1,886	11,810	6,849	4,961	271	87	61	9	2	10	5	200	236	199	14	23	NA
1967		15,332	1,943	12,539	6,795	5,744	302	93	66	9	3	10	7	208	247	208	15	24	NA
1968		16,154	1,904	13,370	7,044	6,326	293	102	72	8	4	9	9	226	259	217	16	26	NA
1969		17,051	2,016	14,071	6,944	7,127	332	110	80	7	5	8	10	246	277	231	18	28	NA
1970		16,925	2,258	13,698	6,232	7,466	340	112	84	6	5	7	10	249	268	220	18	30	NA
1971		17,399	2,473	13,924	6,167	7,757	391	98	69	8	4	9	9	267	246	194	19	33	NA
1972		18,743	2,639	15,043	6,533	8,510	402	101	63	12	4	14	9	291	267	213	19	35	NA
1973		20,197	2,657	16,394	6,621	9,773	399	126	71	18	5	20	13	296	326	268	20	38	NA
1974		21,504	2,765	17,421	6,553	10,868	479	141	75	20	7	25	15	321	377	314	22	42	NA
1975		22,706	2,890	18,352	6,783	11,569	535	156	83	22	8	27	16	373	400	330	23	47	NA
1976		25,085	2,972	20,412	7,522	12,890	654	182	100	24	12	31	16	447	418	341	25	52	NA
1977		27,667	3,188	22,603	8,275	14,328	675	254	153	28	15	40	19	503	444	359	27	58	NA
1978		31,056	3,676	25,216	8,756	16,460	753	373	254	32	15	49	24	542	496	403	30	64	NA
1979		35,445	3,944	29,033	9,888	19,145	810	469	336	34	16	56	28	603	586	483	32	71	NA
1980		40,765	4,072	33,848	10,957	22,891	882	518	362	38	19	68	31	719	726	612	35	79	NA
1981		46,305	4,530	38,547	12,791	25,756	950	568	386	44	24	80	35	778	485	360	37	88	447
1982		51,879	5,178	43,434	14,215	29,219	989	597	397	46	27	88	39	745	500	362	40	98	436
1983		57,771	6,106	48,064	15,522	32,542	1,054	617	399	47	31	97	43	832	599	447	44	109	500
1984		66,461	7,078	55,371	17,640	37,731	1,056	677	435	51	37	108	47	986	762	594	47	120	530
1985		74,522	8,011	62,020	20,258	41,762	1,102	756	486	57	43	120	49	1,244	829	644	51	134	560
1986		75,855	8,275	62,871	21,517	41,354	1,145	818	513	65	50	136	53	1,504	790	587	55	149	453

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	Performer:	Federal	Industry <sup>a</sup>		FFRDCs <sup>b</sup>		U&C <sup>c</sup>		FFRDCs		Other nonprofit			FFRDCs <sup>d</sup>					
	Funding source:	All sources	Total	Federal <sup>b</sup>	Industry <sup>e</sup>	Total	Total	Federal	Other government <sup>f</sup>	Industry	U&C	Other nonprofit	Total	Federal <sup>d</sup>	Industry <sup>g</sup>	Other nonprofit <sup>g</sup>	Total		
			Federal	Total	Federal <sup>b</sup>	Industry <sup>e</sup>	Total	Federal	Other government <sup>f</sup>	Industry	U&C	Other nonprofit	Total	Federal <sup>d</sup>	Industry <sup>g</sup>	Other nonprofit <sup>g</sup>	Total		
1987		79,929	8,176	66,789	24,122	42,667	1,230	945	599	73	57	155	61	1,670	698	474	60	165	421
1988		84,567	8,864	70,353	23,719	46,634	1,414	1,098	698	83	66	180	71	1,762	655	407	65	183	420
1989		87,723	9,355	72,725	21,049	51,676	1,423	1,227	773	91	76	205	81	1,782	780	507	70	203	430
1990		94,067	9,700	78,376	18,966	59,410	1,438	1,407	910	99	83	226	89	1,735	920	619	75	226	490
1991		95,105	8,778	80,286	17,256	63,030	1,383	1,534	1,012	103	86	239	94	1,537	1,054	722	82	251	533
1992		99,811	9,098	84,569	17,181	67,388	1,372	1,596	1,055	105	91	246	100	1,452	1,125	758	88	279	599
1993		99,705	9,071	84,757	16,083	68,674	1,038	1,700	1,127	109	97	259	107	1,374	1,191	787	95	309	574
1994		102,938	8,823	87,890	16,209	71,681	1,196	1,816	1,213	114	102	276	112	1,378	1,261	815	103	343	573
1995		113,079	9,262	97,342	17,824	79,518	1,208	1,812	1,180	123	108	288	113	1,616	1,236	744	111	381	603
1996		121,377	9,033	105,863	17,066	88,797	1,358	1,791	1,128	128	115	305	115	1,520	1,241	698	120	423	571
1997		128,677	9,077	113,184	18,121	95,063	1,292	1,708	1,055	121	114	305	112	1,454	1,378	687	155	536	585
1998		144,723	9,214	129,041	18,452	110,589	1,280	1,619	974	116	114	302	113	1,527	1,535	760	164	611	507
1999		154,376	9,265	138,807	16,571	122,236	1,208	1,391	710	120	119	321	121	1,640	1,578	727	178	673	487
2000		169,472	9,377	153,745	13,510	140,235	1,185	1,289	565	125	121	348	130	1,577	1,579	580	195	804	720
2001		167,812	11,062	149,952	12,542	137,410	647	1,441	673	132	121	376	140	1,717	1,960	874	197	890	1,033
2002		176,689	11,800	157,788	13,061	144,727	639	1,507	669	144	120	419	156	1,726	2,156	937	191	1,028	1,074
2003		175,591	12,646	155,060	11,939	143,121	747	1,849	940	160	121	461	167	1,954	2,120	743	195	1,182	1,216
2004		177,347	12,746	155,034	14,419	140,615	851	2,204	1,268	166	123	474	172	2,447	2,686	1,300	199	1,186	1,379
2005		195,864	13,994	172,208	15,512	156,696	1,052	2,157	1,199	163	126	493	175	2,360	2,723	1,211	212	1,301	1,369
2006		212,836	16,089	188,112	16,720	171,392	1,156	1,952	970	162	130	512	179	2,136	2,189	603	226	1,360	1,202
2007		228,084	18,016	200,429	14,860	185,569	1,738	1,971	939	169	138	533	192	2,488	2,319	568	240	1,511	1,123
2008		259,713	17,566	231,449	29,488	201,961	1,948	2,020	885	185	153	581	216	2,239	2,500	562	249	1,689	1,991
2009		255,987	17,245	226,554	30,436	196,118	2,008	3,517	1,636	305	254	950	373	1,868	2,636	550	241	1,846	2,158
2010		250,791	18,844	217,700	28,088	189,612	2,118	5,265	2,633	419	348	1,338	528	1,838	2,801	638	242	1,921	2,226
2011		271,577	23,015	233,887	26,228	207,659	2,027	5,623	2,856	416	357	1,450	545	1,715	3,010	797	255	1,958	2,301
2012 (preliminary)		290,935	24,404	251,989	30,409	221,580	1,975	5,783	2,951	409	362	1,510	550	1,628	2,814	555	267	1,992	2,342
2005 constant \$millions																			
1953		21,093	3,503	17,022	6,943	10,078	NA	99	53	18	6	16	6	294	176	102	37	37	NA
1954		22,875	3,290	18,930	8,607	10,323	NA	104	52	21	6	19	6	358	193	107	43	43	NA
1955		25,235	3,268	21,223	10,753	10,470	NA	127	69	23	9	19	6	416	202	111	48	42	NA
1956		34,099	3,672	29,611	16,407	13,204	NA	146	79	26	12	21	9	469	201	114	47	41	NA
1957		37,655	4,100	32,633	20,380	12,253	NA	147	68	30	14	24	11	569	206	116	45	45	NA
1958		39,764	4,639	34,083	21,730	12,353	NA	152	69	31	17	24	11	661	229	135	44	50	NA
1959		46,109	5,121	39,811	25,879	13,931	NA	169	84	33	16	25	11	730	278	174	49	54	NA
1960		50,294	5,387	43,545	27,775	15,771	NA	185	102	34	13	25	11	809	368	261	54	54	NA
1961		52,753	5,788	45,350	28,407	16,942	NA	199	114	37	11	27	11	901	515	388	53	74	NA
1962		53,013	6,431	44,687	27,674	17,013	NA	210	118	40	10	30	10	996	689	537	58	94	NA

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	Performer:	performers	Federal	Industry <sup>a</sup>		FFRDCs <sup>b</sup>	U&C <sup>c</sup>			FFRDCs	Other nonprofit		FFRDCs <sup>d</sup>						
	Funding	All		Total	Federal <sup>b</sup>	Industry <sup>e</sup>	Total	Federal	Other	Other	Total	Total	Federal <sup>d</sup>	Industry <sup>g</sup>	Other	Total			
	source:	sources	Federal	Total	Federal <sup>b</sup>	Industry <sup>e</sup>	Total	Federal	government <sup>f</sup>	Industry	U&C	nonprofit	Total	Total	Federal <sup>d</sup>	Industry <sup>g</sup>	nonprofit <sup>g</sup>	Total	
1963		59,846	7,598	50,051	31,718	18,333	NA	207	114	41	10	32	10	1,133	856	695	57	104	NA
1964		63,876	8,581	51,096	31,442	19,654	1,834	248	151	41	10	33	13	1,157	960	812	56	92	NA
1965		66,286	8,971	53,355	31,189	22,166	1,495	354	241	43	10	39	20	1,036	1,076	915	60	100	NA
1966		70,674	9,199	57,605	33,407	24,198	1,322	424	298	46	10	47	24	976	1,149	968	68	112	NA
1967		72,554	9,195	59,339	32,156	27,183	1,429	440	310	40	12	47	31	984	1,167	982	71	114	NA
1968		73,326	8,643	60,691	31,975	28,716	1,330	461	325	35	18	42	41	1,026	1,176	985	73	118	NA
1969		73,756	8,719	60,867	30,038	30,829	1,436	474	344	31	22	34	43	1,064	1,196	997	78	121	NA
1970		69,543	9,277	56,284	25,607	30,677	1,397	460	343	27	21	29	41	1,023	1,101	904	74	123	NA
1971		68,086	9,676	54,489	24,133	30,355	1,530	384	270	31	16	34	33	1,045	963	759	74	129	NA
1972		70,312	9,901	56,432	24,508	31,924	1,508	379	234	46	13	51	34	1,092	1,002	799	71	131	NA
1973		71,781	9,444	58,266	23,532	34,734	1,418	446	251	62	18	71	44	1,050	1,157	951	71	135	NA
1974		70,066	9,010	56,761	21,351	35,410	1,561	458	243	65	21	80	49	1,046	1,229	1,021	70	138	NA
1975		67,594	8,603	54,634	20,193	34,441	1,593	465	246	66	24	82	48	1,109	1,192	982	70	140	NA
1976		70,624	8,367	57,467	21,177	36,290	1,841	513	280	67	32	88	45	1,258	1,178	960	71	147	NA
1977		73,228	8,438	59,824	21,902	37,922	1,787	672	405	74	38	106	49	1,332	1,176	950	72	153	NA
1978		76,805	9,092	62,362	21,654	40,707	1,862	922	628	79	36	121	58	1,340	1,227	995	73	159	NA
1979		80,930	9,004	66,289	22,577	43,712	1,849	1,072	768	78	35	127	63	1,378	1,338	1,102	73	163	NA
1980		85,299	8,521	70,826	22,927	47,899	1,846	1,083	757	80	41	141	64	1,504	1,519	1,281	72	166	NA
1981		88,590	8,667	73,747	24,471	49,276	1,818	1,086	738	84	45	152	67	1,488	928	688	72	168	856
1982		93,544	9,337	78,317	25,631	52,685	1,783	1,076	717	82	48	159	70	1,343	902	653	73	176	787
1983		100,207	10,590	83,369	26,924	56,445	1,828	1,071	692	82	54	169	74	1,442	1,040	776	76	188	867
1984		111,107	11,833	92,567	29,490	63,077	1,765	1,132	727	86	62	180	78	1,648	1,274	994	79	201	887
1985		120,920	12,998	100,635	32,871	67,764	1,788	1,227	789	93	70	195	80	2,018	1,345	1,045	83	217	909
1986		120,422	13,136	99,809	34,159	65,650	1,818	1,298	815	104	80	216	84	2,387	1,255	931	88	236	719
1987		123,308	12,613	103,038	37,214	65,824	1,898	1,457	924	113	88	240	93	2,576	1,078	731	92	255	650
1988		126,134	13,221	104,934	35,378	69,556	2,109	1,638	1,041	123	99	268	106	2,628	977	608	96	273	627
1989		126,081	13,446	104,525	30,253	74,272	2,045	1,764	1,112	131	109	294	117	2,561	1,121	729	100	292	619
1990		130,176	13,424	108,462	26,246	82,215	1,990	1,947	1,259	138	115	313	123	2,401	1,274	857	104	313	678
1991		127,105	11,731	107,300	23,062	84,238	1,848	2,050	1,352	137	115	320	126	2,054	1,409	965	109	335	712
1992		130,305	11,877	110,407	22,430	87,976	1,791	2,084	1,377	137	119	321	130	1,895	1,468	990	115	364	782
1993		127,353	11,587	108,259	20,543	87,717	1,326	2,171	1,440	139	124	331	137	1,755	1,521	1,005	122	395	734
1994		128,768	11,037	109,944	20,276	89,668	1,496	2,272	1,518	142	128	345	140	1,724	1,578	1,019	129	430	716
1995		138,567	11,350	119,283	21,842	97,442	1,480	2,220	1,445	150	133	353	139	1,980	1,515	911	136	467	739
1996		145,956	10,862	127,300	20,522	106,778	1,633	2,154	1,357	154	138	367	138	1,827	1,492	839	144	509	686
1997		152,050	10,725	133,743	21,413	112,330	1,527	2,018	1,247	143	135	360	133	1,718	1,628	811	183	634	691

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	Funding	All		Total	Federal <sup>b</sup>	Industry <sup>e</sup>	Total	Total	Federal	Other	U&C	Other	Total	Total	Federal <sup>d</sup>	Industry <sup>g</sup>	Other <sup>g</sup>	Total	
	source:	sources	Federal						government <sup>f</sup>			nonprofit							
1998		169,101	10,766	150,777	21,560	129,217	1,496	1,891	1,138	135	133	353	132	1,785	1,794	888	192	714	592
1999		177,766	10,669	159,839	19,082	140,757	1,391	1,602	818	138	137	370	139	1,888	1,817	837	205	775	561
2000		191,013	10,568	173,287	15,227	158,060	1,336	1,453	637	141	137	392	146	1,778	1,780	653	220	907	812
2001		184,963	12,192	165,278	13,824	151,454	713	1,588	741	145	133	414	154	1,892	2,161	963	217	981	1,139
2002		191,644	12,798	171,144	14,167	156,977	693	1,635	725	156	130	455	169	1,872	2,338	1,016	207	1,115	1,165
2003		186,531	13,434	164,721	12,683	152,038	793	1,964	998	170	129	489	177	2,076	2,252	790	207	1,255	1,292
2004		183,236	13,169	160,182	14,898	145,284	879	2,277	1,310	172	128	489	178	2,529	2,775	1,344	206	1,226	1,425
2005		195,864	13,994	172,208	15,512	156,696	1,052	2,157	1,199	163	126	493	175	2,360	2,723	1,211	212	1,301	1,369
2006		206,175	15,586	182,224	16,197	166,028	1,120	1,891	940	157	126	496	174	2,069	2,121	584	219	1,318	1,164
2007		214,715	16,960	188,681	13,989	174,692	1,636	1,856	884	159	130	501	181	2,342	2,183	534	226	1,422	1,057
2008		239,185	16,178	213,155	27,157	185,998	1,794	1,860	815	170	141	535	199	2,062	2,302	518	229	1,555	1,833
2009		233,714	15,745	206,842	27,788	179,054	1,833	3,211	1,494	278	232	867	340	1,706	2,407	502	220	1,685	1,971
2010		225,954	16,977	196,140	25,306	170,834	1,908	4,743	2,372	377	313	1,206	475	1,656	2,524	575	218	1,731	2,006
2011		239,573	20,303	206,325	23,137	183,187	1,788	4,960	2,520	367	315	1,279	481	1,513	2,655	703	225	1,727	2,030
2012 (preliminary)		252,138	21,149	218,385	26,354	192,032	1,712	5,012	2,558	354	314	1,309	477	1,411	2,439	481	232	1,726	2,030

NA = not available; included in data for federal support to industry and federal support to other nonprofit institutions.

FFRDC = federally funded R&D center; U&C = universities and colleges.

<sup>a</sup> Character-of-work estimates for industry were revised in 1998 and for later years; hence, the data for 1997 and earlier years are not directly comparable.

<sup>b</sup> Character-of-work estimates for industry-administered FFRDCs in 1953–63 are not separate from the federal funding to industry; the data on federal funding to industry in those years include the funding to these FFRDCs.

<sup>c</sup> The data for U&C R&D before 2003 covers only science and engineering (S&E) fields; in 2003 and later years, the R&D in non-S&E fields is also included. Adjustments have been made to U&C R&D for 1998 and later years to eliminate the double counting of funds passed through from one academic institution to another. The character-of-work estimation procedure for academic R&D was revised in 1998 and again in 2010; hence, these data are not directly comparable with data reported for earlier years.

<sup>d</sup> Character-of-work estimates for nonprofit-administered FFRDCs in 1953–80 are not separate from federal funding for other nonprofit institutions; thus, the data for federal funding to other nonprofit institutions includes the funding to these FFRDCs in those years.

<sup>e</sup> Industry sources of funding for industry R&D include all nonfederal sources of funding.

<sup>f</sup> Due to survey limitations, data on R&D funded by other (nonfederal) government are separately available only for U&C; nonetheless, other government funded R&D is included in the own performance of these other sectors (e.g., other government funding to other nonprofits is included in other nonprofit funding for their own R&D).

<sup>g</sup> The 1998–2012 data for other nonprofit R&D are not based on a dedicated nonprofit survey and may later be revised.

NOTES: The R&D data for 2012 are preliminary and may later be revised. Some back-year data may have been revised, accordingly, for trend comparisons, use only the historical data reported here; do not use data published earlier. Detail may not add to total due to rounding. Constant-dollar estimates are derived from unrounded data. Data are based on annual reports by performers, except for the nonprofit sector. The R&D expenditures of FFRDCs are chiefly from federal funding, but any nonfederal funds are included in the totals. Expenditures for industry and, before 2001, for industry-administered FFRDCs are collected by calendar year. Expenditures for other performers are calendar-year approximations based on fiscal year data. In most cases, the approximation equals 75% of the amount reported in the same fiscal year plus 25% of the amount reported in the subsequent fiscal year. However, the fiscal year for academic performers generally begins 1 July, not 1 October; also, prior to 1977, the federal fiscal year began on 1 July, not 1 October. Therefore, calendar-year approximations for academic performers and federal performers before 1977 equal 50% of the amount reported in the same fiscal year plus 50% of amount reported in the subsequent fiscal year. Los Alamos National Laboratory became industry administered in June 2006—previously, it was U&C administered. Lawrence Livermore National Laboratory became industry administered in October 2007—previously, it was U&C administered.

SOURCES: National Science Foundation, National Center for Science and Engineering Statistics (NSF/NCSES), National Patterns of R&D Resources (annual series), Business R&D and Innovation Survey (annual series), Higher Education R&D Survey (annual series), Survey of Federal Funds for R&D (annual series), FFRDC R&D Survey (annual series), R&D Funding and Performance by Nonprofit Organizations (FYs 1996–97). All NSF/NCSES reports available at <http://www.nsf.gov/statistics/>.