

TABLE 7

## U.S. basic research expenditures, by source of funds and performing sector: 1953–2021

(Millions of current and of constant 2012 dollars)

Year	All funding sources		Federal						Nonfederal government					Business					Higher education	NPOs				
	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Higher education	Total	FFRDC	Business	Higher education	NPO
Current \$millions																								
1953	460	265	102	36	NA	19	82	27	7	NA	NA	NA	7	154	NA	132	13	9	6	28	NA	NA	16	12
1954	509	291	96	45	NA	23	97	31	10	NA	NA	NA	10	169	NA	143	15	11	8	31	NA	NA	18	13
1955	570	318	98	62	NA	7	117	35	14	NA	NA	NA	14	192	NA	162	17	13	12	35	NA	NA	21	14
1956	718	392	114	89	NA	7	143	41	19	NA	NA	NA	19	251	NA	216	20	15	15	41	NA	NA	24	17
1957	813	451	124	110	NA	4	167	48	25	NA	NA	NA	25	268	NA	230	23	15	20	50	NA	NA	27	23
1958	943	537	149	115	NA	14	202	58	31	NA	NA	NA	31	292	NA	252	24	16	24	59	NA	NA	31	28
1959	1,087	665	165	134	NA	34	263	71	38	NA	NA	NA	38	290	NA	248	24	18	28	66	NA	NA	36	30
1960	1,286	794	184	150	NA	36	341	84	45	NA	NA	NA	45	343	NA	297	25	21	33	71	NA	NA	41	30
1961	1,511	972	230	177	NA	30	432	104	54	NA	NA	NA	54	361	NA	314	25	22	40	85	NA	NA	48	37
1962	1,824	1,218	252	189	NA	104	546	128	64	NA	NA	NA	64	394	NA	345	25	24	48	101	NA	NA	55	46
1963	2,115	1,446	285	216	NA	109	689	147	75	NA	NA	NA	75	425	NA	375	25	25	58	113	NA	NA	63	50
1964	2,396	1,693	339	245	NA	123	824	163	84	NA	NA	NA	84	434	NA	384	25	25	70	115	NA	NA	68	47
1965	2,664	1,900	375	250	NA	157	944	175	94	NA	NA	NA	94	462	NA	406	27	29	86	122	NA	NA	70	52
1966	2,930	2,075	410	273	NA	142	1,066	184	104	NA	NA	NA	104	512	NA	451	29	32	106	133	NA	NA	75	58
1967	3,168	2,280	434	301	NA	168	1,188	190	114	NA	NA	NA	114	495	NA	427	34	34	136	144	NA	NA	83	61
1968	3,376	2,399	482	315	NA	145	1,265	192	131	NA	NA	NA	131	537	NA	462	38	37	156	154	NA	NA	91	63
1969	3,491	2,457	545	313	NA	123	1,288	188	153	NA	NA	NA	153	541	NA	458	40	43	171	170	NA	NA	103	67
1970	3,594	2,501	562	304	NA	122	1,323	191	179	NA	NA	NA	179	531	NA	444	43	44	196	187	NA	NA	115	72
1971	3,720	2,559	581	289	NA	101	1,385	204	194	NA	NA	NA	194	551	NA	456	50	45	214	204	NA	NA	127	77
1972	3,850	2,656	603	313	NA	91	1,437	213	195	NA	NA	NA	195	565	NA	463	55	47	216	218	NA	NA	134	84
1973	4,099	2,847	652	382	NA	96	1,489	229	196	NA	NA	NA	196	607	NA	499	59	49	223	227	NA	NA	137	90
1974	4,511	3,146	715	467	NA	114	1,609	242	204	NA	NA	NA	204	656	NA	536	66	54	250	254	NA	NA	153	102
1975	4,875	3,415	760	533	NA	104	1,768	251	212	NA	NA	NA	212	704	NA	573	72	59	264	280	NA	NA	164	116
1976	5,373	3,793	850	629	NA	116	1,924	274	218	NA	NA	NA	218	774	NA	634	75	65	283	305	NA	NA	175	131
1977	6,008	4,235	943	746	NA	135	2,114	297	232	NA	NA	NA	232	862	NA	701	89	72	334	346	NA	NA	198	148
1978	6,959	4,950	1,044	1,005	NA	156	2,399	346	260	NA	NA	NA	260	970	NA	785	107	79	398	380	NA	NA	213	168
1979	7,836	5,558	1,112	1,160	NA	161	2,719	406	286	NA	NA	NA	286	1,107	NA	893	128	87	466	419	NA	NA	229	190
1980	8,747	6,147	1,212	1,294	NA	170	3,061	411	307	NA	NA	NA	307	1,286	NA	1,035	156	95	544	463	NA	NA	248	215
1981	9,658	6,591	1,343	1,430	NA	164	3,331	324	338	NA	NA	NA	338	1,600	NA	1,313	183	105	615	512	NA	NA	269	243
1982	10,651	7,121	1,522	1,503	NA	253	3,475	369	368	NA	NA	NA	368	1,854	NA	1,523	215	115	716	591	NA	NA	317	275
1983	11,880	7,853	1,733	1,661	NA	346	3,689	426	396	NA	NA	NA	396	2,146	NA	1,760	260	127	816	668	NA	NA	358	311
1984	13,332	8,651	1,877	1,854	NA	340	4,087	494	436	NA	NA	NA	436	2,584	NA	2,132	313	139	915	746	NA	NA	395	351
1985	14,748	9,407	1,947	1,936	NA	358	4,606	560	514	NA	NA	NA	514	2,915	NA	2,373	389	153	1,075	837	NA	NA	440	397

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1986	17,154	10,220	2,026	2,045	NA	434	5,122	594	606	NA	NA	NA	606	4,130	NA	3,496	466	168	1,262	936	NA	NA	488	449
1987	18,481	11,090	2,047	2,242	NA	598	5,527	675	659	NA	NA	NA	659	4,282	NA	3,583	514	185	1,399	1,052	NA	NA	545	507
1988	19,787	12,097	2,116	2,633	NA	656	5,937	756	705	NA	NA	NA	705	4,275	NA	3,507	565	203	1,530	1,180	NA	NA	607	573
1989	21,891	13,392	2,309	2,815	NA	986	6,422	860	766	NA	NA	NA	766	4,692	NA	3,832	637	223	1,714	1,327	NA	NA	680	647
1990	23,029	14,057	2,319	3,033	NA	869	6,889	947	847	NA	NA	NA	847	4,710	NA	3,760	705	245	1,929	1,486	NA	NA	756	730
1991	27,140	15,283	2,378	3,195	NA	1,251	7,423	1,036	912	NA	NA	NA	912	7,157	NA	6,125	764	269	2,127	1,660	NA	NA	836	825
1992	27,604	15,710	2,419	3,408	NA	712	8,058	1,114	941	NA	NA	NA	941	6,925	NA	5,816	814	295	2,203	1,824	NA	NA	893	931
1993	28,743	16,399	2,621	3,517	NA	466	8,638	1,157	952	NA	NA	NA	952	7,136	NA	5,961	851	324	2,268	1,987	NA	NA	936	1,051
1994	29,651	16,770	2,547	3,512	NA	436	9,139	1,137	992	NA	NA	NA	992	7,323	NA	6,078	890	356	2,406	2,160	NA	NA	974	1,186
1995	29,610	16,990	2,689	3,307	NA	190	9,634	1,170	1,070	NA	NA	NA	1,070	6,715	NA	5,379	945	390	2,511	2,326	NA	NA	987	1,338
1996	32,799	18,063	2,680	3,393	NA	650	10,092	1,248	1,149	NA	NA	NA	1,149	8,309	NA	6,848	1,032	428	2,740	2,539	NA	NA	1,028	1,510
1997	36,717	19,254	2,746	3,404	NA	1,029	10,758	1,317	1,233	NA	NA	NA	1,233	10,376	NA	8,766	1,161	449	3,150	2,704	NA	NA	1,147	1,557
1998	34,842	20,473	3,003	3,441	NA	1,002	11,567	1,461	1,292	NA	NA	NA	1,292	6,606	NA	4,851	1,278	477	3,495	2,976	NA	NA	1,259	1,717
1999	38,282	22,364	3,347	3,719	NA	1,108	12,456	1,734	1,386	NA	NA	NA	1,386	7,429	NA	5,537	1,375	517	3,848	3,255	NA	NA	1,396	1,860
2000	42,033	24,295	3,765	4,037	NA	925	13,469	2,099	1,501	NA	NA	NA	1,501	8,134	NA	6,115	1,453	566	4,314	3,790	NA	NA	1,553	2,236
2001	46,363	26,323	4,260	3,925	NA	754	14,919	2,464	1,615	10	NA	NA	1,606	9,400	62	7,299	1,467	571	4,759	4,267	95	NA	1,704	2,467
2002	50,400	29,724	4,511	4,612	NA	888	17,139	2,575	1,761	16	NA	NA	1,745	8,739	69	6,659	1,456	554	5,311	4,865	141	NA	1,891	2,833
2003	54,823	32,842	4,664	4,858	NA	1,386	19,220	2,714	1,910	17	NA	NA	1,893	9,017	70	6,944	1,436	567	5,692	5,363	129	NA	1,978	3,256
2004	56,379	34,124	4,697	4,837	NA	1,072	20,730	2,788	2,013	13	NA	NA	2,000	8,878	54	6,763	1,483	578	5,965	5,399	72	NA	2,067	3,259
2005	59,899	35,561	4,770	4,995	NA	1,108	21,786	2,902	2,080	12	NA	NA	2,068	9,828	54	7,559	1,600	614	6,568	5,861	70	NA	2,226	3,565
2006	61,552	36,368	4,716	5,074	16	1,444	22,270	2,849	2,232	11	30	NA	2,191	9,424	63	6,940	1,765	656	7,288	6,239	74	NA	2,431	3,735
2007	66,488	37,962	4,621	5,166	20	2,780	22,546	2,829	2,449	11	38	NA	2,400	11,206	64	8,488	1,956	698	7,932	6,939	76	NA	2,733	4,130
2008	70,468	37,821	4,957	5,336	26	1,475	22,954	3,073	2,645	12	47	12	2,573	13,794	75	10,864	2,131	724	8,467	7,741	79	18	3,002	4,643
2009	74,379	39,227	5,441	5,907	33	1,340	23,008	3,498	2,541	14	57	13	2,457	16,157	67	13,397	1,995	698	8,257	8,196	79	34	3,032	5,051
2010	76,388	40,063	5,111	6,475	39	1,406	23,618	3,414	2,368	18	63	10	2,277	17,450	67	14,897	1,783	703	8,010	8,498	77	58	2,983	5,381
2011	73,551	39,177	5,047	6,333	41	677	23,999	3,081	2,339	11	62	21	2,244	14,899	67	12,284	1,804	744	8,496	8,641	64	38	3,035	5,504
2012	73,843	38,106	5,489	5,530	40	644	23,312	3,092	2,283	14	59	10	2,200	15,302	61	12,611	1,866	764	9,244	8,908	57	29	3,189	5,634
2013	79,137	36,183	5,330	4,085	38	1,196	22,502	3,031	2,293	12	54	21	2,206	21,044	53	18,203	1,976	813	9,927	9,690	39	88	3,425	6,139
2014	82,769	36,949	5,705	4,077	42	2,044	21,991	3,090	2,320	6	57	17	2,240	22,757	53	19,757	2,088	859	10,350	10,394	34	119	3,614	6,628
2015	84,273	37,131	5,890	4,043	42	2,038	22,084	3,034	2,373	4	59	14	2,297	22,764	47	19,621	2,205	891	10,978	11,028	32	120	3,798	7,079
2016	87,276	38,745	6,119	4,112	38	2,037	22,450	3,988	2,606	5	55	20	2,355	25,925	44	22,879	2,286	716	11,577	8,304	35	117	4,011	4,141
2017	89,955	39,167	6,259	4,054	41	1,853	23,198	3,762	2,655	6	55	17	2,387	26,937	38	23,644	2,407	846	12,228	8,805	30	103	4,337	4,335
2018	97,798	42,313	6,827	4,188	45	2,535	24,360	4,358	2,735	9	57	12	2,449	30,181	39	26,545	2,598	995	12,963	9,384	33	112	4,719	4,520
2019	105,051	44,503	7,352	4,501	52	2,349	25,350	4,901	2,844	10	62	15	2,528	34,065	36	30,132	2,727	1,167	13,598	9,737	33	86	4,915	4,701

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(Millions of current and of constant 2012 dollars)

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	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Higher education	Total	FFRDC	Business	Higher education	NPO	
2020 <sup>a</sup>	111,883	46,205	7,310	4,714	54	2,191	26,379	5,557	2,963	9	64	24	2,608	38,239	35	34,053	2,741	1,406	14,026	10,026	32	103	4,865	5,024	
2021 <sup>b</sup>	118,196	47,134	6,239	4,994	53	2,342	27,642	5,863	3,053	8	61	26	2,684	42,753	37	38,443	2,787	1,484	14,455	10,353	32	112	4,906	5,301	
Constant 2012 \$millions																									
1953	3,182	1,835	703	249	NA	132	564	187	45	NA	NA	NA	45	1,067	NA	914	90	62	42	194	NA	NA	111	83	
1954	3,490	1,994	659	305	NA	158	662	209	66	NA	NA	NA	66	1,160	NA	981	103	75	58	213	NA	NA	124	89	
1955	3,846	2,146	658	418	NA	47	786	236	94	NA	NA	NA	94	1,296	NA	1,093	115	88	78	233	NA	NA	138	94	
1956	4,683	2,559	741	581	NA	44	930	264	124	NA	NA	NA	124	1,635	NA	1,409	127	98	101	264	NA	NA	153	111	
1957	5,138	2,852	783	692	NA	25	1,052	300	157	NA	NA	NA	157	1,690	NA	1,453	142	95	125	316	NA	NA	171	145	
1958	5,825	3,317	920	710	NA	84	1,248	355	192	NA	NA	NA	192	1,803	NA	1,556	148	99	148	364	NA	NA	191	173	
1959	6,622	4,054	1,002	813	NA	207	1,599	433	229	NA	NA	NA	229	1,767	NA	1,511	146	110	173	399	NA	NA	216	183	
1960	7,727	4,770	1,103	902	NA	214	2,047	505	271	NA	NA	NA	271	2,059	NA	1,785	147	126	201	427	NA	NA	246	180	
1961	8,986	5,781	1,365	1,053	NA	181	2,566	616	319	NA	NA	NA	319	2,147	NA	1,867	149	131	237	503	NA	NA	282	220	
1962	10,719	7,158	1,481	1,111	NA	612	3,205	749	374	NA	NA	NA	374	2,315	NA	2,027	147	141	281	591	NA	NA	320	270	
1963	12,287	8,398	1,653	1,255	NA	635	4,002	854	435	NA	NA	NA	435	2,466	NA	2,178	142	145	334	653	NA	NA	363	290	
1964	13,708	9,686	1,940	1,402	NA	704	4,712	930	483	NA	NA	NA	483	2,483	NA	2,197	143	143	398	658	NA	NA	389	269	
1965	14,968	10,676	2,104	1,405	NA	882	5,301	983	531	NA	NA	NA	531	2,593	NA	2,281	149	163	483	685	NA	NA	393	292	
1966	16,015	11,342	2,241	1,492	NA	776	5,827	1,006	566	NA	NA	NA	566	2,799	NA	2,465	159	175	582	727	NA	NA	410	317	
1967	16,824	12,107	2,302	1,599	NA	892	6,307	1,007	605	NA	NA	NA	605	2,626	NA	2,268	178	181	720	765	NA	NA	441	324	
1968	17,199	12,219	2,455	1,602	NA	739	6,444	978	666	NA	NA	NA	666	2,733	NA	2,354	191	188	796	785	NA	NA	464	321	
1969	16,953	11,931	2,648	1,520	NA	597	6,253	913	742	NA	NA	NA	742	2,625	NA	2,224	192	209	831	823	NA	NA	498	325	
1970	16,579	11,540	2,592	1,402	NA	563	6,101	881	827	NA	NA	NA	827	2,450	NA	2,048	198	203	903	860	NA	NA	528	332	
1971	16,333	11,234	2,552	1,267	NA	443	6,078	893	850	NA	NA	NA	850	2,417	NA	2,002	217	198	939	893	NA	NA	555	338	
1972	16,203	11,176	2,536	1,315	NA	383	6,048	894	822	NA	NA	NA	822	2,378	NA	1,949	231	198	909	917	NA	NA	564	354	
1973	16,357	11,359	2,601	1,524	NA	383	5,939	912	783	NA	NA	NA	783	2,420	NA	1,991	233	196	890	904	NA	NA	545	359	
1974	16,512	11,517	2,616	1,710	NA	417	5,890	884	746	NA	NA	NA	746	2,401	NA	1,962	242	197	916	932	NA	NA	558	373	
1975	16,331	11,442	2,545	1,784	NA	348	5,923	841	712	NA	NA	NA	712	2,358	NA	1,920	240	199	883	936	NA	NA	549	387	
1976	17,062	12,043	2,699	1,997	NA	368	6,110	869	691	NA	NA	NA	691	2,459	NA	2,013	238	207	900	970	NA	NA	554	415	
1977	17,963	12,661	2,819	2,230	NA	404	6,320	888	693	NA	NA	NA	693	2,576	NA	2,096	266	214	999	1,033	NA	NA	590	443	
1978	19,438	13,827	2,917	2,807	NA	436	6,701	966	726	NA	NA	NA	726	2,710	NA	2,193	297	220	1,112	1,062	NA	NA	594	468	
1979	20,213	14,337	2,869	2,991	NA	415	7,013	1,048	737	NA	NA	NA	737	2,856	NA	2,303	329	224	1,202	1,080	NA	NA	591	489	
1980	20,691	14,542	2,868	3,061	NA	402	7,240	971	726	NA	NA	NA	726	3,043	NA	2,448	369	226	1,287	1,095	NA	NA	587	508	
1981	20,871	14,245	2,902	3,090	NA	354	7,199	700	731	NA	NA	NA	731	3,459	NA	2,838	395	226	1,330	1,107	NA	NA	582	525	
1982	21,678	14,494	3,097	3,059	NA	515	7,072	751	749	NA	NA	NA	749	3,773	NA	3,100	439	234	1,458	1,204	NA	NA	645	559	

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1983	23,269	15,382	3,394	3,252	NA	678	7,224	834	775	NA	NA	NA	775	4,204	NA	3,447	509	248	1,599	1,309	NA	NA	701	608
1984	25,203	16,355	3,548	3,505	NA	643	7,725	934	823	NA	NA	NA	823	4,885	NA	4,030	591	263	1,729	1,410	NA	NA	746	664
1985	27,026	17,238	3,568	3,548	NA	656	8,439	1,026	943	NA	NA	NA	943	5,341	NA	4,348	713	280	1,971	1,533	NA	NA	806	727
1986	30,813	18,358	3,639	3,674	NA	780	9,200	1,066	1,088	NA	NA	NA	1,088	7,418	NA	6,280	837	302	2,267	1,682	NA	NA	876	806
1987	32,396	19,440	3,589	3,931	NA	1,048	9,688	1,184	1,154	NA	NA	NA	1,154	7,505	NA	6,281	901	323	2,453	1,844	NA	NA	956	888
1988	33,504	20,484	3,583	4,458	NA	1,111	10,052	1,280	1,194	NA	NA	NA	1,194	7,238	NA	5,938	956	343	2,590	1,998	NA	NA	1,028	970
1989	35,668	21,821	3,762	4,587	NA	1,607	10,464	1,402	1,248	NA	NA	NA	1,248	7,645	NA	6,244	1,039	363	2,793	2,161	NA	NA	1,108	1,054
1990	36,169	22,077	3,642	4,764	NA	1,365	10,819	1,487	1,330	NA	NA	NA	1,330	7,397	NA	5,905	1,108	384	3,030	2,335	NA	NA	1,187	1,147
1991	41,231	23,218	3,613	4,854	NA	1,901	11,277	1,574	1,385	NA	NA	NA	1,385	10,874	NA	9,305	1,160	408	3,232	2,522	NA	NA	1,269	1,253
1992	41,001	23,335	3,593	5,062	NA	1,058	11,969	1,655	1,398	NA	NA	NA	1,398	10,286	NA	8,639	1,210	438	3,272	2,710	NA	NA	1,327	1,383
1993	41,704	23,794	3,803	5,103	NA	676	12,533	1,679	1,382	NA	NA	NA	1,382	10,354	NA	8,649	1,235	470	3,291	2,883	NA	NA	1,358	1,525
1994	42,123	23,823	3,618	4,989	NA	619	12,982	1,615	1,409	NA	NA	NA	1,409	10,404	NA	8,635	1,264	505	3,419	3,069	NA	NA	1,384	1,685
1995	41,202	23,640	3,742	4,601	NA	264	13,405	1,628	1,488	NA	NA	NA	1,488	9,343	NA	7,485	1,315	543	3,493	3,236	NA	NA	1,374	1,862
1996	44,818	24,682	3,662	4,636	NA	888	13,790	1,706	1,570	NA	NA	NA	1,570	11,353	NA	9,357	1,410	585	3,744	3,469	NA	NA	1,405	2,064
1997	49,320	25,862	3,688	4,572	NA	1,382	14,451	1,769	1,657	NA	NA	NA	1,657	13,938	NA	11,775	1,559	603	4,231	3,632	NA	NA	1,541	2,091
1998	46,281	27,195	3,989	4,571	NA	1,331	15,365	1,940	1,717	NA	NA	NA	1,717	8,774	NA	6,444	1,697	634	4,642	3,953	NA	NA	1,673	2,280
1999	50,127	29,283	4,382	4,869	NA	1,451	16,310	2,270	1,815	NA	NA	NA	1,815	9,727	NA	7,250	1,801	677	5,039	4,262	NA	NA	1,828	2,435
2000	53,871	31,137	4,825	5,173	NA	1,186	17,262	2,691	1,924	NA	NA	NA	1,924	10,425	NA	7,837	1,862	726	5,529	4,857	NA	NA	1,991	2,866
2001	58,112	32,993	5,340	4,920	NA	945	18,700	3,089	2,025	12	NA	NA	2,012	11,782	78	9,149	1,839	716	5,965	5,348	119	NA	2,136	3,092
2002	62,203	36,685	5,567	5,692	NA	1,096	21,152	3,178	2,174	20	NA	NA	2,154	10,785	85	8,218	1,797	684	6,555	6,004	174	NA	2,334	3,496
2003	66,351	39,748	5,645	5,879	NA	1,677	23,261	3,285	2,311	21	NA	NA	2,291	10,913	85	8,404	1,738	686	6,888	6,490	156	NA	2,393	3,941
2004	66,451	40,220	5,536	5,701	NA	1,264	24,434	3,286	2,373	16	NA	NA	2,357	10,464	63	7,971	1,748	681	7,031	6,363	85	NA	2,436	3,842
2005	68,453	40,640	5,452	5,708	NA	1,266	24,897	3,317	2,377	14	NA	NA	2,363	11,232	62	8,638	1,829	702	7,506	6,698	80	NA	2,544	4,074
2006	68,236	40,318	5,228	5,625	17	1,601	24,688	3,158	2,475	13	34	NA	2,429	10,448	70	7,694	1,956	728	8,079	6,917	82	NA	2,695	4,140
2007	71,769	40,977	4,988	5,576	22	3,001	24,337	3,054	2,644	12	41	NA	2,591	12,096	69	9,162	2,112	753	8,562	7,490	82	NA	2,950	4,458
2008	74,634	40,057	5,250	5,651	28	1,562	24,311	3,255	2,801	13	50	13	2,726	14,610	80	11,506	2,256	767	8,968	8,199	83	19	3,179	4,918
2009	78,274	41,282	5,726	6,217	35	1,410	24,213	3,682	2,674	15	60	14	2,585	17,003	70	14,098	2,100	735	8,690	8,626	83	36	3,191	5,316
2010	79,434	41,660	5,314	6,733	41	1,462	24,559	3,551	2,462	19	66	11	2,367	18,145	70	15,491	1,854	731	8,329	8,837	80	60	3,101	5,595
2011	74,927	39,910	5,142	6,451	41	690	24,448	3,138	2,382	11	64	22	2,286	15,177	69	12,514	1,837	758	8,655	8,802	65	38	3,092	5,607
2012	73,843	38,106	5,489	5,530	40	644	23,312	3,092	2,283	14	59	10	2,200	15,302	61	12,611	1,866	764	9,244	8,908	57	29	3,189	5,634
2013	77,775	35,560	5,239	4,015	38	1,175	22,115	2,979	2,253	12	53	20	2,168	20,682	52	17,890	1,942	799	9,756	9,523	38	87	3,366	6,033
2014	79,852	35,647	5,504	3,933	40	1,972	21,216	2,981	2,238	6	55	16	2,161	21,955	52	19,060	2,014	829	9,985	10,028	32	115	3,486	6,394
2015	80,497	35,467	5,626	3,862	40	1,947	21,094	2,898	2,267	4	56	13	2,194	21,744	45	18,742	2,106	851	10,486	10,534	31	114	3,627	6,761
2016	82,538	36,642	5,787	3,889	36	1,927	21,231	3,772	2,465	5	52	19	2,227	24,518	42	21,637	2,162	678	10,948	7,853	33	111	3,793	3,916

TABLE 7

**U.S. basic research expenditures, by source of funds and performing sector: 1953–2021**

(Millions of current and of constant 2012 dollars)

Year	All funding sources		Federal						Nonfederal government					Business					Higher education	NPOs				
	All performers	Total	Federal intramural	FFRDC	Nonfederal government	Business	Higher education	NPO	Total	FFRDC	Nonfederal government	Business	Higher education	Total	FFRDC	Business	Higher education	NPO	Higher education	Total	FFRDC	Business	Higher education	NPO
2017	83,487	36,351	5,809	3,762	38	1,719	21,530	3,492	2,464	6	51	16	2,215	25,000	35	21,944	2,234	785	11,348	8,172	28	95	4,025	4,023
2018	88,634	38,348	6,187	3,796	40	2,298	22,077	3,950	2,479	8	51	11	2,219	27,353	35	24,058	2,355	901	11,748	8,505	30	101	4,277	4,096
2019	93,530	39,622	6,546	4,007	46	2,091	22,569	4,363	2,532	9	55	14	2,250	30,329	32	26,827	2,427	1,039	12,106	8,669	30	77	4,376	4,185
2020 <sup>a</sup>	98,328	40,607	6,424	4,143	48	1,926	23,183	4,884	2,604	7	56	21	2,292	33,606	30	29,928	2,409	1,236	12,326	8,811	28	90	4,276	4,415
2021 <sup>b</sup>	99,412	39,643	5,248	4,201	45	1,970	23,249	4,931	2,568	7	51	22	2,258	35,958	31	32,334	2,344	1,248	12,158	8,708	27	94	4,126	4,458

NA = not available.

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

<sup>a</sup> Some data for 2020 are preliminary and may be revised later.<sup>b</sup> The data for 2021 include estimates and are likely to be revised later.**Note(s):**

This table reaggregates the R&D performer data in table 3 according to major categories of R&D funding: federal government, nonfederal government (state and local), business, higher education, and NPOs. Business sources of R&D funding in this table include the own funds of domestic R&D-performing businesses, funds from other domestic businesses, and funds from foreign businesses. For further detail on the R&D performers listed, see table 2, footnotes a–f. 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. (See also table 3, general notes.)

**Source(s):**

National Center for Science and Engineering Statistics, National Patterns of R&amp;D Resources (annual series).