

TABLE 19

## Companies with domestic R&amp;D paid for by the company and others and performed by the company in the software products and embedded software technology focus area, by industry and company size: 2016

(Millions of U.S. dollars)

Industry and company size	NAICS code	Software products and embedded software R&D									
		Domestic R&D		Total		Paid for by the company		Paid for by others			
		Companies <sup>a</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Total		Federally funded	
								Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount
All industries	21-23, 31-33, 42-81	31,784	374,685	13,408	120,824	12,851	111,933	1,488	8,890	780	4,481
Manufacturing industries	31-33	19,522	250,553	5,967	35,984	5,767	31,527	509	4,457	124	3,057
Food	311	1,185	4,828	29	16	12	11	18	4	0	0
Chemicals	325	2,907	73,575	286	575	224	430	116	145	4	1
Basic chemicals	3251	346	2,545	30	41	30	41	0	0	0	0
Pharmaceuticals and medicines	3254	1,089	64,628	149	302	88	165	D	137	4	1
Other chemicals	other 325	1,473	6,402	106	232	105	224	D	8	0	0
Plastics and rubber products	326	1,238	3,752	124	91	123	91	D	*	D	*
Nonmetallic mineral products	327	416	1,289	22	17	22	17	0	0	0	0
Fabricated metal products	332	2,406	2,239	435	167	434	167	D	*	0	0
Machinery	333	2,780	12,585	1,183	1,290	1,179	1,245	17	44	D	D
Agricultural implements	33311	198	1,565	69	187	69	185	D	2	D	2
Semiconductor machinery	333242	50	3,411	25	222	22	212	3	9	D	*
Engines, turbines, and power transmission equipment	3336	128	1,959	43	217	43	216	D	1	0	0
Other machinery	other 333	2,405	5,650	1,046	664	1,045	632	10	32	D	D
Computer and electronic products	334	3,090	77,385	2,313	24,540	2,221	22,935	257	1,606	D	D
Semiconductors and other electronic components	3344	858	31,391	462	8,134	401	8,033	115	101	D	D
Other electronic products	other 334	2,232	45,993	1,851	16,406	1,820	14,902	142	1,504	D	D
Electrical equipment, appliances, and components	335	727	4,771	449	855	449	616	25	238	D	1
Transportation equipment	336	1,154	51,275	299	6,301	290	3,903	38	2,398	D	D
Automobiles, bodies, trailers, and parts	3361-63	768	22,042	220	1,592	212	1,456	29	136	D	1
Other transportation	other 336	386	29,234	79	4,709	78	2,446	9	2,262	D	D
Miscellaneous manufacturing	339	D	D	499	2,011	487	1,990	35	21	14	1
Other manufacturing	312-16, 321-24, 331, 337	D	D	328	121	327	121	D	*	D	*
Nonmanufacturing industries	21-23, 42-81	12,263	124,132	7,441	84,840	7,084	80,406	978	4,434	656	1,424
Mining, extraction, and support activities	21	69	3,296	25	601	21	524	6	77	0	0

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Utilities	22	34	351	14	5	14	5	D	*	0	0	
Wholesale trade	42	1,652	452	801	106	801	106	0	0	0	0	
Information	51	2,362	70,748	2,143	63,213	2,135	62,870	58	343	D	11	
Publishing	511	1,349	33,574	1,228	27,864	1,226	27,689	40	176	4	3	
Telecommunications	517	D	D	103	2,996	D	D	D	D	0	0	
Data processing, hosting, and related services	518	765	11,914	704	11,233	703	11,171	10	62	D	6	
Other information	other 51	D	D	108	21,120	D	D	D	D	D	2	
Professional, scientific, and technical services	54	7,181	37,595	4,340	14,185	3,995	10,174	911	4,011	629	1,411	
Architectural, engineering, and related services	5413	1,544	3,412	376	515	302	231	144	284	124	209	
Scientific research and development services	5417	1,940	14,842	652	2,060	490	363	341	1,698	213	768	
Biotechnology research and development	541711	411	4,464	35	29	31	16	10	14	4	4	
Other scientific research and development	other 5417	1,529	10,378	616	2,031	458	347	331	1,684	209	764	
Other professional, scientific, and technical services	other 54	3,697	19,341	3,313	11,610	3,204	9,581	425	2,029	292	435	
Health care services	621-23	284	848	11	74	10	73	D	1	0	0	
Other nonmanufacturing	23, 44-45, 48-49, 52-53, 55-56, 624, 71-72, 81	682	10,841	107	6,655	107	6,654	D	2	D	1	
All companies (number of domestic employees)	-	31,784	374,685	13,408	120,824	12,851	111,933	1,488	8,890	780	4,481	
Micro companies <sup>c</sup>												
5 - 9	-	3,921	1,581	2,018	359	1,911	246	309	113	208	71	
Small companies												
10 - 19	-	6,757	4,958	3,308	1,329	3,186	1,135	314	195	197	99	
20 - 49	-	8,397	9,662	3,454	3,152	3,306	2,626	417	526	224	329	
Medium companies												
50 - 99	-	4,712	9,298	1,727	2,534	1,661	2,144	166	390	64	192	

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100 – 249	–	4,062	14,875	1,361	i 4,273	1,306	i 3,409	115	i 864	39	251
Large companies											
250 – 499	–	1,623	13,092	586	i 4,493	565	i 4,338	54	i 154	15	i 42
500 – 999	–	868	14,450	312	5,383	302	5,224	29	159	7	35
1,000 – 4,999	–	959	63,971	403	21,095	385	20,098	42	997	6	325
5,000 – 9,999	–	235	40,633	105	17,595	i 100	17,143	i 14	452	i 5	47
10,000 – 24,999	–	153	65,594	82	11,982	76	9,820	16	2,162	i 6	671
25,000 or more	–	98	136,571	52	48,629	i 52	45,751	i 11	2,878	9	2,421

\* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = > 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

<sup>a</sup> Statistics for the number of companies are based only on companies in the United States that reported to the survey. These statistics do not include an adjustment to the weight to account for unit nonresponse. A company having multiple reporting parts for data collection may contribute to the statistics for multiple industries, so the detail may not add to the total for the number of companies.

<sup>b</sup> Statistics for the number of companies are based only on companies in the United States that reported to the survey. These statistics do not include an adjustment to the weight to account for unit nonresponse. These company count estimates reflect a new imputation process implemented for survey year 2014. This change has affected the comparability of these company count estimates with estimates published for years prior to 2014. A company having multiple reporting parts for data collection may contribute to the statistics for multiple industries, so the detail may not add to the total for the number of companies.

<sup>c</sup> Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

#### Note(s)

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Statistics are representative of companies located in the United States that performed or funded R&D. Some R&D may be reported in more than one application area. Some R&D is not classified in any application area.

#### Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2016.