

TABLE 53

## Domestic full-time equivalent R&amp;D employees and researchers, by work status, industry, and company size: 2022

(Thousands)

Industry and company size	NAICS code	FTE R&D employees <sup>a</sup>				FTE R&D scientists and engineers <sup>b</sup>							
		Total	Full-time R&D employees	Full-time employees working on R&D part time	Part-time employees working on R&D	Total	Full-time R&D employees	Full-time employees working on R&D part time	Part-time employees working on R&D				
All industries	21-23, 31-33, 42-81	1,941	1,639	275	27	i	1,316	1,152	153	i	11	i	
Manufacturing industries	31-33	925	817	99	9		634	583	47		4		
Food	311	27	24	2	*		14	14	1	i	*	i	
Beverage and tobacco products	312	4	3	1	*		2	2	*		*	i	
Textile, apparel, and leather products	313-16	4	3	1	*	i	2	1	*	i	*	i	
Wood products	321	3	2	1	0		1	1	*	i	0		
Paper	322	5	3	1	*		3	3	*		*		
Printing and related support activities	323	1	1	1	*		1	*	*		*		
Petroleum and coal products	324	4	3	*	*		1	1	*		*		
Chemicals	325	206	200	5	1		131	128	3		1		
Basic chemicals	3251	12	11	1	*		7	6	1		*		
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	6	6	*	*		4	4	*		*		
Pesticide, fertilizer, and other agricultural chemicals	3253	4	4	*	*		3	3	*		*		
Pharmaceuticals and medicines	3254	164	161	2	1		103	101	1	i	*		
Soap, cleaning compound, and toilet preparations	3256	11	10	1	*		8	8	*	i	*	i	
Paint, coating, adhesive, and other chemicals	3255, 3259	8	8	*	*		6	6	*		*		
Plastics and rubber products	326	19	13	5	1		10	8	2		*		
Nonmetallic mineral products	327	5	4	1	*	r	3	3	*		*	r	
Primary metals	331	5	3	2	i	*	r	2	2	1	*	i	
Fabricated metal products	332	28	13	14	*		11	6	5		*		
Machinery	333	92	69	22	1		63	48	14		*		
Agricultural implement	33311	9	9	*	*		7	7	*		*		
Semiconductor machinery	333242	14	i	13	i	1	i	9	i	9	i	*	i
Engine, turbine, and power transmission equipment	3336	14	7	8	*		13	5	7		*		
Other machinery	other 333	54	41	13	1		34	27	6		*		
Computer and electronic products	334	237	225	11	2		189	183	5		1		
Communications equipment	3342	36	34	2	*		28	27	1		*		
Semiconductor and other electronic components	3344	90	86	3	1		73	i	71	i	2	i	
Navigational, measuring, electromedical, and control instruments	3345	49	45	3	1		35	33	2		*		
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	16	16	*	*		11	10	*		*		
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	14	13	1	*		11	10	*		*		
Other measuring and controlling devices	other 3345	19	16	2	*		13	12	1		*		

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		Total	Full-time R&D employees	Full-time employees working on R&D part time	Part-time employees working on R&D	Total	Full-time R&D employees	Full-time employees working on R&D part time	Part-time employees working on R&D								
Other computer and electronic products	other 334	63	60	3	*	54	53	1	i	*							
Electrical equipment, appliances, and components	335	26	23	2	1	16	15	1	i	*	i						
Transportation equipment	336	175	151	24	1	131	118	12		1	i						
Motor vehicles, bodies, trailers, and parts	3361-63	107	102	5	*	82	79	2		*							
Aerospace products and parts	3364	58	41	16	1	44	34	9	i	*	i						
Aircraft, aircraft engine, and aircraft parts	336411-13	44	29	14	*	32	23	8		*	i						
Guided missile, space vehicle, and related parts	336414-15, 336419	14	i	12	i	2		*	i	12	i	10	i	1		*	i
Military armored vehicle, tank, and tank components	336992	*	*	*	0	*	i	*	i	*	i	0					
Other transportation	other 336	11	i	8	i	3	i	*		5	5	1	i	*	i		
Furniture and related products	337	3	1	2	*	2	1	1		*	i						
Miscellaneous	339	82	75	6	1	51	49	2		1							
Medical equipment and supplies	3391	68	64	3	1	44	43	1		1							
Other miscellaneous manufacturing	3399	14	11	3	*	7	6	1		*							
Nonmanufacturing industries	21-23, 42-81	1,016	821	175	i	19	i	682	569	106	i	7	i				
Mining, quarrying, oil and gas extraction, and support activities	21	7	i	5	i	2	i	*	i	4	i	3	i	1	i	*	i
Utilities	22	2	i	1	i	1	i	*	i	1	i	1	i	*	i		
Wholesale trade	42	17	i	10	i	7	i	*	i	7	i	4	i	3	i	*	r
Electronic shopping and electronic auctions	454111-12	77	i	D		D		D		D		D		D			
Transportation and warehousing	48-49	17	i	14	i	3	i	*	i	11	i	9	i	2	i	*	i
Information	51	474	445	27	2	356	340	14		1							
Publishing	511	139	130	8	1	111	106	5		1							
Newspaper, periodical, book, and directory publishers	5111	1	1	*	*	*	*	*		0							
Software publishers	5112	138	130	7	1	111	106	5		1							
Telecommunications	517	10	i	8	i	2	*	6	i	5	i	1	*	r			
Data processing, hosting, and related services	518	171	156	15	1	119	112	7		*	i						
Other information	other 51	155	151	3	1	120	117	2		*							
Finance and insurance	52	43	i	28	i	14	i	1	i	26	i	22	i	4	i	*	i
Real estate and rental and leasing	53	6	6	*	*	4	i	4	i	*		*					
Lessors of nonfinancial intangible assets (except copyrighted works)	533	*	i	*	i	0	0	*	i	*	i	0	0				
Other real estate and rental and leasing	other 53	6	6	*	*	4	i	4	i	*		*					
Professional, scientific, and technical services	54	336	267	56	13	185	153	27		5	i						
Architectural, engineering, and related services	5413	46	23	21	2	32	17	14		1	i						

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		Total	Full-time R&D employees	Full-time employees working on R&D part time	Part-time employees working on R&D	Total	Full-time R&D employees	Full-time employees working on R&D part time	Part-time employees working on R&D				
Computer systems design and related services	5415	102	89	11	2	69	61	7	i	1			
Scientific research and development services	5417	143	i 128	i 6	i 9	62	58	2	i	2	i		
Research and development in nanotechnology	541713	1	1	*	*	1	1	*	i	*			
Research and development in biotechnology (except nanobiotechnology)	541714	34	i 33	i 1	i *	13	13	*		*			
Research and development in the physical, engineering, and life sciences (except nanotechnology and biotechnology)	541715	98	i 91	i 4	i 2	47	i 44	i 2	i	1	i		
Research and development in the social sciences and humanities	541720	10	i 3	i 1	i 6	2	i 1	i *	i	1	i		
Other professional, scientific, and technical services	other 54	45	27	18	*	21	16	5	i	*			
Health care services	621-23	10	8	2	*	4	3	D		D			
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	27	D	D	D	D	D	D		D			
All companies (number of domestic employees)	-	1,941	1,639	275	27	i 1,316	1,152	153	i	11	i		
Small companies													
10-19 <sup>c</sup>	-	30	21	7	2	20	15	4		1			
20-49	-	76	52	21	2	46	36	9		1			
Medium companies													
50-99	-	74	52	20	2	43	34	9		1	i		
100-249	-	119	87	30	2	72	58	13		1			
Large companies													
250-499	-	109	88	18	2	68	59	8		1			
500-999	-	115	94	19	1	72	63	8		1	i		
1,000-4,999	-	318	280	34	3	213	193	17		2			
5,000-9,999	-	171	148	15	8	i 122	110	10		2	i		
10,000-24,999	-	318	286	29	3	i 204	191	12	i	1	i		
25,000 or more	-	613	530	80	i 3	i 456	391	62	i	2	i		

\* = amount < 500 employees; D = data withheld to avoid disclosing operations of individual companies; i = more than 50% of the estimate is a combination of imputation and reweighting to account for nonresponse; r = relative standard error is more than 50%.

FTE = full-time equivalent; NAICS = 2017 North American Industry Classification System.

<sup>a</sup> Includes scientists and engineers; their managers; and technicians, technologists, and support staff.

<sup>b</sup> Includes scientists and engineers and their managers.

<sup>c</sup> The Business Enterprise Research and Development Survey does not include companies with fewer than 10 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 \$50,000 or more of R&D and are not comparable with estimates published for years prior to 2018.

**Source(s):**

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2022.