

TABLE 34. Worldwide R&D employment, by occupation, industry, and company size: 2011
(Thousands)

Industry and company size	NAICS code	Total	R&D scientists and engineers and their managers	R&D technicians and technologists	R&D support staff (clerical and others)
All industries	21–23, 31–33, 42–81	2,025	1,398	403	225
Manufacturing industries	31–33	1,211	857	217	137
Food	311	36	20	8	8
Beverage and tobacco products	312	6	3	1	1
Textile, apparel, and leather products	313–316	8	3	3	1
Wood products	321	3	2	1	1
Paper	322	13	11	2	1
Printing and related support activities	323	3	1	1	1
Petroleum and coal products	324	6	4	2	1
Chemicals	325	225	145	47	33
Basic chemicals	3251	27	17	8	2
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	8	4	3	1
Pesticide, fertilizer, and other agricultural chemical	3253	8	5	2	1
Pharmaceuticals and medicines	3254	147	93	28	26
Soap, cleaning compound, and toilet preparation	3256	21	16	3	2
Paint, coating, adhesive, and other chemicals	3255, 3259	15	10	4	1
Plastics and rubber products	326	25	14	8	4
Nonmetallic mineral products	327	12	7	4	1
Primary metals	331	7	3	2	2
Fabricated metal products	332	33	16	11	5
Machinery	333	121	90	22	9
Agricultural implement	33311	9	8	1	*
Semiconductor machinery	333295	9	7	2	1
Engine, turbine, and power transmission equipment	3336	D	D	5	2
Other machinery	other 333	D	D	14	6
Computer and electronic products	334	392	304	50	37
Communications equipment	3342	79	62	11	6
Semiconductor and other electronic components	3344	153	117	17	19
Navigational, measuring, electromedical, and control instruments	3345	91	67	16	8
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	26	19	6 i	2
Search, detection, navigation, guidance, aeronautical, and nautical systems and instruments	334511	33	25	4	4
Other measuring and controlling device	other 3345	32	23	6	3
Other computer and electronic products	other 334	68	58 i	5	5
Electrical equipment, appliances, and components	335	53	39	11	4
Transportation equipment	336	198	153	26	19
Motor vehicles, bodies, trailers, and parts	3361, 3362, 3363	106	78	16	11
Aerospace products and parts	3364	80	67	7	5
Aircraft, aircraft engine, and aircraft parts	336411–13	74	62 i	7	5 i
Guided missile, space vehicle, and related parts	336414–15, 336419	5	5	*	*
Military armored vehicle, tank, and tank component	336992	*	*	*	*

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Other transportation equipment	other 336	13	7	3	2 i
Furniture and related products	337	5	2	1	1
Miscellaneous manufacturing	339	66	41	17	8
Medical equipment and supplies	3391	39	26	8	5
Other miscellaneous manufacturing	3399	27	15	9	2
Nonmanufacturing industries	21–23, 42–81	814	541	186	88
Mining, extraction, and support activities	21	14	9	3	2
Utilities	22	2	1	1	*
Wholesale trade	42	21 i	11 i	6 i	4 i
Electronic shopping and electronic auctions	454111–12	5	1	2 i	1 i
Transportation and warehousing	48–49	1	1	*	*
Information	51	326	252	44	30
Publishing	511	229	182	21	26
Newspaper, periodical, book, and directory publishers	5111	4	3 i	*	1
Software publishers	5112	225	179	21	25
Telecommunications	517	24 i	20 i	3 i	1 i
Data processing, hosting, and related services	518	37	23	12	2
Other information	other 51	36	27	8	1
Finance and insurance	52	31	12	13	6
Real estate and rental and leasing	53	2	1	*	1
Lessors of nonfinancial intangible assets (except copyrighted works)	533	2	1	*	*
Other real estate and rental and leasing	other 53	*	*	*	*
Professional, scientific, and technical services	54	369	229	101	39
Architectural, engineering, and related services	5413	66	52	10	4
Computer systems design and related services	5415	156	97	50	9
Scientific research and development services	5417	97	49	27	21
Biotechnology research and development	541711	21	12	6	3
Physical, engineering, and life sciences (except biotechnology) research and development	541712	72	37	18	18
Social sciences and humanities research and development	541720	4	1	3 i	*
Other professional, scientific, and technical services	other 54	50	31	14	4 i
Health care services	621–23	9	4	3	1
Other nonmanufacturing	23, 44–45 (excluding 454111–12), 55–56, 624, 71–72, 81	35	19	11	5
All companies (number of domestic employees)	–	2,025	1,398	403	225
Small companies ^a					
5–499	–	529	325	139	65
5–99	–	297	182	80	34
5–49	–	204	128	53	23
5–9	–	38	24	11	4
10–24	–	84	54	20	9

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25-49	-	83	50	23	10
50-99	-	92	54	27	11
100-249	-	123	77	31	15
250-499	-	109	66	27	16
Medium and large companies					
500-999	-	76	45	19	12
1,000-4,999	-	346	232	76	38
5,000-9,999	-	199	131	31	36
10,000-24,999	-	273	190	55	29
25,000 or more	-	602	475	82	44

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

NAICS = 2007 North American Industry Classification System.

^a Upper bound based on U.S. Small Business Administration's definition of a small business; Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

NOTES: Detail may not add to total because of rounding. Industry classification based on dominant business code for domestic R&D performance where available. For companies that did not report business codes, classification used for sampling was assigned. Statistics are representative of companies located in the United States that performed or funded R&D.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics and U.S. Census Bureau, Business R&D and Innovation Survey, 2011.