

TABLE 60

Source of technology capabilities, by industry: 2021

(Percent)

Industry	NAICS code	Companies (number)	Acquired technology products	Acquired intellectual property rights	Modified or adapted existing technology	Developed new technology
All industries	11, 21–23, 31–33, 42–81	4,874,928	18.3	1.8	10.3	3.3
Manufacturing industries	31–33	209,282	26.4	3.6	16.8	7.4
Food	311	19,326	18.8	2.9	10.6	3.3
Beverage and tobacco products	312	9,354	26.0	2.6	13.5	3.5
Textile, apparel, and leather products	313–16	9,443	15.5	2.8	8.0	3.5
Wood products	321	9,546	24.5	1.1	12.8	3.2
Paper	322	1,500	24.3	7.1	19.1	7.5
Printing and related support activities	323	20,212	27.3	2.1	13.4	2.9
Petroleum and coal products	324	546	9.3	2.7	13.2	5.1
Chemicals	325	7,961	28.4	7.9	22.3	8.0
Pesticide, fertilizer, and other agricultural chemicals	3253	580	27.9	2.6	14.3	2.4
Pharmaceuticals and medicines	3254	1,536	36.7	14.8	26.8	11.3
Soap, cleaning compound, and toilet preparation	3256	1,652	24.5	4.5	18.0	5.0
Other chemicals	other 325	4,194	26.9	7.3	23.4	8.7
Plastics and rubber products	326	7,060	28.1	5.0	21.2	7.5
Nonmetallic mineral products	327	7,290	20.5	1.9	13.9	3.2
Primary metals	331	2,079	31.3	2.8	20.9	6.7
Fabricated metal products	332	46,128	29.1	1.9	16.1	6.6
Machinery	333	16,440	33.6	7.2	26.2	14.8
Computer and electronic products	334	8,527	30.5	8.2	35.4	31.6
Communications equipment	3342	850	30.1	5.6	43.8	42.7
Semiconductor and other electronic components	3344	2,711	34.2	6.6	35.3	25.4
Navigational, measuring, electromedical, and control instruments	3345	3,737	30.6	10.1	34.7	34.2
Other computer and electronic products	other 334	1,230	22.3	8.2	32.3	30.0
Electrical equipment, appliances, and components	335	3,925	29.8	5.9	27.8	20.0
Transportation equipment	336	7,325	28.0	5.9	20.8	10.3
Automobiles, bodies, trailers, and parts	3361–63	4,494	28.8	6.0	21.7	10.7
Aerospace products and parts	3364	1,044	37.9	7.9	26.5	14.6
Other transportation	other 336	1,787	20.1	4.5	15.1	6.9
Furniture and related products	337	12,060	23.8	2.1	10.6	2.7
Miscellaneous	339	20,536	26.2	4.2	16.7	7.7
Medical equipment and supplies	3391	7,602	28.5	4.7	19.4	9.7
Other miscellaneous manufacturing	3399	12,933	24.8	3.9	15.1	6.5
Nonmanufacturing industries	11, 21–23, 42–81	4,665,645	17.9	1.7	10.0	3.1
Agriculture, forestry, fishing, and hunting	11	19,567	17.9	0.0	7.0	2.1
Mining, extraction, and support activities	21	14,004	19.4	1.6	8.3	1.7
Utilities	22	2,994	19.9	2.0	10.5	5.1
Construction	23	635,568	14.1	0.8	6.3	1.4
Wholesale trade	42	241,440	16.9	2.9	9.9	3.8
Retail trade	44–45	546,067	15.8	1.8	8.0	2.2
Transportation and warehousing	48–49	165,454	16.2	0.8	7.6	2.4
Information	51	65,445	25.0	5.1	21.2	16.5
Publishing	511	17,755	24.5	7.3	26.6	28.7
Newspaper, periodical, book, and directory publishers	5111	9,162	22.3	3.8	12.2	5.6
Software publishers	5112	8,589	26.7	10.9	41.9	53.4
Telecommunications	517	7,319	30.6	3.9	19.8	5.5

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Data processing, hosting, and related services	518	8,346	27.7	4.9	32.9	34.0
Other information	other 51	32,027	23.3	4.3	15.6	7.7
Finance and insurance	52	198,128	21.2	1.6	14.6	3.5
Real estate and rental and leasing	53	283,276	15.0	1.0	8.4	1.6
Lessors of nonfinancial intangible assets (except copyrighted works)	533	1,956	17.4	11.4 r	11.0	5.3 r
Other real estate and rental and leasing	other 53	281,321	15.0	0.9	8.4	1.5
Professional, scientific, and technical services	54	717,229	25.9	2.6	18.1	7.9
Legal services	5411	152,543	25.0	1.4	18.1	1.7
Accounting, tax preparation, bookkeeping, and payroll services	5412	109,075	39.0	2.4	17.4	2.6
Architectural, engineering, and related services	5413	87,994	29.6	2.4	19.4	8.2
Specialized design services	5414	29,258	21.8	1.6	11.7	3.9
Computer systems design and related services	5415	100,282	22.9	3.5	27.6	25.1
Management, scientific, and technical consulting services	5416	144,421	18.6	2.8	14.5	6.9
Scientific research and development services	5417	11,149	27.9	17.2	33.3	31.4
Advertising, public relations, and related services	5418	28,236	20.3	3.0	14.1	5.9
Other professional, scientific, and technical services	5419	54,270	25.3	2.1	12.0	4.4
Management of companies and enterprises	55	3,153	20.1	3.8 r	10.3	5.9
Administrative and support and waste management and remediation services	56	293,539	15.2	1.1	7.9	2.3
Educational services	61	57,078	16.9	2.9	14.0	3.9
Health care and social assistance	62	536,276	21.8	1.7	11.5	2.0
Health care services	621-23	469,939	22.9	1.8	12.0	2.0
Social assistance	624	66,336	13.8	1.3	8.4	1.9
Arts, entertainment, and recreation	71	89,491	15.5	2.7	7.6	1.7
Accommodation and food services	72	455,071	11.8	1.4	5.4	1.5
Other services	81	341,869	18.1	1.4	6.5	1.5

r = relative standard error > 50%.

NAICS = 2017 North American Industry Classification System.

Note(s):

Detail may not add to total because of rounding or unavailable NAICS detail for select records beyond the 4-digit industry classification. Industry classification is based on dominant establishment payroll. Statistics are representative of companies located in the United States.

Source(s):

National Center for Science and Engineering Statistics and Census Bureau, 2022 Annual Business Survey: Data Year 2021.