

TABLE 25

Foreign R&D paid for by the company and others and performed by the company, by type of R&D, selected industry, and location: 2022

(Millions of U.S. dollars)

Industry and location	NAICS code	Total foreign R&D performance	Research (basic and applied)	Development
All locations				
All industries	21-23, 31-33, 42-81	149,584	25,331	124,254
Manufacturing industries	31-33	84,419	15,462	68,957
Chemicals	325	25,061	7,484	17,577
Pharmaceuticals and medicines	3254	22,266	6,803	15,463
Computer and electronic products	334	35,536	4,680	30,856
Semiconductor and other electronic components	3344	21,784	2,372	19,411
Nonmanufacturing industries	21-23, 42-81	65,165	9,868	55,297
Information	51	36,948	3,550	33,398
Software publishers	5112	12,330	1,176	11,155
Professional, scientific, and technical services	54	19,028	5,240	13,788
Scientific research and development services	5417	13,571	4,089	9,481
Africa				
All industries	21-23, 31-33, 42-81	633	130	502
Manufacturing industries	31-33	257	66	191
Chemicals	325	67	24	43
Pharmaceuticals and medicines	3254	58	23	35
Computer and electronic products	334	7	2	5
Semiconductor and other electronic components	3344	D	*	D
Nonmanufacturing industries	21-23, 42-81	375	64	311
Information	51	84	5	79
Software publishers	5112	43	3	40
Professional, scientific, and technical services	54	202	41	161
Scientific research and development services	5417	178	36	142
Asia and Pacific				
All industries	21-23, 31-33, 42-81	52,070	7,581	44,489
Manufacturing industries	31-33	30,784	4,942	25,842
Chemicals	325	5,861	1,760	4,102
Pharmaceuticals and medicines	3254	5,106	1,595	3,512
Computer and electronic products	334	17,658	2,243	15,416
Semiconductor and other electronic components	3344	12,245	1,225	11,020
Nonmanufacturing industries	21-23, 42-81	21,287	2,640	18,647
Information	51	12,046	1,042	11,005
Software publishers	5112	4,956	431	4,525
Professional, scientific, and technical services	54	5,352	1,192	4,159
Scientific research and development services	5417	3,677	814	2,863
Canada				
All industries	21-23, 31-33, 42-81	11,083	1,863	9,220
Manufacturing industries	31-33	5,054	872	4,182
Chemicals	325	1,043	276	767
Pharmaceuticals and medicines	3254	983	263	720
Computer and electronic products	334	2,209	242	1,967
Semiconductor and other electronic components	3344	1,303	96	1,207
Nonmanufacturing industries	21-23, 42-81	6,029	990	5,038
Information	51	3,735	342	3,393
Software publishers	5112	1,562	127	1,435
Professional, scientific, and technical services	54	1,427	556	871
Scientific research and development services	5417	788	453	335
Europe				

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All industries	21-23, 31-33, 42-81	68,744	13,280	55,464	
Manufacturing industries	31-33	37,703	8,107	29,596	
Chemicals	325	16,310	4,921	11,389	
Pharmaceuticals and medicines	3254	14,592	4,490	10,102	
Computer and electronic products	334	9,710	1,526	8,184	
Semiconductor and other electronic components	3344	4,174	602	3,572	i
Nonmanufacturing industries	21-23, 42-81	31,041	5,172	25,869	i
Information	51	17,195	1,735	15,460	
Software publishers	5112	4,393	419	3,973	
Professional, scientific, and technical services	54	10,218	2,951	7,267	i
Scientific research and development services	5417	8,089	2,592	5,497	i
Latin America and other Western Hemisphere ^a					
All industries	21-23, 31-33, 42-81	5,945	940	5,005	i
Manufacturing industries	31-33	4,103	677	3,425	i
Chemicals	325	1,156	308	848	
Pharmaceuticals and medicines	3254	991	279	712	
Computer and electronic products	334	1,364	169	1,195	i
Semiconductor and other electronic components	3344	739	85	653	i
Nonmanufacturing industries	21-23, 42-81	1,842	262	1,580	i
Information	51	699	44	656	
Software publishers	5112	D	D	115	
Professional, scientific, and technical services	54	853	185	667	i
Scientific research and development services	5417	650	163	487	i
Middle East					
All industries	21-23, 31-33, 42-81	10,429	1,370	9,059	i
Manufacturing industries	31-33	6,001	663	5,338	i
Chemicals	325	460	129	331	
Pharmaceuticals and medicines	3254	428	122	306	
Computer and electronic products	334	4,538	477	4,061	i
Semiconductor and other electronic components	3344	3,319	364	2,955	i
Nonmanufacturing industries	21-23, 42-81	4,428	707	3,721	
Information	51	3,143	381	2,762	
Software publishers	5112	1,244	186	1,057	
Professional, scientific, and technical services	54	893	293	601	
Scientific research and development services	5417	177	26	151	i
Puerto Rico ^b					
All industries	21-23, 31-33, 42-81	271	83	188	
Manufacturing industries	31-33	257	76	180	
Chemicals	325	114	54	60	
Pharmaceuticals and medicines	3254	D	D	D	
Computer and electronic products	334	D	D	D	
Semiconductor and other electronic components	3344	D	0	D	
Nonmanufacturing industries	21-23, 42-81	14	6	8	i
Information	51	1	*	1	
Software publishers	5112	*	*	*	
Professional, scientific, and technical services	54	12	6	6	i
Scientific research and development services	5417	4	3	*	i

* = amount < \$500,000; 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.

NAICS = 2017 North American Industry Classification System.

^a Other Western Hemisphere is defined as Argentina, Brazil, Chile, Mexico, and other Latin America.

^b Puerto Rico is not included in the U.S. total due to its classification as a U.S. territory.

Note(s):

Detail within a select location may not add to total because of rounding. Sum of locations does not equal all locations due to the undistributed portion not being published. 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. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&D and also performed foreign 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.