

Table 8-3

Business enterprise research and development personnel — By industry and by occupational category, 2013<sup>a</sup>

	Research and development professionals	Research and development technicians and technologists	Research and development other support staff	Total research and development personnel
	number			
<b>Total all industries</b>	<b>89,165<sup>A</sup></b>	<b>33,551<sup>A</sup></b>	<b>9,615<sup>A</sup></b>	<b>132,331<sup>A</sup></b>
<b>Agriculture, forestry, fishing and hunting</b>	<b>507<sup>A</sup></b>	<b>414<sup>A</sup></b>	<b>103<sup>A</sup></b>	<b>1,024<sup>A</sup></b>
Agriculture	421 <sup>A</sup>	368 <sup>A</sup>	86 <sup>A</sup>	874 <sup>A</sup>
Forestry, logging and support activities for forestry	48 <sup>A</sup>	20 <sup>A</sup>	11 <sup>A</sup>	80 <sup>A</sup>
Fishing, hunting, trapping and animal aquaculture	38 <sup>A</sup>	26 <sup>A</sup>	6 <sup>A</sup>	70 <sup>A</sup>
<b>Mining, quarrying, and oil and gas extraction</b>	<b>1,087<sup>A</sup></b>	<b>446<sup>A</sup></b>	<b>307<sup>A</sup></b>	<b>1,840<sup>A</sup></b>
Oil and gas extraction, contract drilling and related services	775 <sup>A</sup>	280 <sup>B</sup>	235 <sup>B</sup>	1,290 <sup>A</sup>
Mining and quarrying, contract drilling and related support activities	312 <sup>A</sup>	166 <sup>A</sup>	73 <sup>A</sup>	550 <sup>A</sup>
<b>Utilities</b>	<b>845<sup>E</sup></b>	<b>F</b>	<b>161<sup>E</sup></b>	<b>1,328<sup>D</sup></b>
Electric power generation, transmission and distribution	718 <sup>E</sup>	x	x	1,016 <sup>E</sup>
Other utilities	128 <sup>A</sup>	x	x	311 <sup>A</sup>
<b>Construction</b>	<b>614<sup>A</sup></b>	<b>386<sup>A</sup></b>	<b>72<sup>A</sup></b>	<b>1,072<sup>A</sup></b>
<b>Manufacturing</b>	<b>33,703<sup>A</sup></b>	<b>14,709<sup>A</sup></b>	<b>5,167<sup>A</sup></b>	<b>53,579<sup>A</sup></b>
Food manufacturing	815 <sup>A</sup>	649 <sup>A</sup>	269 <sup>A</sup>	1,733 <sup>A</sup>
Beverage and tobacco product manufacturing	55 <sup>A</sup>	45 <sup>A</sup>	6 <sup>B</sup>	105 <sup>A</sup>
Textile mills and textile product mills	151 <sup>A</sup>	175 <sup>A</sup>	48 <sup>A</sup>	374 <sup>A</sup>
Wood product manufacturing	218 <sup>A</sup>	215 <sup>A</sup>	35 <sup>B</sup>	467 <sup>A</sup>
Paper manufacturing	277 <sup>A</sup>	290 <sup>A</sup>	83 <sup>A</sup>	649 <sup>A</sup>
Printing and related support activities	301 <sup>A</sup>	395 <sup>A</sup>	54 <sup>A</sup>	749 <sup>A</sup>
Petroleum and coal products manufacturing	166 <sup>A</sup>	37 <sup>A</sup>	4 <sup>A</sup>	207 <sup>A</sup>
Pharmaceutical and medicine manufacturing	1,582 <sup>A</sup>	1,348 <sup>A</sup>	192 <sup>A</sup>	3,122 <sup>A</sup>
Other chemicals manufacturing	1,137 <sup>A</sup>	510 <sup>A</sup>	110 <sup>A</sup>	1,757 <sup>A</sup>
Plastic product manufacturing	761 <sup>A</sup>	600 <sup>A</sup>	121 <sup>A</sup>	1,482 <sup>A</sup>
Rubber product manufacturing	153 <sup>A</sup>	61 <sup>B</sup>	F	220 <sup>B</sup>
Non-metallic mineral product manufacturing	275 <sup>A</sup>	195 <sup>A</sup>	32 <sup>B</sup>	503 <sup>A</sup>
Primary metal (ferrous) manufacturing	117 <sup>A</sup>	x	x	243 <sup>A</sup>
Primary metal (non-ferrous) manufacturing	319 <sup>A</sup>	x	x	524 <sup>A</sup>
Fabricated metal product manufacturing	1,331 <sup>A</sup>	1,180 <sup>A</sup>	230 <sup>B</sup>	2,740 <sup>A</sup>
Machinery manufacturing	3,552 <sup>A</sup>	2,331 <sup>A</sup>	478 <sup>A</sup>	6,362 <sup>A</sup>
Computer and peripheral equipment manufacturing	483 <sup>A</sup>	x	x	680 <sup>A</sup>
Communications equipment manufacturing	7,788 <sup>A</sup>	481 <sup>A</sup>	360 <sup>A</sup>	8,628 <sup>A</sup>
Semiconductor and other electronic component manufacturing	2,857 <sup>A</sup>	758 <sup>A</sup>	200 <sup>A</sup>	3,815 <sup>A</sup>
Navigational, measuring, medical and control instrument manufacturing	3,006 <sup>A</sup>	733 <sup>A</sup>	156 <sup>A</sup>	3,894 <sup>A</sup>
Other computer and electronic products manufacturing	302 <sup>A</sup>	x	x	371 <sup>A</sup>
Electrical equipment, appliance and component manufacturing	1,075 <sup>A</sup>	659 <sup>A</sup>	109 <sup>B</sup>	1,843 <sup>D</sup>
Motor vehicle and parts manufacturing	1,057 <sup>A</sup>	581 <sup>A</sup>	237 <sup>A</sup>	1,875 <sup>A</sup>
Aerospace products and parts manufacturing	3,535 <sup>A</sup>	x	x	7,015 <sup>A</sup>
All other transportation equipment manufacturing	968 <sup>A</sup>	381 <sup>A</sup>	161 <sup>A</sup>	1,510 <sup>A</sup>
Furniture and related product manufacturing	211 <sup>A</sup>	218 <sup>A</sup>	52 <sup>A</sup>	481 <sup>A</sup>
Other manufacturing industries	1,214 <sup>A</sup>	826 <sup>A</sup>	189 <sup>A</sup>	2,229 <sup>A</sup>
<b>Services</b>	<b>52,409<sup>A</sup></b>	<b>17,275<sup>A</sup></b>	<b>3,805<sup>A</sup></b>	<b>73,489<sup>A</sup></b>
Wholesale trade	7,430 <sup>A</sup>	1,954 <sup>A</sup>	747 <sup>A</sup>	10,132 <sup>A</sup>
Retail trade	571 <sup>A</sup>	399 <sup>A</sup>	65 <sup>A</sup>	1,034 <sup>A</sup>
Transportation and warehousing	426 <sup>A</sup>	168 <sup>A</sup>	25 <sup>A</sup>	619 <sup>A</sup>
Information and cultural industries	8,903 <sup>A</sup>	3,635 <sup>A</sup>	540 <sup>A</sup>	13,078 <sup>A</sup>
Finance, insurance and real estate	1,414 <sup>A</sup>	325 <sup>C</sup>	43 <sup>B</sup>	1,783 <sup>B</sup>
Architectural, engineering and related services	3,718 <sup>A</sup>	1,068 <sup>A</sup>	305 <sup>A</sup>	5,090 <sup>A</sup>
Computer systems design and related services	12,801 <sup>A</sup>	4,046 <sup>A</sup>	532 <sup>A</sup>	17,379 <sup>A</sup>
Management, scientific and technical consulting services	885 <sup>A</sup>	316 <sup>A</sup>	50 <sup>A</sup>	1,250 <sup>A</sup>
Scientific research and development services	11,631 <sup>A</sup>	3,399 <sup>A</sup>	997 <sup>A</sup>	16,028 <sup>A</sup>
Health care and social assistance	860 <sup>A</sup>	294 <sup>A</sup>	84 <sup>A</sup>	1,238 <sup>A</sup>
All other services	3,768 <sup>A</sup>	1,672 <sup>A</sup>	418 <sup>B</sup>	5,858 <sup>A</sup>

**Note(s):** Components may not add to totals due to rounding. Personnel counts are reported as full-time equivalent.