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Economics and Statistics Administration
U.S. CENSUS BUREAU

FORM

BRDI-1 (12-17-2008) Draft 18

2008 BUSINESS R&D AND INNOVATION SURVEY

OMB No. 0607-0912: Approval Expires 10/31/2011

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- Write to the address above. Include your 11-digit ID printed on the mailing label.

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(Please correct any errors in this mailing address)

Your Response is Required by Law

Title 13, United States Code, requires businesses and other organizations that receive this questionnaire to answer the questions and return the report to the Census Bureau.

Respondents are not required to respond to any information collection unless it displays a valid approval number from the Office of Management and Budget (OMB). The OMB number appears at the top of this page.

Your Response is Confidential by Law

Title 13, United States Code, requires that your response be seen only by persons sworn to uphold the confidentiality of Census Bureau information and may be used only for statistical purposes. The law also provides that copies retained in your company's files are immune from legal process.

Thank You – Your Response is Important

The Business R&D and Innovation Survey will provide valuable information for U.S. policy makers as well as industry and academic data users. Better information about R&D and innovation in the U.S. business sector will help leaders make better decisions to strengthen American competitiveness.

Accurate and timely statistical information could not be produced without your continued cooperation and goodwill. Thank you.

~ This survey is jointly conducted by the U.S. Census Bureau and the National Science Foundation ~



Table of Contents

What does this survey ask?

This survey asks questions about your company's **R&D expenses** as well as R&D that is paid for by customers, the government, and other organizations that are not owned by your company (**funded R&D**). This survey also requests data on your company's R&D employees and intellectual property.

The Business R&D and Innovation Survey is divided into six sections. Each section asks questions about different aspects of R&D at your company. Due to the specialized nature of each section, it may be necessary to collaborate with colleagues in different departments within your company for each section. The sections are color-coded and cover the following topical areas:

Section 1: Company Information	p.3
<ul style="list-style-type: none"> Asks for information about your company's ownership, business(es), and revenue All companies must complete this section to determine whether they are required to complete the rest of the survey 	
Section 2: R&D Paid for by Your Company (R&D Expense)	p.11
<ul style="list-style-type: none"> Asks for information about your company's R&D expense and capital expenditures for R&D Best answered by persons with knowledge of your company's accounting concepts and with access to financial records 	
Section 3: Management and Strategy of R&D Expense	p.21
<ul style="list-style-type: none"> Asks for strategic and technical information about your company's R&D expense reported in Section 2 Best answered by persons with first-hand knowledge of R&D operations, such as a VP of research 	
Section 4: R&D Funded or Paid for by Others	p.29
<ul style="list-style-type: none"> Asks for information about R&D that is paid for by others, such as that paid for by customers or partners Best answered by persons with knowledge of your company's financial records related to contracts and grants 	
Section 5: R&D Human Resources	p.43
<ul style="list-style-type: none"> Asks for information about your company's R&D employees Best answered by persons with knowledge of your company's human resources records 	
Section 6: Intellectual Property, Technology Transfer, and Innovation	p.49
<ul style="list-style-type: none"> Asks for information about intellectual property, patents, technology transfer activities such as patent licensing, and actions taken to improve company performance Best answered by persons with knowledge of your company's patenting, licensing, and general business strategy 	

Are electronic copies of this survey form available?

You can download PDF copies of this survey from our website: www.census.gov/econhelp/brdis.

Downloaded forms are for coordination purposes only and should not be returned to the Census Bureau because they lack the unique barcodes that appear on the form that was mailed to your company.



SECTION 1
Company Information



General Instructions

What is Research and Development (R&D)?

R&D is planned, creative work aimed at discovering new knowledge or developing new or significantly improved goods and services. It includes 1) activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use (basic research); 2) activity aimed at solving a specific problem or meeting a specific commercial objective (applied research); and 3) systematic use of research and practical experience to produce new or significantly improved goods, services, or processes (development).

The term Research and Development does **not** include expenditures for:

- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Market research
- Efficiency surveys or management studies
- Literary, artistic, or historical projects, such as films, music, or books and other publications
- Prospecting or exploration for natural resources

Can I file this survey electronically?

Yes. You may submit your report by mail or electronically via Census Taker, a web-based form.

How to file electronically

- (1) Go to www.census.gov/econhelp/brdis
- (2) Click on Report Online
- (3) Follow the online instructions to log in and respond to this survey

Advantages

- Reduced time and expense to report
- Improved quality through automatic data checks
- Data are saved to secure Census Bureau servers as you complete the form. You can exit the form and resume at a later time without losing your data.
- Save a paper or electronic version of your completed form

Security

- Your information is encrypted at all times
- No cookies are used
- No plug-ins or downloaded software is required

How do I obtain additional information?

Our website www.census.gov/econhelp/brdis has the following information:

- More detailed general information about the Business R&D and Innovation Survey
- Frequently asked questions
- Sample questionnaires
- Worksheets for each section in a format that can be saved and emailed

How do I obtain copies of the final data reports?

Data from this survey, as well as other sources of information on science and technology, are available at the National Science Foundation's website: www.nsf.gov/statistics/.

How should dollar amounts be reported?

Report all dollar amounts rounded to the nearest thousand.

	\$Bil.	Mil.	Thou.
Example: If figure is \$179,125,628.00 report:		1 7 9	1 2 6

To speak with a survey analyst, call 1-800-772-7851, option "5" (8 a.m. – 5 p.m. EST, M-F)



Business Codes

1•5

Do the business code(s) listed below reflect all applicable codes from the list on pages 8-9 in which your company operated worldwide during 2008?

Why are these codes needed?

The codes below are needed to report your sales for Question 1-8. They are also used in Section 2 and Section 4 to collect R&D information.

How did we decide on these codes for your company?

We selected the codes using payroll and receipts data contained in our database for your company's domestic establishments and research on your company's global businesses. The codes and descriptions are based on groups of industries from the North American Industry Classification System (NAICS) selected specifically for this form.

NOTE: If you have no business codes printed below, please refer to the list on pages 8-9 and write in the codes that apply to your company.

☐ Yes → **Continue with Question 1•6**

☐ No → **Draw a line through codes that are incorrect. As needed, enter additional codes and descriptions from pages 8 and 9 in the spaces provided.**

Business Code (see pages 8-9)	Description

1•6

What was the amount of your company's worldwide net sales and operating revenues—the value of goods and services sold during the year, net of discounts, returns, and allowances—during 2008?

Include:

- Sales and operating revenues for discontinued operations

Exclude:

- Non-operating income (i.e. dividends, interest)
- Excise, sales, and other revenue based taxes

\$Bil.	Mil.	Thou.



1•7 How much of the 2008 worldwide net sales and operating revenues reported in Question 1•6 was from domestic operations?

Include:

- Operating revenues and sales to foreign subsidiaries

\$Bil.	Mil.	Thou.

1•8 How much of the 2008 sales and operating revenue amounts was for each business code listed or amended on page 6 of this form:

(1) Worldwide net sales and operating revenues reported in Question 1•6

(2) Domestic net sales and operating revenues reported in Question 1•7

	Business Code (see page 6)	(1) Worldwide sales and revenues			(2) Domestic sales and revenues		
		\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.
a.							
b.							
c.							
d.							
e.							
f.							
g.							
h.							
i.	Less eliminations—sales and revenues that are eliminated in order to consolidate the business codes.						
j.	Total						

Total equals Question 1•6

Total equals Question 1•7

1•9 Approximately how long did it take to complete Section 1?

Hours



Business codes

(used in Sections 1, 2, and 4)

Aerospace & Defense

- 33641 Aircraft manufacturing
- 33642 Aircraft engine and engine parts manufacturing
- 33643 Other aircraft parts and auxiliary equipment manufacturing
- 33644 Guided missiles, space vehicles, and parts manufacturing
- 33692 Military armored vehicle, tank, and tank components manufacturing
- 33452 Search, detection, navigation, guidance, aeronautical, and nautical system and instruments manufacturing
- 33660 Ship and boat building

Automobiles, Motorcycles, & Components

- 33610 Motor vehicles manufacturing
- 33620 Motor vehicle body and trailer manufacturing
- 33630 Motor vehicle parts manufacturing
- 33691 Motorcycle, bicycle, and parts manufacturing
- 33699 All other transportation equipment manufacturing

Capital Goods

- 33430 Audio and video equipment manufacturing
- 33330 Commercial, service industry, temperature control, and airflow control machinery manufacturing
- 33312 Construction machinery manufacturing
- 23600 Construction of buildings
- 33360 Engine, turbine, and power transmission equipment manufacturing
- 33200 Fabricated metal products manufacturing
- 33311 Farm machinery and equipment manufacturing
- 23700 Heavy and civil engineering construction
- 33322 Industrial machinery manufacturing, except semiconductor machinery
- 33390 Metalworking and other general purpose machinery manufacturing
- 33313 Mining machinery and equipment manufacturing
- 33651 Railroad rolling stock manufacturing
- 33660 Ship and boat building
- 23800 Specialty trade contractors

Commercial and Professional Services (including contract research)

- 54120 Accounting, tax preparation, bookkeeping, and payroll services
- 54180 Advertising and related services
- 54130 Architectural, engineering, and related services
- 56140 Business support services
- 53240 Commercial and industrial machinery and equipment rental and leasing
- 54110 Legal services
- 54160 Management, scientific, and technical consulting services
- 56190 Office administrative, facilities, employment, and other support services
- 32300 Printing and related support activities
- 56290 Remediation and other waste management services
- 54170 Research & development services
- 54140 Specialized design services
- 56150 Travel arrangement and reservation services

Consumer Goods & Services

- 71300 Amusement, gambling, and recreation industries
- 31500 Apparel manufacturing
- 33430 Audio and video equipment manufacturing
- 81110 Automotive repair and maintenance
- 31210 Beverage manufacturing
- 51520 Cable and other subscription programming (except Internet)
- 62440 Child day care services
- 44800 Clothing and clothing accessories stores
- 23600 Construction of buildings
- 53220 Consumer goods and general rental centers
- 61100 Educational services
- 33500 Electrical equipment, appliances, and components manufacturing
- 45410 Electronic shopping and mail-order houses
- 44300 Electronics and appliance stores
- 44500 Food and beverage stores
- 31100 Food manufacturing
- 72200 Food services and drinking places
- 33700 Furniture and related products manufacturing
- 45200 General merchandise stores
- 51600 Internet publishing and broadcasting
- 56160 Investigation, security, and services to buildings and dwellings
- 31600 Leather and allied products manufacturing
- 51200 Motion picture and sound recording (except Internet)
- 44100 Motor vehicle and parts dealers
- 51110 Newspaper, periodical, book, and directory publishers (except internet)
- 81200 Personal care, death care, laundry, and other personal services
- 51510 Radio and television broadcasting (except Internet)
- 81190 Repair and maintenance, except automotive
- 32591 Soap, cleaning compound, and toilet preparations manufacturing
- 62400 Social assistance (except child day care services)
- 31300 Textile mill products
- 31220 Tobacco manufacturing
- 72100 Traveler accommodation services

Energy

- 21210 Coal mining
- 22110 Electric power generation, transmission, and distribution
- 21100 Oil and gas extraction
- 33313 Oil and gas field machinery and equipment manufacturing
- 32400 Petroleum and coal products manufacturing
- 48610 Pipeline transportation of crude oil, refined petroleum, and miscellaneous products, except natural gas
- 56150 Travel arrangement and reservation services

Financials

- 52230 Activities related to credit intermediation
- 52420 Agencies, brokerages, and other insurance related activities
- 52210 Depository credit intermediation
- 52500 Funds, trusts, and other financial vehicles
- 52410 Insurance carriers
- 52100 Monetary authorities-central bank
- 52220 Nondepository credit intermediation



53100 Real estate
52300 Securities, commodity contracts, and other financial investments and related activities

Health Care

33451 Electromedical, electrotherapeutic and irradiation apparatus manufacturing
62210 General medical and surgical hospitals
62160 Home health care services
32543 In-vitro diagnostic substances manufacturing
62150 Medical and diagnostic laboratories
33910 Medical equipment and supplies manufacturing
62300 Nursing and residential care facilities
62120 Offices of dentists and other health practitioners
62110 Offices of physicians
62190 Outpatient care centers and other ambulatory health care services
32541 Pharmaceutical, medicinal, botanical, and biological products (except diagnostic) manufacturing
62220 Psychiatric, substance abuse, and specialty hospitals
54170 Research & development services

Information Technology - Goods and Services

33429 Communication equipment manufacturing, except broadcasting, wireless, and telephone apparatus
54150 Computer systems design and related services
33410 Computers and peripheral equipment manufacturing
51820 Data processing, hosting, and related services
33500 Electrical equipment, appliances, and components manufacturing
51900 Information services (not elsewhere listed in this category)
51810 Internet service providers and web search portals
33460 Manufacturing and reproducing magnetic and optical media manufacturing
33459 Measuring and control instruments manufacturing (not listed elsewhere in this category)
33422 Radio and television broadcasting and wireless communications equipment manufacturing
33452 Search, detection, navigation, guidance, aeronautical, and nautical system and instruments manufacturing
33440 Semiconductor and other electronic components manufacturing
33321 Semiconductor machinery manufacturing
51120 Software
33421 Telephone apparatus manufacturing

Materials

32511 Basic chemicals manufacturing
32790 Cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing
32710 Clay and glass products manufacturing
33150 Ferrous and nonferrous foundries
33110 Iron and steel mills, ferroalloy, and steel product from purchased steel
21220 Metal ore mining
33130 Nonferrous metals production and processing
21230 Nonmetallic mineral mining and quarrying

32592 Paint, adhesive, and other chemical manufacturing
32200 Paper manufacturing
32530 Pesticide, fertilizer, and other agricultural chemical manufacturing
32600 Plastics and rubber products manufacturing
32512 Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing
32591 Soap, cleaning compound, and toilet preparations manufacturing
21310 Support activities for solid mineral operations
32100 Wood products manufacturing

Telecommunication Service

51750 Cable and other program distribution
51740 Satellite telecommunications
51710 Wired telecommunications carriers
51720 Wireless telecommunications carriers (except satellite)
51790 Telecommunications services (not listed elsewhere)

Transportation

48100 Air transportation
53210 Automotive equipment rental and leasing
49200 Couriers and messengers
48200 Rail transportation
48700 Scenic and sightseeing transportation
48800 Support activities for transportation
48500 Transit and ground passenger transportation
48400 Truck transportation
49300 Warehousing and storage
48300 Water transportation

Utilities

22110 Electric power generation, transmission, and distribution
22120 Natural gas distribution
56290 Remediation and other waste management services
56210 Waste collection, treatment, and disposal
22130 Water, sewage, and other systems

Business Codes Not Elsewhere Classified

53300 Lessors of nonfinancial intangible assets
55100 Management of companies and enterprises
42300 Merchant wholesalers, durable goods
42400 Merchant wholesalers, nondurable goods
33990 Miscellaneous manufacturing (not listed elsewhere)
71200 Museums, historical sites, and similar institutions
45490 Nonstore retailers, except electronic shopping and mail-order houses
71100 Performing arts, spectator sports, and related industries
54190 Professional, scientific, and technical services (not listed elsewhere)
45990 Retail trade stores, including gasoline stations (not listed elsewhere)
42500 Wholesale electronic markets and agents and brokers



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SECTION 2

R&D Paid for by Your Company (R&D Expense)

Who should answer this section?

Persons familiar with accounting concepts and with access to financial records related to your company’s R&D activities should complete this section.



SECTION 2 – R&D Paid for by Your Company (R&D Expense)

What does this section cover?

This section requests financial information about your company's R&D expenses and capital expenditures for R&D. This section requests information about your company's R&D at multiple levels of detail: for your worldwide consolidated enterprise, for units or parts of your company defined by geography (countries, states, specific location), and for parts of your company defined by business code.

What is the reporting unit?

The reporting unit is your company, including all subsidiaries and divisions. Include operations of subsidiary companies where there is more than 50 percent ownership. Also, include data for discontinued operations.

NOTE: If your company is owned by a non-U.S. company, do not include data for your foreign owner or for any other affiliated companies not owned by your company.

What does "R&D performed by your company" mean?

This section uses two different concepts to collect information about your company's R&D: an accounting concept, R&D expense, and a physical concept, R&D performed by your company. The amount of R&D reported using these two concepts may differ.

Report R&D expense according to accounting definitions used by your company. For more information refer to Financial Accounting Standards Board (FASB) Statement of Accounting Standards No. 2 (Accounting for Research and Development Costs). For this survey, report R&D expense even if the amount is not considered material to your company.

R&D performed by your company includes all costs for R&D performed by your company's full-time, part-time, and temporary employees. It excludes costs for R&D performed by others not owned by your company, such as contract research organizations, universities, and federal laboratories.

What do the terms "worldwide" and "domestic" mean?

The term "worldwide" refers to all geographic locations, including the United States. The term "domestic" refers to the 50 United States and the District of Columbia only.

How should dollar amounts be reported?

Report all dollar amounts rounded to the nearest thousand.

	\$Bil.	Mil.	Thou.
Example: If figure is \$179,125,628.00 report:		1 7 9	1 2 6

Are estimates acceptable?

Yes, estimates are acceptable. Please report all items to the best of your ability.

How should I answer a question that does not apply to my company?

Enter "0" if a question or category does not apply to your company.

What time period should be reported?

Report data for calendar year 2008, if possible, or for your company's fiscal year ending between April 2008 and March 2009.

NOTE: If your company was either purchased or ceased operations between April 1 and December 31, 2008, complete the survey for the time period from January 1, 2008 to the date of purchase or the date your company ceased operations.

To speak with a survey analyst, call 1-800-772-7851, option "5" (8 a.m. – 5 p.m. EST, M-F)



2•1**What was the total worldwide R&D expense for your company (including all domestic R&D expenses) in 2008?****Include:**

- R&D expenses for all foreign and domestic subsidiaries and divisions owned by your company
- R&D services purchased from others, including medical clinical trials
- R&D in social sciences—the application of scientific methods to the study of the human aspects of the world, including such disciplines as economics and psychology
- R&D expenses for discontinued operations

Exclude:

- R&D costs paid for by others not owned by your company (these costs are reported in Section 4), such as:
 - Costs for customer-sponsored R&D
 - Costs associated with contract services your company provides to others
 - Costs for R&D funded by government grants/contracts
 - Costs reimbursed by business partners, such as through cost-sharing agreements
- R&D costs paid for by your foreign owner, if your company is foreign-owned
- Capital expenditures for R&D (report domestic capital expenditures for R&D in Question 2•15)
- Market and advertising research
- R&D from acquired companies prior to acquisition (in-process R&D)
- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Independent research and development (IR&D) costs for which your company anticipates reimbursement by the U.S. federal government through indirect charges on government contracts (these costs are reported in Section 4)

\$Bil.	Mil.	Thou.

2•2**Was the amount entered in Question 2•1 greater than zero?**

- ☐ Yes → **Continue with Question 2•3**
- ☐ No → **Skip to Section 4**

2•3**How much of the 2008 worldwide R&D expense reported in Question 2•1 was for R&D performed by your company and how much was for R&D performed by others not owned by your company?**

a. R&D performed by your company.

Include:

- All costs for R&D performed by your company's full-time, part-time, and temporary employees

b. R&D performed by others not owned by your company, such as contract research organizations, universities, and government labs.

Include:

- If your company is foreign-owned, include your R&D expense that paid for R&D performed by your foreign owner

c. **Total** (equals Question 2•1)

\$Bil.	Mil.	Thou.

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2•4

How much of the 2008 worldwide R&D expense reported in Question 2•1 was for gross annual payroll—wages and salaries of employees excluding the cost of fringe benefits?

\$Bil.	Mil.	Thou.

2•5

How much of the worldwide R&D expense for R&D performed by others not owned by your company, reported in Question 2•3, line b, was performed by the following types of organizations?

- a. Companies located inside the United States
- b. Companies located outside the United States
- c. U.S. federal government agencies or laboratories.
- d. U.S. state and local government agencies or laboratories.
- e. Foreign government agencies or laboratories.
- f. Universities, colleges, and academic researchers (including principal investigators) located inside the United States
- g. Universities, colleges, and academic researchers (including principal investigators) located outside the United States
- h. All other organizations
- i. **Total R&D performed by others** (equals Question 2•3, line b).

\$Bil.	Mil.	Thou.

2•6

How much of the R&D performed by your company in 2008 reported in Question 2•3, line a, was performed in the countries listed below?

R&D performed by your company by country should reflect the actual location where your company performed R&D.

- a. United States (domestic).
- b. Puerto Rico.
- c. Canada.
- d. China
- e. France.
- f. Germany.
- g. India.
- h. Ireland
- i. Israel.
- j. Italy.
- k. Japan.
- l. Russia.
- m. Singapore.
- n. South Korea

\$Bil.	Mil.	Thou.

\$Bil.	Mil.	Thou.

Question continues on next page



2•6 (Continued)

	\$Bil.	Mil.	Thou.
o. Sweden			

	\$Bil.	Mil.	Thou.
p. United Kingdom			

	\$Bil.	Mil.	Thou.
q. All other			

	\$Bil.	Mil.	Thou.
r. Total (equals Question 2-3, line a).			

2•7 How much of the domestic R&D performed by your company in 2008 reported in Question 2•6, line a, was paid for by your company's foreign operations or foreign subsidiaries?

	\$Bil.	Mil.	Thou.

2•8 How much of the domestic R&D performed by your company reported in Question 2•6, line a, was for the following types of costs?

	\$Bil.	Mil.	Thou.
a. Gross annual payroll—wages and salaries of R&D employees and officers excluding fringe benefits			

	\$Bil.	Mil.	Thou.
b. Employer's cost for fringe benefits			

Include:

- Disability benefits
- Life and medical insurance
- Paid holidays, time off benefits, vacation, annual, sick, and maternity leave
- Retirement benefits, pension, and social security contributions

	\$Bil.	Mil.	Thou.
c. Stock-based compensation			

	\$Bil.	Mil.	Thou.
d. Temporary staffing and leased employees			

Include:

- Costs paid to Professional Employer Organizations (PEOs) and staffing agencies for personnel
- All charges for payroll, benefits, and services

	\$Bil.	Mil.	Thou.
e. Expensed equipment			

	\$Bil.	Mil.	Thou.
f. Materials and supplies			

	\$Bil.	Mil.	Thou.
g. Lease and rental payments			

	\$Bil.	Mil.	Thou.
h. Depreciation and amortization on R&D property and equipment . . .			

	\$Bil.	Mil.	Thou.
i. All other costs			

	\$Bil.	Mil.	Thou.
j. Total (equals Question 2-6, line a)			



2•9

How much of the domestic R&D performed by your company reported in Question 2•6, line a, was performed in each state (including the District of Columbia) in 2008?

	\$Bil.	Mil.	Thou.
Alabama			
Alaska			
Arizona			
Arkansas			
California			
Colorado			
Connecticut			
Delaware			
District of Columbia			
Florida			
Georgia			
Hawaii			
Idaho			
Illinois			
Indiana			
Iowa			
Kansas			
Kentucky			
Louisiana			
Maine			
Maryland			

	\$Bil.	Mil.	Thou.
Massachusetts			
Michigan			
Minnesota			
Mississippi			
Missouri			
Montana			
Nebraska			
Nevada			
New Hampshire			
New Jersey			
New Mexico			
New York			
North Carolina			
North Dakota			
Ohio			
Oklahoma			
Oregon			
Pennsylvania			
Rhode Island			
South Carolina			
South Dakota			

Question continues on next page



2•9 (Continued)

	\$Bil.	Mil.	Thou.		\$Bil.	Mil.	Thou.
Tennessee.....				Washington			
Texas				West Virginia			
Utah				Wisconsin			
Vermont				Wyoming			
Virginia				Total (equals Question 2•6, line a)			

2•10 At what domestic location did your company perform the largest dollar amount of R&D in 2008?

Address 1

Address 2

City

State

ZIP

2•11 How much of the domestic R&D performed by your company reported in Question 2•6, line a, was from the location identified in Question 2•10?

\$Bil.	Mil.	Thou.



R&D by business code

2•12 How much of the worldwide R&D expense reported in Question 2•1 was for each business code listed or amended on page 6 of this form?

Allocate R&D that is applicable to more than one business code on a reasonable basis. Allocation in proportion to operating revenues is acceptable unless some alternative allocation basis is more appropriate.

	Business Code (see page 6)	Worldwide R&D expense		
		\$Bil.	Mil.	Thou.
a.				
b.				
c.				
d.				
e.				
f.				
g.				
h.				
i.	Total (equals Question 2•1)			

2•13 How much of the worldwide R&D expense reported in Question 2•1 was a domestic R&D expense—R&D paid for by your company’s domestic operations?

\$Bil.	Mil.	Thou.



2•14 How much of the worldwide R&D expense for each business code reported in Question 2•12 was:

(1) Domestic R&D expense reported in Question 2•13

(2) Domestic R&D performed by your company reported in Question 2•6, line a

Business Code (see page 6)	(1) Domestic R&D expense			(2) Domestic R&D performed by your company		
	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.
a. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
d. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
e. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
f. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
g. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
h. <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
i. Total	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Total equals Question 2-13 Total equals Question 2-6, line a

2•15 How much of your company's domestic capital expenditures in 2008 was for R&D operations?

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>

2•16 How much of the domestic capital expenditures for R&D operations reported in Question 2•15 was for the following categories?

	\$Bil.	Mil.	Thou.
a. Structures	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. Equipment	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. Capitalized software	<input type="text"/>	<input type="text"/>	<input type="text"/>
d. All other capital expenditures for R&D operations	<input type="text"/>	<input type="text"/>	<input type="text"/>
e. Total domestic capital expenditures for R&D (equals Question 2-15).	<input type="text"/>	<input type="text"/>	<input type="text"/>



2•17 What is your company's projected 2009 worldwide R&D expense for the following categories?

NOTE: The total for this question is the 2009 projection of what is reported in question 2•1.

	\$Bil.	Mil.	Thou.
a. R&D performed by your company at domestic locations.			
b. R&D performed by your company at foreign locations			
c. R&D performed by others not owned by your company, such as contract research organizations, universities, and government labs.			
Include: • If your company is foreign-owned, include your R&D expense that paid for R&D performed by your foreign owner			
d. Total projected worldwide R&D expense for 2009			

Reporting information

2•18 Is the information in this section reported on a calendar year basis?

☐ Yes → **Continue**

☐ No → **Enter time period covered below:**

(MM)	(YYYY)	(MM)	(YYYY)
From		To	

2•19 Approximately how long did it take to complete Section 2?

Hours

2•20 Please list the names and titles of the persons who provided data for this section.

Name	Title



SECTION 3

Management and Strategy of R&D Expense

Who should answer this section?

Persons familiar with the technical, managerial, and strategic aspects of your company’s R&D should complete this section.

In order to complete this section, you will need to copy your company’s answers from Questions 2-1, 2-4, and 2-6 in Section 2 to Questions 3-1, 3-2, and 3-3.

SECTION 3



SECTION 3 – Management and Strategy of R&D Expense

What does this section cover?

This section requests information about the characteristics of the R&D expenses your company reported in Section 2. This section requests information about your company's worldwide consolidated R&D and R&D your company performs in the domestic United States. Similar information about R&D funded or paid for by others not owned by your company, such as costs for customer-sponsored R&D and R&D funded by government grants/contracts, is requested in Section 4.

What is the reporting unit?

The reporting unit is your company, including all subsidiaries and divisions. Include operations of subsidiary companies where there is more than 50 percent ownership. Also, include data for discontinued operations.

NOTE: If your company is owned by a non-U.S. company, do not include data for your foreign owner or for any other affiliated companies not owned by your company.

What does "R&D performed by your company" mean?

This section uses two different concepts to collect information about your company's R&D: an accounting concept, R&D expense, and a physical concept, R&D performed by your company. The amount of R&D reported using these two concepts may differ.

R&D expense is based on accounting definitions used by your company. For more information refer to Financial Accounting Standards Board (FASB) Statement of Accounting Standards No. 2 (Accounting for Research and Development Costs). For this survey, report R&D expense even if the amount is not considered material to your company.

R&D performed by your company includes all costs for R&D performed by your company's full-time, part-time, and temporary employees. It excludes costs for R&D performed by others not owned by your company, such as contract research organizations, universities, and federal laboratories.

What do the terms "worldwide" and "domestic" mean?

The term "worldwide" refers to all geographic locations, including the United States. The term "domestic" refers to the 50 United States and the District of Columbia only.

How should dollar amounts be reported?

Report all dollar amounts rounded to the nearest thousand.

	\$Bil.	Mil.	Thou.
Example: If figure is \$179,125,628.00 report:		1 7 9	1 2 6

Are estimates acceptable?

Yes, estimates are acceptable. Please report all items to the best of your ability.

How should I answer a question that does not apply to my company?

Enter "0" if a question or category does not apply to your company.

What time period should be reported?

Report data for calendar year 2008, if possible, or for your company's fiscal year ending between April 2008 and March 2009.

NOTE: If your company was either purchased or ceased operations between April 1 and December 31, 2008, complete the survey for the time period from January 1, 2008 to the date of purchase or the date your company ceased operations.

To speak with a survey analyst, call 1-800-772-7851, option "5" (8 a.m. – 5 p.m. EST, M-F)



- 3•1** Copy the amount reported in Question 2•1—your company's worldwide R&D expense in 2008.

\$Bil.	Mil.	Thou.

- 3•2** Copy the amount reported in Question 2•6, line a—R&D expense performed by your company in the domestic United States in 2008.

\$Bil.	Mil.	Thou.

- 3•3** Copy the amount reported in Question 2•3, line b—2008 R&D performed by others not owned by your company, such as contract research organizations, universities, or government labs.

\$Bil.	Mil.	Thou.

Worldwide R&D expense

- 3•4** What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was directed toward business areas or product lines in which your company had no revenues before 2008?

Example: Company A is an automobile manufacturer. In 2008, it began R&D on the company's first motorcycle. Because Company A had no previous revenues for motorcycles, it is a new business area for the company. The expense for this R&D is included in the calculation for this question.

Percent

- 3•5** What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 involved science/technology that your company had not used in projects before 2008?

Example: Company B is an automobile manufacturer. In 2008, it began to explore using hydrogen fuel cells in its vehicles. Because Company B had not used this technology before 2008, it is new for the company. The expense for this R&D is included in the calculation for this question.

Percent

- 3•6** What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was both directed toward business areas or product lines in which your company had no revenues before 2008 and involved science/technology that had not been used by your company in other projects before 2008?

Example: Company C is an automobile manufacturer. In 2008, it began a project to develop the company's first motorcycle. At the same time, C begins to explore using hydrogen fuel cell technology in its vehicles—including motorcycles. Because motorcycle manufacturing is a new business area for C and the company had no experience with hydrogen fuel cell technology before 2008, it would include the hydrogen fuel cell R&D related to its motorcycle project in the calculation for this question.

Percent

- 3•7** What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was for R&D in science/technology new to the market(s) (i.e. first-to-market) in which your company operates?

Exclude

- R&D to improve upon, replicate, or adopt science/technology currently in use in the market(s) in which your company operates

Example: Company D manufactures cookware. In 2008, it devotes 10% of its R&D expense to exploring the potential use in its products of a heat-conducting material currently used only by the aerospace industry. The remainder of D's R&D is focused on improving products and technology already used in the cookware market. Company D reports 10% for this question.

Percent



Worldwide R&D agreements

3•8 What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was for R&D agreements?

R&D agreements involve two or more parties pooling resources and expertise to undertake R&D and share in any resulting intellectual property. R&D agreements involve shared risk and shared reward.

Percent	
<input type="text"/>	<input type="text"/> %

3•9 What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was for R&D agreements with for-profit companies?

Percent	
<input type="text"/>	<input type="text"/> %

3•10 What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was for R&D agreements with U.S. federal government agencies or laboratories?

Percent	
<input type="text"/>	<input type="text"/> %

3•11 What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was for R&D agreements with universities, colleges, and academic researchers, including individual principal investigators?

Percent	
<input type="text"/>	<input type="text"/> %

3•12 What percentage of the worldwide R&D expense in 2008 reported in Question 3•1 was for R&D agreements with nonprofit organizations other than universities and colleges?

Percent	
<input type="text"/>	<input type="text"/> %

3•13 In 2008, how many new R&D agreements did your company enter into?

Number
<input type="text"/>

3•14 Did the new R&D agreements reported in Question 3•13 involve agreements with the following types of organizations?

- a. For-profit companies located inside the United States ☐ Yes ☐ No
- b. For-profit companies located outside the United States ☐ Yes ☐ No
- c. U.S. federal government agencies or laboratories. ☐ Yes ☐ No
- d. Universities, colleges, and academic researchers, including individual principal investigators. ☐ Yes ☐ No
- e. Foreign government agencies or laboratories. ☐ Yes ☐ No

3•15 Did the new R&D agreements reported in Question 3•13 involve agreements with the following?

- a. Customers ☐ Yes ☐ No
- b. Vendors/suppliers. ☐ Yes ☐ No
- c. Competitors ☐ Yes ☐ No



Characteristics of domestic R&D performed by your company that was part of your R&D expense

For questions 3•16 through 3•39, the reported amounts exclude R&D funded or paid by others, which is reported in Section 4.

3•16 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for the following categories?

- a. Research—planned, systematic pursuit of new knowledge or understanding. . . .
- b. Development—systematic use of research and practical experience to produce new or significantly improved goods, services, or processes. . . .
- c. **Total.** . . .

Percent	
	%
	%
1 0 0	%

3•17 If you reported any research in Question 3•16, line a, what percentage of that research was for the following categories?

- a. Applied research—activity aimed at solving a specific problem or meeting a specific commercial objective
- b. Basic research—activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use
- c. **Total.** . . .

Percent	
	%
	%
1 0 0	%

3•18 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was directed toward business areas or product lines in which your company had no revenues before 2008?

Example: Company E is an automobile manufacturer. In 2008, it began R&D at its U.S. facilities on the company's first motorcycle. Because Company E had no previous revenues for motorcycles, it is a new business area for the company. The costs for this R&D are included in the calculation for this question.

Percent	
	%

3•19 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 involved science/technology that your company had not used in projects before 2008?

Example: Company F is an automobile manufacturer. In 2008, it began to explore using hydrogen fuel cells in its vehicles at its U.S. R&D facility. Because Company F had not used this technology before 2008, it is new for the company. The costs for this R&D are included in the calculation for this question.

Percent	
	%

3•20 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was both directed toward business areas or product lines in which your company had no revenues before 2008 and involved science/technology that had not been used by your company in other projects before 2008?

Example: Company G is an automobile manufacturer. In 2008, it began a project to develop the company's first motorcycle. At the same time, G begins to explore using hydrogen fuel cell technology in its vehicles—including motorcycles—at its U.S. R&D facility. Because motorcycle manufacturing is a new business area for G and the company had no experience with hydrogen fuel cell technology before 2008, it would include the hydrogen fuel cell R&D related to its motorcycle project in the calculation for this question.

Percent	
	%



3•21 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for R&D in science/technology new to the market(s) (i.e. first-to-market) in which your company operates?

Exclude:

- R&D to improve upon, replicate, or adopt science/technology currently in use in the market(s) in which your company operates.

Example: Company H manufactures cookware. In 2008, 10% of its domestic R&D performed by its company is for exploring the potential use in its products of a heat-conducting material currently used only by the aerospace industry. The remainder of H's domestic R&D performed by its company is focused on improving products and technology already used in the cookware market. Company H reports 10% for this question.

Percent

		%
--	--	---

Areas of application for domestic R&D performed by your company

3•22 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 had defense applications, including military applications and general security-related R&D?

Percent

		%
--	--	---

3•23 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 had health or medical applications?

Percent

		%
--	--	---

3•24 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?

Example: Company I is a semiconductor manufacturer. Its products are not designed specifically for energy applications, but 10% of its domestic R&D performed by its company is focused on improving the energy efficiency of its products. Based on this, Company I reports "10%" for this question.

Percent

		%
--	--	---

3•25 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 had environmental protection applications, including pollution abatement R&D?

Percent

		%
--	--	---

3•26 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 had agricultural applications?

Percent

		%
--	--	---

Technology focus of domestic R&D performed by your company

3•27 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for software products?

Percent

		%
--	--	---

3•28 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for software embedded in other projects or products?

Percent

		%
--	--	---

3•29 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for the development of new or significantly improved processes?

Percent

		%
--	--	---



3•30 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for medical clinical trials?

Percent		
		%

3•31 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for the production of prototypes?

Percent		
		%

3•32 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for the operation of pilot plants?

Percent		
		%

3•33 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for biotechnology—the use of cellular and bio-molecular processes to solve problems or make useful products?

Percent		
		%

3•34 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for nanotechnology—science and technology involving work at the nanometer scale?

Percent		
		%

3•35 What percentage of the domestic R&D performed by your company in 2008 reported in Question 3•2 was for social sciences—the application of scientific methods to the study of human aspects of the world, including such disciplines as economics and psychology?

Percent		
		%

R&D performed by others

3•36 What percentage of the R&D performed by others not owned by your company reported in Question 3•3 was for the following categories?

Percent		
		%

a. Research—planned, systematic pursuit of new knowledge or understanding.

b. Development—systematic use of research and practical experience to produce new or significantly improved goods, services, or processes.

		%
--	--	---

c. **Total**.

1	0	0	%
---	---	---	---

3•37 If you reported any research in Question 3•36, line a, what percentage of that research was for the following categories?

Percent		
		%

a. Applied research—activity aimed at solving a specific problem or meeting a specific commercial objective

b. Basic research—activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use

		%
--	--	---

c. **Total**.

1	0	0	%
---	---	---	---

3•38 What percentage of the R&D performed by others reported in Question 3•3 was for medical clinical trials?

Percent		
		%

3•39 What percentage of the R&D performed by others reported in Question 3•3 was for the production of prototypes?

Percent		
		%



Activities with academia

3•40 Did your company perform any of the following activities with universities, students, or academic faculty in 2008?

- a. Hired academic consultants for short-term projects in science and engineering ☐ Yes ☐ No
- b. Hosted student interns pursuing undergraduate or graduate degrees in science or engineering for at least one month. ☐ Yes ☐ No
- c. Hosted post-doctoral fellows in science or engineering for at least one month ☐ Yes ☐ No
- d. Scientists or engineers from your company that served as visiting scientists or engineers at a college or university for at least one month. ☐ Yes ☐ No
- e. Made monetary gifts to universities or colleges that were restricted to supporting R&D ☐ Yes ☐ No

Company characteristics

3•41 Were the following statements true for your company in 2008?

- a. This company has been in business for fewer than 5 years as of December 31, 2008. ☐ Yes ☐ No
- b. This company's primary mission in 2008 was to commercialize science/technology discovered or developed by academic researchers. . ☐ Yes ☐ No
- c. This company received venture capital funding in 2008 ☐ Yes ☐ No

Reporting information

3•42 Is the information in this section reported on a calendar year basis?

☐ Yes → **Continue**

☐ No → **Enter time period covered below:**

(MM) (YYYY) (MM) (YYYY)

From

--	--	--	--

 To

--	--	--	--

3•43 Approximately how long did it take to complete Section 3?

Hours

--	--

3•44 Please list the names and titles of the persons who provided data for this section.

Name	Title



SECTION 4

R&D Funded or Paid for by Others

Who should answer this section?

Persons familiar with accounting concepts and with access to financial records related to your company's R&D activities that are funded or paid for by others (funded R&D), including R&D paid for by customers and R&D supported by government contracts and grants should complete this section.

Please answer Questions 4.1 to 4.3 to see if your company should fill out this section.



SECTION 4 – R&D Funded or Paid for by Others

What does this section cover?

This section requests information about your company's R&D activities that are funded or paid for by others not owned by your company (funded R&D). R&D reported in Section 2 should not be included in responses to this section.

What is the reporting unit?

The reporting unit is your company, including all subsidiaries and divisions. Include operations of subsidiary companies where there is more than 50 percent ownership. Also, include data for discontinued operations.

NOTE: If your company is owned by a non-U.S. company, you should report the cost of R&D reimbursed by both your foreign owner and other affiliated companies not owned by your company in this section.

What is funded R&D?

Funded R&D is R&D your company performs that is funded or paid for by others not owned by your company. Examples of funded R&D include R&D performed under contract for a customer, R&D supported by a government grant, and R&D that is performed under a reimbursable agreement with business partners.

Because the costs for this work are not paid for by your company, they are not accounted for as R&D expenses, even though the nature of the work may be identical to other activities that are accounted for as R&D expenses by your company.

What do the terms "worldwide" and "domestic" mean?

The term "worldwide" refers to all geographic locations, including the United States. The term "domestic" refers to the 50 United States and the District of Columbia only.

How should dollar amounts be reported?

Report all dollar amounts rounded to the nearest thousand.

	\$Bil.	Mil.	Thou.
Example: If figure is \$179,125,628.00 report:		1 7 9	1 2 6

Are estimates acceptable?

Yes, estimates are acceptable. Please report all items to the best of your ability.

How should I answer a question that does not apply to my company?

Enter "0" if a question or category does not apply to your company.

What time period should be reported?

Report data for calendar year 2008, if possible, or for your company's fiscal year ending between April 2008 and March 2009.

NOTE: If your company was either purchased or ceased operations between April 1 and December 31, 2008, complete the survey for the time period from January 1, 2008 to the date of purchase or the date your company ceased operations.

To speak with a survey analyst, call 1-800-772-7851, option "5" (8 a.m. – 5 p.m. EST, M-F)



Worldwide R&D performed by your company

4•1 What were your company's total worldwide costs in 2008 for R&D that was funded or paid for by others not owned by your company?

Include:

- Cost of sales and indirect costs, such as overhead for contract R&D services provided to others not owned by your company
- R&D costs paid for by your foreign owner, if your company is foreign-owned
- Costs for R&D supported by grants from government agencies or private foundations
- Costs paid for by others for the development, production, and testing of prototypes prior to their introduction to the market
- Costs paid for by others for phase I - III medical clinical trials of medical products
- Independent research and development (IR&D) costs for which your company anticipates reimbursement by the U.S. federal government through indirect charges on government contracts
- Costs reimbursed by business partners, such as through cost-sharing agreements

Exclude:

- Costs accounted for as R&D expenses by your company (reported in Section 2)
- Payments in excess of the actual cost of the R&D (such as profits or fees)
- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Costs for routine testing of products currently on the market
- Costs for phase IV medical clinical trials or other post-marketing testing performed for medical products
- Costs for R&D performed by FFRDCs (Federally Funded Research and Development Centers) your company administers
- Bid and proposal (B&P) costs

\$Bil.	Mil.	Thou.

4•2 How much of the 2008 worldwide costs reported in Question 4•1 for R&D that was funded or paid for by others not owned by your company was for R&D performed by your company and how much was for R&D performed by others not owned by your company, such as subcontractors or subgrantees?

a. R&D performed by your company

Include:

- All costs for R&D performed by your company's full-time, part-time, and temporary employees

b. R&D performed by others not owned by your company, such as subcontractors or subgrantees

c. **Total** (equals Question 4•1)

\$Bil.	Mil.	Thou.

--	--	--

--	--	--

4•3 Was the amount entered in Question 4•2, line a, greater than zero?

☐ Yes → **Continue with Question 4•4**

☐ No → **Skip to Section 5**



4•4

How much of the 2008 worldwide R&D performed by your company that was funded by others reported in Question 4•2, line a, was performed in the countries listed below?

	\$Bil.	Mil.	Thou.		\$Bil.	Mil.	Thou.
a. United States (domestic)				j. Italy			
b. Puerto Rico				k. Japan			
c. Canada				l. Russia			
d. China				m. Singapore			
e. France				n. South Korea			
f. Germany				o. Sweden			
g. India				p. United Kingdom			
h. Ireland				q. All other			
i. Israel				r. Total (equals Question 4-2, line a)			

Domestic R&D performed by your company that was funded by others

4•5

How much of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, was for each business code listed or amended on page 6 of this form?

Allocate R&D that is applicable to more than one business code on a reasonable basis. Allocation in proportion to operating revenues is acceptable unless some alternative allocation basis is more appropriate.

Business Code (see page 6)	\$Bil.	Mil.	Thou.
a. <input type="text"/>			
b. <input type="text"/>			
c. <input type="text"/>			
d. <input type="text"/>			
e. <input type="text"/>			
f. <input type="text"/>			
g. <input type="text"/>			

Question continues on next page



4•5 (Continued)

Business Code
(see page 6)

h.

--	--	--	--	--

\$Bil.	Mil.	Thou.

i. **Total** (equals Question 4-4, line a)

--	--	--

4•6 How much of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, was for the following types of costs?

a. Gross annual payroll—wages and salaries of R&D employees and officers excluding fringe benefits

\$Bil.	Mil.	Thou.

b. Employer's cost for fringe benefits

--	--	--

Include:

- Disability benefits
- Life and medical insurance
- Paid holidays, time off benefits, vacation, annual, sick, and maternity leave
- Retirement benefits, pension, and social security contributions

c. Stock-based compensation

--	--	--

d. Temporary staffing and leased employees

--	--	--

Include:

- Costs paid to Professional Employer Organizations (PEOs) and staffing agencies for personnel
- All charges for payroll, benefits, and services

e. Expensed equipment

--	--	--

f. Materials and supplies

--	--	--

g. Lease and rental payments

--	--	--

h. Depreciation and amortization on R&D property and equipment ...

--	--	--

i. All other costs

--	--	--

j. **Total** (equals Question 4-4, line a)

--	--	--



4•7

How much of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, was performed under each of the following types of agreements?

	\$Bil.	Mil.	Thou.
a. Contracts (include direct or prime contracts and subcontracts)			
b. Grants, reimbursements, and all other agreements			
c. Total (equals Question 4-4, line a)			

4•8

How much of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, was funded by each of the following?

Include

- If your company is a subcontractor or subgrantee, report the original source of funding

Example: Company K is a car manufacturer and Company L is a glass manufacturer. In 2008, Company K is awarded a U.S. federal government contract to develop a new type of armored car. Company K performs some of the R&D itself and subcontracts the development of the car's bulletproof glass windshield to Company L. Both Company K and Company L would include their R&D costs for this project in the calculation for line c of this question.

	\$Bil.	Mil.	Thou.
a. Other companies located <u>inside</u> the United States.			
b. Other companies located <u>outside</u> the United States			
c. U.S. federal government agencies or laboratories			
d. U.S. state government agencies or laboratories (50 United States and D.C.)			
e. Foreign government agencies or laboratories			
f. All other organizations <u>inside</u> the United States.			
g. All other organizations located <u>outside</u> the United States			
h. Total (equals Question 4-4, line a).			



4•9

How much of the R&D funded by other companies reported in Question 4•8, lines a and b, was funded by the following types of companies?

	\$Bil.	Mil.	Thou.
a. Aerospace			
b. Computer products			
c. Electronic products			
d. Motor vehicles			
e. Petrochemicals			
f. Pharmaceuticals			
g. All other companies			
h. Total (equals Question 4-8, lines a and b)			

4•10

How much of the R&D funded by U.S. federal government agencies or laboratories reported in Question 4•8, line c, was funded by the following agencies?

	\$Bil.	Mil.	Thou.
a. Department of Defense			
b. Department of Energy			
c. National Aeronautics and Space Administration			
d. National Institutes of Health			
e. All other			
f. Total (equals Question 4-8, line c)			

4•11

How much of the 2008 worldwide R&D reported in Question 4•1 was independent research and development (IR&D) costs for which your company anticipates reimbursement by the U.S. federal government through indirect charges on government contracts?

\$Bil.	Mil.	Thou.



4•12 How much of the following three funded R&D amounts was performed in each state (including D.C.):

(1) 2008 R&D funded by the U.S. federal government reported in Question 4•8, line c

(2) 2008 R&D funded by all nonfederal sources

(3) 2008 total domestic R&D performed by your company that was funded by others reported in Question 4•4, line a

	(1) Federal			(2) Nonfederal			(3) Total		
	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.
Alabama									
Alaska									
Arizona									
Arkansas									
California									
Colorado									
Connecticut									
Delaware									
District of Columbia									
Florida									
Georgia									
Hawaii									
Idaho									
Illinois									
Indiana									
Iowa									
Kansas									
Kentucky									
Louisiana									

Question continues on next page



4•12 (Continued)

	(1) Federal			(2) Nonfederal			(3) Total		
	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.
Maine.									
Maryland									
Massachusetts									
Michigan									
Minnesota									
Mississippi									
Missouri									
Montana									
Nebraska									
Nevada									
New Hampshire									
New Jersey									
New Mexico									
New York									
North Carolina									
North Dakota									
Ohio									
Oklahoma									
Oregon									
Pennsylvania									
Rhode Island									

Question continues on next page



4•12 (Continued)

	(1) Federal			(2) Nonfederal			(3) Total		
	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.
South Carolina									
South Dakota . .									
Tennessee									
Texas									
Utah									
Vermont									
Virginia									
Washington									
West Virginia . . .									
Wisconsin									
Wyoming									
Total									

Total equals Question
4-8, line c

Total equals Question
4-4, line a

4•13 What are your company's worldwide projected costs in 2009 for R&D performed by your company that will be paid for by others?

\$Bil.	Mil.	Thou.

4•14 How much of the projected costs in 2009 for R&D performed by your company that will be paid for by others reported in Question 4•13 will be performed in the domestic United States?

\$Bil.	Mil.	Thou.

4•15 How much of the projected costs in 2009 for domestic R&D performed by your company that will be paid for by others reported in Question 4•14 will be paid for by U.S. federal government agencies?

\$Bil.	Mil.	Thou.



Characteristics of domestic R&D performed by your company that was funded by others

4•16 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, was for the following categories?

- a. Research—planned, systematic pursuit of new knowledge or understanding. . . .
- b. Development—systematic use of research and practical experience to produce new or significantly improved goods, services, or processes. . . .
- c. **Total**. . . .

Percent	
	%
	%
1 0 0	%

4•17 If you reported any research in Question 4•16, line a, what percentage of that research was for the following categories?

- a. Applied research—activity aimed at solving a specific problem or meeting a specific commercial objective
- b. Basic research—activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use
- c. **Total**. . . .

Percent	
	%
	%
1 0 0	%

4•18 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, was for medical clinical trials (phases I, II, and III)?

Percent	
	%

4•19 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, was for the production of prototypes?

Percent	
	%

4•20 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, had defense applications, including military applications and general security-related R&D?

Percent	
	%

4•21 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, had health or medical applications?

Percent	
	%

4•22 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?

Example: Company L is a semiconductor manufacturer. Its products are not designed specifically for energy applications, but 10% of its domestic R&D performed by its company is focused on improving the energy efficiency of its products. Based on these facts, Company L reports "10%" for this question.

Percent	
	%

4•23 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, had environmental protection applications, including pollution abatement R&D?

Percent	
	%



4•24 What percentage of the domestic R&D performed by your company that was funded by others reported in Question 4•4, line a, had agricultural applications?

Percent	
	%

Characteristics of domestic R&D performed by your company that was funded by the U.S. federal government

4•25 What percentage of the domestic R&D performed by your company funded by U.S. federal government agencies or laboratories reported in Question 4•8, line c, was for the following categories?

- a. Research—planned, systematic pursuit of new knowledge or understanding. . . .
- b. Development—systematic use of research and practical experience to produce new or significantly improved goods, services, or processes. . . .
- c. **Total.** . . .

Percent	
	%
	%
1 0 0	%

4•26 If you reported any research in Question 4•25, line a, what percentage of that research was for the following categories?

- a. Applied research—activity aimed at solving a specific problem or meeting a specific commercial objective
- b. Basic research—activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use
- c. **Total.** . . .

Percent	
	%
	%
1 0 0	%

4•27 What percentage of the domestic R&D performed by your company that was funded by U.S. federal government agencies or laboratories reported in Question 4•8, line c, was for the production of prototypes?

Percent	
	%



Reporting information

4•28 Is the information in this section reported on a calendar year basis?

☐ Yes → Continue

☐ No → Enter time period covered below:

(MM)

(YYYY)

From

To

(MM)

(YYYY)

4•29 Approximately how long did it take to complete Section 4?

Hours

4•30 Please list the names and titles of the persons who provided data for this section.

Name	Title



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SECTION 5
R&D Human Resources

Who should answer this section?

Persons familiar with human resources concepts and with access to records related to your company’s employees should complete this section.

SECTION 5



SECTION 5 – R&D Human Resources

What does this section cover?

This section requests information about your company's employees, focusing on those who worked on R&D activities either full-time or part-time.

What is the reporting unit?

The reporting unit is your company, including all subsidiaries and divisions. Include operations of subsidiary companies where there is more than 50 percent ownership. Also, include data for discontinued operations.

NOTE: If your company is owned by a non-U.S. company, do not include data for your foreign owner or for any other affiliated companies not owned by your company.

Who are R&D employees?

R&D employees include all employees providing direct support to either R&D paid for by your company **or** R&D paid for by others not owned by your company, such as R&D your company performs under a grant or contract. Include scientists and engineers working on R&D as well as R&D managers, technicians, administrators, clerical staff, and interns providing direct support to R&D.

R&D employees do not include staff providing indirect support, such as security guards and cafeteria workers. Leased employees, temps, and on-site consultants should not be counted as R&D employees.

What is a full-time equivalent (FTE)?

A full-time equivalent takes into account employees who do not work full-time or for employees who do not work on R&D activities full-time. For example, an employee who works half-time would be counted as one employee on a headcount basis but as one-half (½) an FTE employee. Similarly, a full-time employee hired in June would be counted as one-half (½) an FTE employee. The number of FTEs and the headcount may differ for your company.

What do the terms "worldwide" and "domestic" mean?

The term "worldwide" refers to all geographic locations, including the United States. The term "domestic" refers to the 50 United States and the District of Columbia only.

Are estimates acceptable?

Yes, estimates are acceptable. Please report all items to the best of your ability.

How should I answer a question that does not apply to my company?

Enter "0" if a question or category does not apply to your company.

What time period should be reported?

Report data for calendar year 2008, if possible, or for your company's fiscal year ending between April 2008 and March 2009.

NOTE: If your company was either purchased or ceased operations between April 1 and December 31, 2008, complete the survey for the time period from January 1, 2008 to the date of purchase or the date your company ceased operations.

To speak with a survey analyst, call 1-800-772-7851, option "5" (8 a.m. – 5 p.m. EST, M-F)



Worldwide employees

5.1 What was the total number of employees working at your company worldwide for the pay period that included March 12, 2008?

Include:

- For the domestic employees, all employees whose payroll was reported on IRS Form 941, Employer's Quarterly Federal Tax Return
- Employees in all activities during the pay period that includes March 12, 2008
- Employees on paid sick leave, paid holidays, and paid vacations during the pay period that included March 12, 2008

Exclude:

- Leased or temporary employees and on-site consultants

Number

5.2 How many of your company's total worldwide employees reported in Question 5.1 were R&D employees?

Include:

- R&D scientists, engineers, managers, technicians, administrators, clerical staff, and interns

Exclude:

- Staff providing indirect support, such as security guards and cafeteria workers

Number

5.3 How many of the worldwide R&D employees reported in Question 5.2 were (1) female employees, (2) male employees, and (3) total employees, working in the R&D occupations listed below?

	(1) Female Employees	(2) Male Employees	(3) Total Employees
a. R&D engineers and their managers			
b. R&D scientists and their managers (not already reported in line a)			
c. R&D technicians and technologists.			
d. R&D support staff (clerical and other)			
e. Total worldwide R&D employees			

Total equals
Question 5.2

5.4 Of the total worldwide R&D scientists and engineers and their managers reported in Question 5.3, lines a and b, how many had the following as their highest educational degree?

	Number
a. PhD (including EngD, ScD, excluding MD, JD, and EdD).	
b. Other college degrees	
c. All other.	
d. Total worldwide R&D scientists and engineers (equals Question 5.3, lines a and b)	



Domestic employees

5•5 How many of the worldwide employees reported in Question 5•1 were domestic employees—employed by your company's domestic operations?

Include:

- All employees whose payroll was reported on IRS Form 941, Employer's Quarterly Federal Tax Return
- Employees on paid sick leave, paid holidays, and paid vacations during the pay period that included March 12, 2008

Number

--	--	--	--	--	--	--	--	--	--

5•6 How many of your company's total domestic employees reported in Question 5•5 were R&D employees?

Include:

- R&D scientists, engineers, managers, technicians, administrators, clerical staff, and interns

Exclude:

- Staff providing indirect support, such as security guards and cafeteria workers

Number

--	--	--	--	--	--	--	--	--	--

5•7 How many of the domestic R&D employees reported in Question 5•6 were (1) female employees, (2) male employees, and (3) total employees, working in the R&D occupations listed below?

	(1) Female Employees	(2) Male Employees	(3) Total Employees																														
a. R&D engineers and their managers.	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										
b. R&D scientists and their managers (not already reported in line a).	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										
c. R&D technicians and technologists	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										
d. R&D support staff (clerical and other)	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										
e. Total domestic R&D employees	<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>											<table><tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>										

Total equals
Question 5•6

5•8 Of the total domestic R&D scientists and engineers and their managers reported in Question 5•7, lines a and b, how many had the following as their highest educational degree?

- a. PhD (including EngD, ScD, excluding MD, JD, and EdD)
- b. Other college degrees
- c. All other
- d. **Total domestic R&D scientists and engineers**
(equals Question 5•7, lines a and b).

Number



- 5•9** How many of the domestic R&D scientists and engineers and their managers reported in Question 5•7, lines a and b, were non-U.S. citizens employed in the United States under a temporary visa, such as H-1B or L-1?

Number			

Full-time equivalents (FTEs)

- 5•10** What was the number of domestic full-time equivalent (FTE) scientists and engineers engaged in R&D activities during 2008?

Full-time equivalents account for R&D scientists and engineers who do not work full-time and R&D scientists and engineers who do not work on R&D activities full-time. For example, a scientist or engineer who works half-time would be counted as one employee on a headcount basis but as one-half ($\frac{1}{2}$) an FTE employee. Similarly, a full-time employee hired in June would be counted as one-half ($\frac{1}{2}$) an FTE employee. The number of FTEs and the headcount may differ for your company.

Number			

- 5•11** How many of the domestic R&D FTE scientists and engineers reported in Question 5•10 were engaged in R&D activities funded by U.S. federal government grants or contracts during 2008?

Number			

Reporting information

- 5•12** Is the information in this section reported on a calendar year basis?

☐ Yes → **Continue**

☐ No → **Enter time period covered below:**

	(MM)	(YYYY)		(MM)	(YYYY)
From			To		

- 5•13** Approximately how long did it take to complete Section 5?

Hours

- 5•14** Please list the names and titles of the persons who provided data for this section.

Name	Title



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SECTION 6

Intellectual Property, Technology Transfer, and Innovation

Who should answer this section?

Persons with an understanding of your company’s general business strategy and knowledge of your company’s patenting, licensing, and other intellectual property related activities should complete this section.



SECTION 6 – Intellectual Property, Technology Transfer, and Innovation

What does this section cover?

This section requests information about intellectual property, technology transfer activities, and actions taken to improve company performance, such as:

- Patents
- Patent licensing
- Protection of intellectual property
- Transfer of intellectual property
- Innovation activity

Are responses to this survey confidential?

Yes. Your responses are completely confidential under Title 13, United States Code, and are seen only by persons sworn to uphold the confidentiality of Census Bureau information. Data provided will be used only to publish summary statistics that do not identify individual firms. Title 13 also provides that copies of reports retained in your files are immune from legal process. In addition, reported data are exempt from requests made under the Freedom of Information Act.

What is the reporting unit?

The reporting unit is your company, including all subsidiaries and divisions. Include operations of subsidiary companies where there is more than 50 percent ownership. Also, include data for discontinued operations.

NOTE: If your company is owned by a non-U.S. company, do not include data for your foreign owner or for any other affiliated companies not owned by your company.

How should dollar amounts be reported?

Report all dollar amounts rounded to the nearest thousand.

	\$Bil.	Mil.	Thou.
Example: If figure is \$179,125,628.00 report:		1 7 9	1 2 6

Are estimates acceptable?

Yes, estimates are acceptable. Please report all items to the best of your ability.

How should I answer a question that does not apply to my company?

Enter "0" if a question or category does not apply to your company.

What time period should be reported?

Report data for calendar year 2008, if possible, or for your company's fiscal year ending between April 2008 and March 2009.

NOTE: If your company was either purchased or ceased operations between April 1 and December 31, 2008, complete the survey for the time period from January 1, 2008 to the date of purchase or the date your company ceased operations.

To speak with a survey analyst, call 1-800-772-7851, option "5" (8 a.m. – 5 p.m. EST, M-F)



6•1 Did your company introduce any of the following during the three-year period, 2006 to 2008?

- a. New or significantly improved goods (excluding the simple resale of new goods purchased from others and changes of a solely aesthetic nature) ☐ Yes ☐ No
- b. New or significantly improved services. ☐ Yes ☐ No
- c. New or significantly improved methods of manufacturing or producing goods or services. ☐ Yes ☐ No
- d. New or significantly improved logistics, delivery, or distribution methods for your inputs, goods, or services. ☐ Yes ☐ No
- e. New or significantly improved support activities for your processes, such as maintenance systems or operations for purchasing, accounting, or computing ☐ Yes ☐ No

Patents**6•2 How many patents did your company apply for in 2008 from the U.S. Patent and Trademark Office (USPTO)?**

Number

--	--	--	--

6•3 What percentage of the patent applications reported in Question 6•2 has your company applied for or plans to apply for in foreign jurisdictions?

Percent

		%
--	--	---

6•4 What percentage of the patent applications reported in Question 6•2 was for inventions that originated within your company's organized R&D activities?

Percent

		%
--	--	---

6•5 How many patents were issued to your company in 2008 by the USPTO?

Number

--	--	--	--

6•6 What percentage of your company's inventions considered for patenting in 2008 resulted in patent applications?

Percent

		%
--	--	---

Patent licensing**6•7 In 2008, what was the amount of your company's revenue from patents licensed to others not owned by your company?**

\$Bil.	Mil.	Thou.

6•8 How many new agreements did your company enter into during 2008 to license patents to others not owned by your company?

Number

--	--	--



Intellectual property transfer activities

6•9 Did your company perform the following activities in 2008?

- | | | |
|---|------------------------------|-----------------------------|
| a. Transferred intellectual property to others not owned by your company through participation in technical assistance or "know how" agreements | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| b. Received intellectual property from others not owned by your company through participation in technical assistance or "know how" agreements | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| c. Transferred intellectual property to a spin-off or spin-out of your company | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| d. Received intellectual property from a parent company as part of a spin-off or spin-out. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| e. Acquired more than 50% ownership in another company for the primary purpose of acquiring their intellectual property | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| f. Acquired any financial interest in another company in order to gain access to their intellectual property | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| g. Participated in cross-licensing agreements—agreements in which two or more parties grant a license to each other for the use of the subject matter claimed in one or more of the patents owned by each party | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| h. Allowed free use of patents or other intellectual property owned by your company (for example, allowing free use of software patents by the open source community) | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| i. Made use of open source patents or other freely available intellectual property not owned by your company. | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Intellectual property protection

6•10 During 2008, how important to your company were the following types of intellectual property protection?

- | | Very important | Somewhat important | Not important |
|---|--------------------------|--------------------------|--------------------------|
| a. Utility patents (patents for invention) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Design patents (patents for appearance). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Trademarks. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Copyrights | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Trade secrets | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Mask works (copyright protection for semiconductor products) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



Reporting information

6•11 Is the information in this section reported on a calendar year basis?

☐ Yes → Continue

☐ No → Enter time period covered below:

(MM)

(YYYY)

From

To

(MM)

(YYYY)

6•12 Approximately how long did it take to complete Section 6?

Hours

6•13 Please list the names and titles of the persons who provided data for this section.

Name	Title



Please provide your comments in the space for "Remarks" on the back cover.



Please provide your comments in the space for "Remarks" on the back cover.



Remarks (Please use the space below for any explanations that may help us understand your reported data.)

We estimate that it will take from .5 to 25 hours to complete this form, with 14.9 hours being the average. This includes time to read instructions, develop or assemble material, conduct tests, organize and review the information, and maintain and report the information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to:

Paperwork Project 0607-0912,
U.S. Census Bureau
4600 Silver Hill Road
AMSD-3K138
Washington, D.C. 20233

You may e-mail comments to Paperwork@census.gov; use "Paperwork Project 0607-0912" as the subject.

~ **Thank you for completing your 2008 Business R&D and Innovation Survey** ~

PLEASE MAKE A COPY OF THIS FORM FOR YOUR RECORDS AND RETURN THE ORIGINAL

