



U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. CENSUS BUREAU

FORM

BRDI-1A (01-02-2009)

2008 BUSINESS R&D AND INNOVATION SURVEY

OMB No. 1234-5678: Approval Expires 12/31/2012

DUE DATE
March 31, 2009

Report electronically:

www.census.gov/econhelp/rd

Username:

Password:

Reporting electronically allows you to save your work as you go through the form and could save you time.

Report by mail:

If you report online, please do *not* mail in the paper form.

U.S. Census Bureau
1201 East 10th Street
Jeffersonville, IN 47132-0001

For information or assistance:

- www.census.gov/econhelp/rd
- Call 1-800-851-2014, option "0" (8 a.m. – 5 p.m. EST, M-F)
- Write to the address above. Include your 11-digit ID printed on the mailing label.

DRAFT

(Please correct any errors in this mailing address.)

Your Response is Required by Law

Title 13, U.S. 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 8-digit number appears in the upper right corner of this report form.

Your Response is Confidential by Law

Title 13, U.S. 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 this 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 Research and Development 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 ~

General Instructions

What does this survey ask?

This survey will ask questions about this 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 this company (**funded R&D**). This survey also requests data on this company's R&D employees and intellectual property (IP).

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 or services.

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

- Routine quality control testing
- 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/rd
- (2) Click on Electronic Reporting
- (3) Enter your Username and Password
- (4) Click on "Start Form"

Advantages

- Reduced time and expense to report
- Improved quality through automatic data checks
- Data is 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 web site www.census.gov/econhelp/rd has the following information:

- More detailed general information about the Business R&D and Innovation Survey
- Frequently asked questions
- Sample questionnaires
- Worksheets for each question 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/.

To speak with a survey analyst, call 1-800-851-2014, option "0" (8 a.m. – 5 p.m. EST, M-F)

How do I complete this survey?

The Business R&D and Innovation Survey is divided into four sections. Each section asks questions about different aspects of R&D at your company. It may be necessary to collaborate with colleagues in different departments within your company for each section. The sections cover the following topical areas:

Section 1: R&D Paid for by your Company

- Asks for information about R&D expenses—R&D funded or paid for by your company
- Best answered by persons with knowledge of your company's financial records
- Best answered by persons with first-hand knowledge of R&D operations, such as a VP of Research

Section 2: R&D Funded or Paid for by Others

- 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 3: R&D Human Resources

- Asks for information about your company's R&D employees
- Best answered by persons with knowledge of your company's HR records

Section 4: Intellectual Property and Technology Transfer, and Innovation

- Asks for information about intellectual property such as 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

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.

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 thousands.

	\$Bil.	Mil.	Thou.
Example: If figure is \$179,125,628.00 report:		179	126

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 period from January 1, 2008 to either the date of purchase or the date your company ceased operations.

You can access electronic copies of the questions or the whole survey on our web site:
www.census.gov/econhelp/rd.

Company Information

1 Did your company cease operations prior to April 1, 2008?

Yes → **Stop here and return the survey form to the U.S. Census Bureau.**

Alternatively, you may use our telephone or web options:

1-800-851-2014, option "0" (8 a.m. – 5 p.m. EST, M-F)

www.census.gov/econhelp/rd

No

2 Did another U.S. company own more than 50 percent of your company during 2008?

Yes → **Please provide the following information:**

Name of owner

EIN (9 digits)

Mailing address

City

State

ZIP

(MM)

(DD)

(YYYY)

Date owner purchased your company

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Stop here if your company was purchased before April 1, 2008.

Return this survey to the U.S. Census Bureau or use our telephone or web options:

1-800-851-2014, option "0" (8 a.m. – 5 p.m. EST, M-F)

www.census.gov/econhelp/rd

No

3 Did your company do any of the following during 2008?

- Incur R&D expenses
- Perform R&D that was funded or paid for by others not owned by your company such as:
 - Product development performed under contract for another company
 - Research funded by a government grant

Yes → **Complete the rest of this survey beginning with Question 4 on page 4.**

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

No → **Skip to Section 4, page 44**

Business codes

Printed below are the business code(s) and description(s) from the list on pages XX-XX in which we believe your company operates. Your company may have R&D activity in business codes where you have no payroll or receipts. It is also valid for your company to have payroll or receipts in business codes where your company has no R&D activity. Later in this survey you will be asked to report sales and R&D data by business code.

Business Segment Code

Description

PREPRINT 1
PREPRINT 2

PREPRINTED DESCRIPTION 1
PREPRINTED DESCRIPTION 2

...
...
...
...
...

...
...
...
...
...

- 4 What was the business code that accounted for the largest share of your company's R&D activities in 2008 worldwide? Refer to the Business Segment Code list on pages xx – xx as well as the list above.

--

- 5 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 (e.g. dividends, interest)
- Excise, sales, and other revenue based taxes

\$ Bil.	Mil.	Thou.

- 6 How much of the 2008 worldwide net sales and operating revenues reported in Question 1•3 was from domestic operations?

Include:

- Operating revenues and sales to foreign subsidiaries

\$ Bil.	Mil.	Thou.

- 7 How much of the following two sales and operating revenue amounts were for the business segment reported in Question 4 on page 4 of this form:

- (1) Worldwide net sales and operating revenues reported in Question 1•3
(2) Domestic net sales and operating revenues reported in Question 1•4

Business code

a.

(1) Worldwide sales and revenues		
\$ Bil.	Mil.	Thou.

(2) Domestic sales and revenues		
\$ Bil.	Mil.	Thou.

SECTION 1 – R&D Funded or 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, sales or revenues, 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 segment.

What is the difference between R&D expense and R&D performance?

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 performance. 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.

Exclude:

- R&D from acquired companies prior to acquisition (in-process R&D)
- Costs for routine product testing, quality control, and technical services
- R&D funded or paid for by others not owned by your company (these costs are reported in Section 3).

Report R&D performance is a subset of R&D expense based on the location where R&D was performed by your company. Exclude costs for R&D performed by others not owned by your company such as contract research organizations, universities, and federal laboratories.

1-1 What was the total worldwide R&D expense for your company (including all Domestic expenditures) in 2008?**Include:**

- R&D expenses for all foreign and domestic subsidiaries and divisions owned by your company
- Contract R&D services purchased from others, including 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

\$ Bil.	Mil.	Thou.

Exclude:

- R&D costs paid for by others not owned by your company (these costs are reported in Section 3), such as:
 - Costs associated with contract services your company provides to others
 - Costs for R&D funded by government grants
 - Costs reimbursed by business partners
- Capital expenditures for R&D (report domestic capital expenditures in question 1•10)
- Market and advertising research

SKIP INSTRUCTIONS
SKIP INSTRUCTIONS

1•2

How much of the 2008 worldwide R&D expense reported in Question 1.1 was for the following categories?

- a. R&D performed by your company at domestic locations (50 United States and D.C.)
- b. R&D performed by your company at locations outside the 50 United States and D.C.
- c. R&D performed by others not owned by your company such as contract research organizations, universities, partners, and government labs
- d. **Total worldwide R&D expense for 2008**

\$ Bil.	Mil.	Thou.

1•3

How much of the following three R&D amounts were for the business segment reported in Question 4 on page 4 of this form:

- (1) Worldwide R&D expense reported in Question 1•1
- (2) Domestic R&D performance reported in Question 1•2, line a

Allocate R&D that is applicable to more than one segment on a reasonable basis. Allocation in proportion to operating revenues is acceptable.

Example: Company C is headquartered in the United States. In 2008:

- Company C had a total worldwide R&D expense of \$50 million
- The majority of Company C's R&D was in medical supplies (33910).
- The medical supplies business performed \$30 million of R&D at its facilities in Ireland to develop new products
- Company C performed \$8 million of R&D at its corporate lab in the U.S. on scientific applications useful to both its medical supplies business as well as its other businesses
- 75% of revenues were from medical supplies

Based on these facts, Company C would report the following for this question:

- In column 1, \$36 million (30+8*75%) for the medical devices segment.
- In column 2, \$6 million (8*75%) for the medical devices segment.

Business segment code (see page 4)

a.

(1) Worldwide R&D expense			(2) Domestic R&D performance		
\$ Bil.	Mil.	Thou.	\$ Bil.	Mil.	Thou.

1•4

How much of the domestic R&D performance reported in Question 1•2, 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
- b. Employer's cost for fringe benefits

Include:

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

- c. All other costs
- d. **Total** (equals Question 1•2, line a)

\$ Bil.	Mil.	Thou.

- 1•5** In which state (including the District of Columbia) did your company perform the largest dollar amount of R&D in 2008?

State

- 1•6** How much of the domestic R&D performance reported in Question 1•2, line a was from the state identified in Question 1•5?

\$ Bil.	Mil.	Thou.

- 1•7** At what domestic location did your company perform the largest dollar amount of R&D in 2008?

Address 1

Address 2

City

State

ZIP

- 1•8** How much of the domestic R&D performance reported in Question 1•2, line a was from the location identified in Question 1•7?

\$ Bil.	Mil.	Thou.

- 1•9** How much of your company's domestic capital expenditures in 2008 are for R&D operations?

\$ Bil.	Mil.	Thou.

- 1•10** What is your company's projected 2009 worldwide R&D expense for the following categories?

- 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
- d. Total projected worldwide R&D expense for 2009

\$ Bil.	Mil.	Thou.

NOTE: The following questions (1•11–1•27) may require input from persons familiar with the management and strategy of your company's R&D

Worldwide R&D expense

1•11 What percentage of the worldwide R&D expense in 2008 reported in Question 1•1 was in the following categories in relation to 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.

Based on these facts, Company D would report the following for this question:

- 10% in line a for its R&D in technology new to the cookware market
- 90% in line b for its R&D in technology currently used in its market

- a. R&D in science/technology new to the market(s) in which your company operates %
- b. R&D to improve upon, replicate, or adopt science/technology currently in use in the market(s) in which your company operates %
- c. **Total** 100 %

R&D agreements

1•12 What percentage of the worldwide R&D expense in 2008 reported in Question 1•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.

 %

Domestic R&D performed by your company

1•13 What percentage of the domestic R&D performance in 2008 reported in Question 1•2, line a was for the following categories?

- a. Research—planned, systematic pursuit of new knowledge or understanding %
- b. Development of new or significantly improved goods, services, or processes %
- c. **Total** 100 %

1•14 If you reported any research in Question 1•13, what percentage of that research was for the following categories?

- a. Applied research aimed at solving a specific problem or meeting a specific, recognized need %
- b. Basic research aimed at acquiring new knowledge or understanding without a specific application or use in view %

c. Total

100 %

1-15

What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a was in the following categories in relation to the market(s) in which your company operates?

Example: Company H manufactures cookware. In 2008 10% of its domestic R&D performance 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 performance is focused on improving products and technology already used in the cookware market.

Based on these facts, Company H would report the following for this question:

- 10% in line a for its R&D in technology new to the cookware market
- 90% in line b for its R&D in technology currently used in its market

a. R&D in science/technology new to the market(s) in which your company operates

%

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

%

c. Total

100 %

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

1-16

What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a had defense applications including military applications and general security-related R&D?

%

1-17

What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a had health or medical applications?

%

1-18

What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a 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 performance is focused on improving the energy efficiency of its products. Based on these facts, Company I reports "10%" for this question.

%

1-19

What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a had environmental protection applications including pollution abatement R&D?

%

1-20

What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a had agricultural applications?

%

Technology focus of domestic R&D performed by your company

- 1-21** What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a was for software products? %
- 1-22** What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a was for software embedded in other projects or products? %
- 1-23** What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a was for biotechnology—the use of cellular and bio-molecular processes to solve problems or make useful products—R&D? %
- 1-24** What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a was for nanotechnology—science and technology involving work at the nanometer scale—R&D? %
- 1-25** What percentage of the domestic R&D performance in 2008 reported in Question 1-2, line a 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—R&D? %

Activities with academia

- 1-26** 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 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

- 1-27** Are the following statements true for your company?
- a. This company has been in business for 5 or fewer years as of Dec. 31, 2008 Yes No
- b. This company's primary mission is to commercialize science/technology discovered or developed by academic researchers Yes No
- c. This company had establishments located in science parks in 2008 Yes No

- d. This company received venture capital funding in 2008 Yes No

SECTION 2 – 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).

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 is R&D performance?

This section requests information about funded R&D your company performs. Report costs for R&D performance based on the location where the R&D was carried out.

Exclude:

- Costs for routine product testing, quality control, and technical services
- R&D performed by others not owned by your company such as subcontractors
- Payments in excess of the actual cost of the R&D (such as profits or fees)

Worldwide R&D performance funded by others

2-1

What was the cost of R&D performed by your company worldwide in 2008 that was funded or paid for by others not owned by your company?

Include:

- Cost of sales for contract R&D services provided to other parties not owned by your company
- Costs for R&D supported by grants from government agencies and 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 clinical trials of medical products
- Independent research and development (IR&D) costs for which your company anticipates reimbursement by the U.S. government through indirect charges on government contracts

\$ Bil.	Mil.	Thou.

Exclude:

- Payments in excess of the actual cost of the R&D (such as profits or fees)
- Costs accounted for as R&D expenses by your company (reported in Section 1)
- Costs for routine testing of products currently on the market
- Costs for phase IV 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

SKIP INSTRUCTIONS

SKIP INSTRUCTIONS

Domestic R&D performance funded by others

2•2 How much of the 2008 worldwide R&D performance funded by others reported in Question 2•1 was performed in the domestic United States?

\$ Bil.	Mil.	Thou.

2•3 How much of the domestic R&D performance funded by others reported in Question 2•2 was for the following types of costs?

- a. Gross annual payroll—wages and salaries of R&D employees and officers excluding fringe benefits
- 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. All other costs
- d. **Total** (equals Question 2•2)

\$ Bil.	Mil.	Thou.

2•4 How much of the domestic R&D performance funded by others reported in Question 2•2 was funded by the following types of organizations?

Example: Company K is a car manufacturer and company L is a glass manufacturer. In 2008 company K is awarded a U.S. 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.

- a. Other companies located in the United States
- b. Other companies located outside the United States
- c. U.S. federal government agencies or laboratories
- d. U.S. state government agencies or laboratories (50 United States and DC)
- e. Foreign government agencies or laboratories
- f. All other organizations in the United States
- g. All other organizations located outside the United States
- h. **Total** (equals question 2•2)

\$ Bil.	Mil.	Thou.

Domestic R&D performance funded by others

2•5

How much of the R&D funded by U.S. federal government agencies or laboratories reported in Question 2•4, line c was funded by the following agencies?

	\$ Bil.	Mil.	Thou.
a. Department of Defense			
b. Department of Energy			
c. National Institutes of Health			
d. National Aeronautics and Space Administration			
e. All other			
f. Total (equals question 3•11, line c)			

2•6

In which state (including the District of Columbia) did your company perform the largest dollar amount of R&D funded or paid for by others in 2008?

State

2•7

How much of the following three funded R&D amounts were performed in the state reported in Question 2•6:

- (1) R&D funded by the U.S. federal government reported in Question 2•4, line c
- (2) R&D funded by all nonfederal sources
- (3) Total domestic R&D performance funded by others reported in Question 2•2

State reported in Question 2•6	(1) Federal			(2) Nonfederal			(3) Total		
	\$ Bil.	Mil.	Thou.	\$ Bil.	Mil.	Thou.	\$ Bil.	Mil.	Thou.

2•8

What are your company's projected costs in 2009 for domestic R&D performance funded or paid for by others?

\$ Bil.	Mil.	Thou.

2•9

What are your company's projected costs in 2009 for domestic R&D performance funded or paid for by U.S. federal government agencies?

\$ Bil.	Mil.	Thou.

Characteristics of domestic R&D performance funded by others

2•10 What percentage of the domestic R&D performance funded by others reported in Question 2•2 was for the following categories?

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

b. Development of new or significantly improved goods, services, or processes %

c. **Total** %

2•11 If you reported any research in Question 2•10, what percentage of that research was for the following categories?

a. Applied research aimed at solving a specific problem or meeting a specific, recognized need %

b. Basic research aimed at acquiring new knowledge or understanding without a specific application or use in view %

c. **Total** %

2•12 What percentage of the domestic R&D performance funded by others reported in Question 2•2 had defense applications including military applications and general security-related R&D? %

2•13 What percentage of the domestic R&D performance funded by others reported in Question 2•2 had health or medical applications? %

2•14 What percentage of the domestic R&D performance funded by others reported in Question 2•2 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 performance is focused on improving the energy efficiency of its products. Based on these facts, Company L reports “10%” for this question.

%

2•15 What percentage of the domestic R&D performance funded by others reported in Question 2•2 had environmental protection applications including pollution abatement R&D? %

2•16 What percentage of the domestic R&D performance funded by others reported in Question 2•2 had agricultural applications? %

SECTION 3 – 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- or part-time.

Who are R&D employees?

R&D employees include all employees providing direct support to either R&D projects paid for by your company **or** R&D projects 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 projects as well as R&D managers, administrators, clerical staff, and interns providing direct support to R&D projects.

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 (1/2) an FTE employee. Similarly, a full-time employee hired in June would be counted as one-half (1/2) an FTE employee. The number of FTEs and the headcount may differ for your company.

3-1 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 included 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

3-2 How many of the worldwide employees reported in Question 3-1 worked on R&D activities?

Include:

- R&D managers, administrators, clerical staff, and interns

Exclude:

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

3-3 How many of the worldwide employees reported in Question 3-1 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

3•4

How many of the following domestic employees reported in Question 4•5 worked on R&D activities:

- (1) Domestic female R&D employees, by occupation
- (2) Domestic male R&D employees, by occupation
- (3) Total domestic R&D employees, by occupation

Include:

- R&D managers, administrators, clerical staff, and interns

Exclude:

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

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

Full-time equivalents (FTEs)

3•5

What was the number of domestic full-time equivalents (FTEs) engaged in R&D activities during 2008?

Full-time equivalents account for R&D employees who do not work full time and 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 (1/2) an FTE employee. Similarly, a full-time employee hired in June would be counted as one-half (1/2) an FTE employee. The number of FTEs and the headcount may differ for your company.

3•6

How many of the domestic R&D FTEs reported in Question 3•5 were engaged in R&D activities funded by U.S. federal government grants or contracts during 2008?

SECTION 4 – Intellectual Property, Technology Transfer, and Innovation

What does this section cover?

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

- Patents
- Patent licensing
- Protection of IP
- Transfer of IP
- Innovation activity

4-1 Did your company introduce any of the following activities during the years 2006 through 2008?

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

Patents

4-2 In 2008, did your company own, apply for, or have pending any utility patents—patents for invention—from the U.S. Patent and Trademark Office (USPTO)?

- Yes → Continue to Question 4-3
- No → Complete the last page of this survey and return the form to the U.S. Census Bureau

4-3 How many U.S. utility patents did your company apply for in 2008?

4-4 What percentage of the patent applications reported in Question 5-3 were for inventions that originated outside of your company's organized R&D activities?

 %

4-5 How many U.S. utility patents were issued to your company in 2008 by the USPTO?

4-6 What percentage of your company's inventions considered for patenting

in 2008 resulted in patent applications?

□ %

Intellectual property transfer activities

4•7 Did your company perform the following activities in 2008?

- a. Participated in technical assistance or “know-how” agreements to transfer intellectual property (IP) to others not owned by your company Yes No
- b. Participated in technical assistance or “know-how” agreements to receive IP from others not owned by your company Yes No
- c. Acquired more than 50% ownership in another company for the primary purpose of acquiring their IP Yes No
- d. Acquired any financial interest in another company in order to gain access to their IP Yes No
- e. 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 Yes No
- f. Allowed free use of patents or other IP owned by your company (for example, allowing free use of software patents by the open source community) Yes No

Business segment codes

(used in Section 1 and Section 3)

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 air-flow 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
- 54190 Professional, scientific, and technical services (Not listed elsewhere in this category)
- 32300 Printing and related support activities
- 56290 Remediation and other waste management services
- 54170 Scientific research & development services
- 54140 Specialized design services
- 56150 Travel arrangement and reservation services
- 56210 Waste collection, treatment, and disposal

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
- 33990 Miscellaneous manufacturing (Not elsewhere listed in this category)
- 51200 Motion picture and sound recording (except Internet)
- 44100 Motor vehicle and parts dealers
- 71200 Museums, historical sites, and similar institutions
- 51110 Newspaper, periodical, book, and directory
- 45490 Nonstore retailers, except electronic shopping and mail-order houses
- 71100 Performing arts, spectator sports, and related industries
- 81200 Personal care, death care, laundry, and other personal services
- 51510 Radio and television broadcasting (except Internet)
- 81190 Repair and maintenance, except automotive
- 45990 Retail trade stores, including gasoline stations (Not elsewhere listed in this category)
- 32591 Soap, cleaning compound, and toilet preparations manufacturing
- 62400 Social assistance (except child day care services)
- 31300 Textile mill products
- 31220 Tobacco manufacturing
- 56150 Travel arrangement and reservation services
- 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
- 48620 Pipeline transportation of natural gas
- 21300 Support activities for oil and gas operations

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 Scientific 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 Services

- 51750 Cable and other program distribution
- 51740 Satellite telecommunications
- 51790 Telecommunications services (Not listed elsewhere in this category)
- 51710 Wired telecommunications carriers
- 51720 Wireless telecommunications carriers (except satellite)

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

Reporting information

A Is the information in this survey reported on a calendar year basis?

Yes → Continue

No → Enter time period covered below:

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

From			To		
------	--	--	----	--	--

B Approximately how long did it take to complete this survey?

hours

C What is the contact information for your company's survey coordinator—the person at your company responsible for gathering all requested information, ensuring instructions are followed, and certifying and submitting the completed survey?

Name

Title

Telephone

Extension

Fax

Extension

E-mail address

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 xxxx-xxxx,
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 xxxx - xxxx" as the subject.

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

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