



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

FORM  
**BRDI-1** (12-17-2013)

## 2013 BUSINESS R&D AND INNOVATION SURVEY

OMB No. 0607-0912: Approval Expires 01/31/2015

### DUE DATE:

#### Report electronically:

econhelp.census.gov/brdis

User ID:

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:

- econhelp.census.gov/brdis
- Call 1-800-772-7851, option "5" (8 a.m.–5 p.m. EST, M-F)
- Write to the address above. Include your 11-digit ID printed on the mailing label.

**INFORMATION COPY ONLY**

*(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 U.S. 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.

### About the Business R&D and Innovation Survey

The Business R&D and Innovation Survey is a national survey that collects critical information about research and development (R&D) and innovation at businesses operating in the U.S. Policy makers and data users in industry and academia make use of this information for short- and long-term planning.

Better information about R&D and innovation in the U.S. business sector will help leaders make better decisions to strengthen American competitiveness.

### Thank You – Your Response is Important

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

## Survey Overview and Table of Contents

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

### Section 1: Company Information . . . . . p.4

**Topics:** company ownership, business(es), revenues, and innovation  
**Requires:** knowledge of the company's sales and revenues

### Section 2: Financial Schedule A . . . . . p.10

**Topics:** R&D expenses and capital expenditures for R&D  
**Requires:** knowledge of your company's accounting concepts and access to financial records

### Section 3: Financial Schedule B . . . . . p.21

**Topics:** costs for work that was funded, paid for, or reimbursed by others  
**Requires:** knowledge of your company's financial records related to R&D activities

### Section 4: Management and Strategy of R&D . . . . . p.35

**Topics:** characteristics of R&D reported in Sections 2 and 3  
**Requires:** familiarity with the technical and strategic aspects of your company's R&D

### Section 5: Human Resources . . . . . p.40

**Topics:** your company's employees, focusing on those who work on R&D activities  
**Requires:** familiarity with human resources (HR) concepts and access to HR records

### Section 6: Intellectual Property and Technology Transfer . . . . . p.44

**Topics:** intellectual property and technology transfer  
**Requires:** knowledge of your company's general business strategy, patenting, and licensing

## Changes from the 2012 survey

On the basis of extensive conversations with many of the 2012 survey respondents, the 2013 survey has been improved. Sections and questions have been modified to make the concepts presented easier to understand. For a list of specific changes, go to [econhelp.census.gov/brdis](http://econhelp.census.gov/brdis).

## Filing electronically

You may submit your survey online via a secure website. Online submission allows you to save the data on secure Census Bureau servers as you go, so you can save, exit, and resume later without losing any of your data. It also allows you to save a paper or electronic copy of your completed survey. To submit online, follow the instructions at [econhelp.census.gov/brdis](http://econhelp.census.gov/brdis).

## Electronic materials

Electronic versions of the questionnaire and related documents are available to print or share with others in your company via e-mail. They can be found at [econhelp.census.gov/brdis](http://econhelp.census.gov/brdis).

### You can:

- Print and download copies of the questionnaire in PDF format
- Download Excel worksheets for each section
- Get question-by-question instructions, definitions, and examples that provide clarification
- Get answers to frequently asked questions, including how the data will be used



## 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. This includes a) activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses (basic research); b) activities aimed at solving a specific problem or meeting a specific commercial objective (applied research); and c) systematic use of research and practical experience to produce new or significantly improved goods, services, or processes (development).

The term R&D 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

## Does R&D include development of software and Internet applications?

Research and development activity in software and Internet applications refers only to activities with an element of uncertainty and that are intended to close knowledge gaps and meet scientific and technological needs. Report in this survey all software R&D as defined here regardless of the eventual user (internal or external).

R&D activity in software includes:

- Software development or improvement activities that expand scientific or technological knowledge
- Construction of new theories and algorithms in the field of computer science

R&D activity in software EXCLUDES:

- Software development that does not depend on a scientific or technological advance, such as
  - supporting or adapting existing systems
  - adding functionality to existing application programs, and
  - routine debugging of existing systems and software
- Creation of new software based on known methods and applications
- Conversion or translation of existing software and software languages
- Adaptation of a product to a specific client, unless knowledge that significantly improved the base program was added in that process

## Reporting unit

The reporting unit is your company, including all subsidiaries and divisions regardless of location. Include only subsidiary companies where there is more than 50 percent ownership. If you are owned by a foreign parent, the reporting unit for the survey is your U.S.-located company, including all your majority-owned subsidiaries and divisions regardless of location. For reporting purposes, your foreign parent and any foreign affiliates your company does not own should be treated the same as any business partner, customer, or supplier you do not own.

## Reporting period

Report data for the calendar year 2013, if possible, or for your company's fiscal year ending between April 2013 and March 2014.

## Estimates are acceptable

Please report all items to the best of your ability.

## To speak with a survey specialist, call 1-800-772-7851, option '1' for English, then option '5'.

Survey specialists are available 8 a.m. to 5 p.m. EST, M-F to help with any questions you may have.



# SECTION 1

## Company Information

**1-1 Did another company other than a holding company own more than 50 percent of voting interest in your company during 2013?**

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

Name of parent company

(MM)

(DD)

(YYYY)

Date parent company purchased your company

No → **Skip to Question 1-3**

**1-2 If you answered "Yes" to Question 1-1, is your company's owner a foreign company?**

Yes (foreign owner) → **Please follow these instructions:**

**REPORTING INSTRUCTIONS FOR FOREIGN-OWNED COMPANIES:**

If you are owned by a foreign parent, the reporting unit for the survey is your U.S.-located company, including all your majority-owned subsidiaries and divisions regardless of location. For reporting purposes, your foreign parent and any foreign affiliates your company does not own should be treated the same as any business partner, customer, or supplier you do not own.

If you pay your foreign parent for R&D services, those costs should be included in your responses in Section 2 as "costs for purchased R&D services."

If your foreign parent pays or reimburses your company for R&D services, the costs for this R&D should be included in your responses in Section 3 as "costs funded, paid for, or reimbursed by others."

Report your survey data using U.S. generally accepted accounting principles (U.S. GAAP) as recognized by the Financial Accounting Standard Board (FASB). If your company follows International Financial Reporting Standards (IFRS), we request that you estimate any adjustments that would be required to conform to U.S. GAAP.

No (U.S. owner) → **Please provide the following information:**

EIN of owner (9 digits)

**REPORTING INSTRUCTIONS FOR U.S.-OWNED COMPANIES:**

If your company was purchased between April 1, 2013 and December 31, 2013, report only for the period January 1, 2013 to the date of purchase. If your company was purchased before April 1, 2013, complete Question 1-6 and return this form to the Census Bureau – you are not required to complete the rest of this survey unless your owner instructs you to complete this survey.



**1-3 Did your company own more than 50 percent of any company operations or subsidiaries outside the 50 United States and D.C. during 2013?**

- Yes → **Include data for these operations/subsidiaries in your survey responses**
- No

**1-4 Has your company ceased operations?**

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

(MM) (DD) (YYYY)

Date your company ceased operations

**REPORTING INSTRUCTIONS:**

If your company ceased operations between April 1, 2013 and December 31, 2013, report only for the period January 1, 2013 to the date your company ceased operations. If your company ceased operations before April 1, 2013, complete Question 1-6 and return this form to the Census Bureau – you are not required to complete the rest of this survey.

- No

**1-5 Did your company have discontinued operations in 2013?**

- Yes → **Include data for these operations in your survey responses**
- No

**1-6 Who is the survey coordinator?**

The survey coordinator is the person at your company responsible for gathering all requested information, ensuring instructions are followed, and submitting the completed survey. The survey coordinator may not be able to personally complete the entire survey and may need to request information from other knowledgeable resources concerning your company's R&D, accounting, human resources, and legal matters.

Name

Title

Telephone

Area code      Number

Extension

Fax

Area code      Number

E-mail address





**1-8 What was the amount of your company's worldwide sales and revenues during 2013?**

**Include:**

- Sales and operating revenues from discontinued operations

|   |   |   |
|---|---|---|
| \$Bil.  | Mil.  | Thou.   |
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**1-9 How much of the amount reported in Question 1-8 was attributable to or originated from domestic operations?**

**Include:**

- Sales and operating revenues to foreign customers, including foreign subsidiaries

**Example:** U.S. Manufacturing Corporation sells parts to customers around the world. However, because all its operations are located inside the United States it reports 100% of its sales in this question.

|   |   |   |
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**1-10 How much of the 2013 sales and operating revenue amounts was for each business code listed or amended in Question 1-7:**

- (1) Worldwide sales and operating revenues reported in Question 1-8  
 (2) Domestic sales and operating revenues reported in Question 1-9

|    | Business code<br>(see page 6)   | (1)<br>Worldwide sales and<br>operating revenues  |   |   | (2)<br>Domestic sales and<br>operating revenues   |   |   |
|----|---|---|---|---|---|---|---|
|    |   | \$Bil.  | Mil.  | Thou.   | \$Bil.  | Mil.  | Thou.   |
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| h. | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>   | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| i. | Less eliminations –<br>the sales and<br>revenues that are<br>eliminated in order<br>to consolidate the<br>business codes. . . . | (   | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | )   | (   | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | )   |
| j. | <b>Total</b> . . . . .  |   | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |   | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |   | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |

Total equals Question 1-8

Total equals Question 1-9



**Product (good or service) innovation**

A product innovation is the market introduction of a **new** or **significantly** improved good or service with respect to its capabilities, user friendliness, components, or sub-systems.

- Product innovations (new or improved) must be new to your company, but they do not need to be new to your market.
- Product innovations could have been originally developed by your company or by other companies.

**1-11 During the three years 2011 to 2013, did your company introduce:**

- a. New or significantly improved goods (Exclude the simple resale of new goods purchased from other companies and changes of a solely aesthetic nature)? . . . . .  Yes  No
- b. New or significantly improved services? . . . . .  Yes  No

**1-12 If you answered "yes" to either 1-11, line a, or 1-11, line b, were any of your product innovations during the three years 2011 to 2013:**

- a. New to your market? . . . . .  Yes  No  
 Your company introduced a new or significantly improved good or service to your market before your competitors. (It may have been available in other markets.)
- b. New only to your company? . . . . .  Yes  No  
 Your company introduced a new or significantly improved good or service that was already available from your competitors in your market.

**1-13 Using the definitions above, please give the percentage of your total sales in 2013 from:**

- a. New or significantly improved goods and services introduced during 2011 to 2013 that were **new to your market** . . . . .    %
- b. New or significantly improved goods and services introduced during 2011 to 2013 that were **new only to your company**. . . . .    %
- c. Goods and services that were **unchanged or only marginally modified** during 2011 to 2013 (include the resale of new goods or services purchased from other companies) . . . . .    %
- d. **Total sales in 2013** . . . . .    %

1 0 0 %



## Process innovation

A process innovation is the implementation of a **new** or **significantly** improved production process, distribution method, or support activity for your goods or services.

- Process innovations must be new to your company, but they do not need to be new to your market.
- The innovation could have been originally developed by your company or by other companies.
- Exclude purely organizational innovations.

### 1-14 During the three years 2011 to 2013, did your company introduce:

- a. New or significantly improved methods of manufacturing or producing goods or services? .....  Yes  No
- b. New or significantly improved logistics, delivery or distribution methods for your inputs, goods, or services? .....  Yes  No
- c. New or significantly improved supporting activities for your processes, such as maintenance systems or operations for purchasing, accounting, or computing? .....  Yes  No



# SECTION 2

## Financial Schedule A

### 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.

### 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.

#### 2-1 What was the total worldwide R&D expense for your company in 2013?

**If your company is publicly traded**, this amount is equivalent to that disclosed on SEC Form 10-K as defined in FASB ASC Topic 730, Research and Development (FASB Statement No. 2, "Accounting for Research and Development Costs.")

**If your company is foreign-owned**, refer to the instructions on page 4. Additional guidance, such as for **privately owned companies**, is available online at [econhelp.census.gov/brdis](http://econhelp.census.gov/brdis).

**NOTE:** Report your company's R&D expense even if the amount is not considered material for your company's financial statements.

| \$Bil.  | Mil.   | Thou.  |
|---|--|--|
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#### 2-2 Does the amount reported in Question 2-1 include any of the following costs?

- a. Collaborative R&D that was reimbursed by business partners, such as through cost-sharing agreements. . . . .  Yes  No
- b. R&D paid for by government or private foundation grants. . . . .  Yes  No
- c. Technical services not an integral part of an R&D project (such as product support provided by R&D employees). . . . .  Yes  No
- d. Bid and proposal costs. . . . .  Yes  No
- e. Expense your company claimed resulting from the acquisition of another company with unfinished R&D projects (in-process R&D) . . . . .  Yes  No

#### 2-3 If you answered "Yes" to any of the costs in Question 2-2, what was the amount of these costs that was included in your response to Question 2-1?

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#### 2-4 Subtract Question 2-3 from Question 2-1 and enter the result here. This is the total R&D paid for by your company in 2013.

| \$Bil.  | Mil.   | Thou.  |
|---|--|--|
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#### 2-5 Is the amount entered in Question 2-4 greater than zero?

- Yes → **Continue with Question 2-6**
- No → **Skip to Section 3 on page 21**



**R&D paid for by your company**

**2-6** Of the amount reported in Question 2-4, what were the costs 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<br>(see page 6)   | \$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"/> | <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"/> | <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"/> | <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"/> | <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"/> | <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"/> | <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"/> | <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"/> | <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> |
| i. <b>Total</b> (equals Question 2-4)   | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> |

**2-7** Of the amount reported in Question 2-4, what costs were incurred by your company in the following locations?

|  | \$Bil.                                    | Mil.   | Thou.  |
|--|---|--|--|
| a. Domestic United States (50 states and D.C.) [Include R&D performed by domestic operations that is paid for by foreign subsidiaries] | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> |
| b. All other countries (also, Puerto Rico) [Include R&D performed by foreign subsidiaries that is paid for by domestic operations]     | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> |
| c. <b>Total</b> (equals Question 2-4).   | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> |

**2-8** Copy the amount from Question 2-7, line a. This is the total domestic R&D paid for by your company in 2013.

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

**2-9** Copy the amount from Question 2-7, line b. This is the total foreign R&D paid for by your company in 2013.

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

SECTION 2



**2-10** How much of the (1) domestic, (2) foreign, and (3) total worldwide R&D paid for by your company in 2013 was for each of the following types of costs?

|  | (1) Domestic         |                      |                      | (2) Foreign          |                      |                      | (3) Total worldwide  |                      |                      |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|  | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                |
| a. Salaries, wages, and fringe benefits  | <input type="text"/> |
| b. Stock-based compensation  | <input type="text"/> |
| c. Temporary staffing, including on-site consultants   | <input type="text"/> |
| d. Expensed equipment  | <input type="text"/> |
| e. Materials and supplies  | <input type="text"/> |
| f. Leased facilities and equipment   | <input type="text"/> |
| g. Depreciation and amortization on R&D property and equipment   | <input type="text"/> |
| h. Payments to business partners for collaborative R&D   | <input type="text"/> |
| i. Purchased R&D services (if your company is foreign-owned, include payments to your foreign owner for R&D) | <input type="text"/> |
| j. All other purchased services except R&D   | <input type="text"/> |
| k. All other costs   | <input type="text"/> |
| l. <b>Total</b>  | <input type="text"/> |

Total equals Question 2-8

Total equals Question 2-9

Total equals Question 2-4



**2-11 Add 2-10, lines h and i for each column, and enter the result here. This is R&D performed by others.**

| (1) Domestic         |                      |                      | (2) Foreign          |                      |                      | (3) Total worldwide  |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                |
| <input type="text"/> |

**2-12 Subtract 2-11 from 2-10, line l, for each column and enter the result here. This is R&D performed by your company.**

| (1) Domestic         |                      |                      | (2) Foreign          |                      |                      | (3) Total worldwide  |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                |
| <input type="text"/> |

**2-13 Copy the amount from Question 2-12, column 2. This is the foreign R&D paid for and performed by your company in 2013.**

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

**2-14 Of the amount reported in Question 2-13, how much R&D was performed in the following locations?** For full list of countries in each region see Question by Question Guidance at [econhelp.census.gov/brdis](http://econhelp.census.gov/brdis).

|                          | \$Bil.               | Mil.                 | Thou.                |                             | \$Bil.               | Mil.                 | Thou.                |
|--------------------------|----------------------|----------------------|----------------------|-----------------------------|----------------------|----------------------|----------------------|
| a. Canada . . . . .      | <input type="text"/> | <input type="text"/> | <input type="text"/> | j. Italy . . . . .          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Puerto Rico . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> | k. Luxembourg . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <b>Europe</b>            | <b>\$Bil.</b>        | <b>Mil.</b>          | <b>Thou.</b>         | l. Netherlands . . . . .    | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| a. Austria . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | m. Norway . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Belgium . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | n. Poland . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. Czech Rep. . . . .    | <input type="text"/> | <input type="text"/> | <input type="text"/> | o. Russia . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. Denmark . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | p. Spain . . . . .          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. Finland . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | q. Sweden . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| f. France . . . . .      | <input type="text"/> | <input type="text"/> | <input type="text"/> | r. Switzerland . . . . .    | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| g. Germany . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | s. Turkey . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| h. Hungary . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | t. United Kingdom . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| i. Ireland . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |                             |                      |                      |                      |

Question continues on next page



**2-14 (Continued)**

|                           | \$Bil.               | Mil.                 | Thou.                |
|---------------------------|----------------------|----------------------|----------------------|
| u. Other Europe . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**Latin America/  
Other Western Hemisphere**

|                            | \$Bil.               | Mil.                 | Thou.                |
|----------------------------|----------------------|----------------------|----------------------|
| a. Argentina . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Brazil . . . . .        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. Chile . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. Mexico . . . . .        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. Other Latin America/OWH | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**Asia and Pacific**

|                        | \$Bil.               | Mil.                 | Thou.                |
|------------------------|----------------------|----------------------|----------------------|
| a. Australia . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. China . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. Hong Kong . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. India . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. Indonesia . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| f. Japan . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| g. Malaysia . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |

|                                 | \$Bil.               | Mil.                 | Thou.                |
|---------------------------------|----------------------|----------------------|----------------------|
| h. New Zealand . . . . .        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| i. Singapore . . . . .          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| j. South Korea . . . . .        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| k. Taiwan . . . . .             | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| l. Thailand . . . . .           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| m. Other Asia/Pacific . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**Middle East**

|                                | \$Bil.               | Mil.                 | Thou.                |
|--------------------------------|----------------------|----------------------|----------------------|
| a. Israel . . . . .            | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Other Middle East . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**Africa**

|                           | \$Bil.               | Mil.                 | Thou.                |
|---------------------------|----------------------|----------------------|----------------------|
| a. South Africa . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Other Africa . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**Total** (equals Question 2-13) . . . . .

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

**2-15** Copy the amount from Question 2-12, column 1. This is the domestic R&D paid for and performed by your company in 2013.

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



**2-16** How much of the amount reported in Question 2-15 was performed in each state (including D.C.) in 2013?

|                                | \$Bil.               | Mil.                 | Thou.                |                          | \$Bil.               | Mil.                 | Thou.                |
|--------------------------------|----------------------|----------------------|----------------------|--------------------------|----------------------|----------------------|----------------------|
| Alabama . . . . .              | <input type="text"/> | <input type="text"/> | <input type="text"/> | Maine . . . . .          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Alaska . . . . .               | <input type="text"/> | <input type="text"/> | <input type="text"/> | Maryland . . . . .       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Arizona . . . . .              | <input type="text"/> | <input type="text"/> | <input type="text"/> | Massachusetts . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Arkansas . . . . .             | <input type="text"/> | <input type="text"/> | <input type="text"/> | Michigan . . . . .       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| California . . . . .           | <input type="text"/> | <input type="text"/> | <input type="text"/> | Minnesota . . . . .      | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Colorado . . . . .             | <input type="text"/> | <input type="text"/> | <input type="text"/> | Mississippi . . . . .    | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Connecticut . . . . .          | <input type="text"/> | <input type="text"/> | <input type="text"/> | Missouri . . . . .       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Delaware . . . . .             | <input type="text"/> | <input type="text"/> | <input type="text"/> | Montana . . . . .        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| District of Columbia . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> | Nebraska . . . . .       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Florida . . . . .              | <input type="text"/> | <input type="text"/> | <input type="text"/> | Nevada . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Georgia . . . . .              | <input type="text"/> | <input type="text"/> | <input type="text"/> | New Hampshire . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Hawaii . . . . .               | <input type="text"/> | <input type="text"/> | <input type="text"/> | New Jersey . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Idaho . . . . .                | <input type="text"/> | <input type="text"/> | <input type="text"/> | New Mexico . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Illinois . . . . .             | <input type="text"/> | <input type="text"/> | <input type="text"/> | New York . . . . .       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Indiana . . . . .              | <input type="text"/> | <input type="text"/> | <input type="text"/> | North Carolina . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Iowa . . . . .                 | <input type="text"/> | <input type="text"/> | <input type="text"/> | North Dakota . . . . .   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Kansas . . . . .               | <input type="text"/> | <input type="text"/> | <input type="text"/> | Ohio . . . . .           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Kentucky . . . . .             | <input type="text"/> | <input type="text"/> | <input type="text"/> | Oklahoma . . . . .       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Louisiana . . . . .            | <input type="text"/> | <input type="text"/> | <input type="text"/> | Oregon . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Question continues on next page

SECTION 2



**2-16 (Continued)**

|                     | \$Bil.               | Mil.                 | Thou.                |  | \$Bil.               | Mil.                 | Thou.                |
|---------------------|----------------------|----------------------|----------------------|--|----------------------|----------------------|----------------------|
| Pennsylvania . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> | Vermont . . . . .                            | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Rhode Island . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> | Virginia . . . . .                           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| South Carolina . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> | Washington . . . . .                         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| South Dakota . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> | West Virginia . . . . .                      | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Tennessee . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> | Wisconsin . . . . .                          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Texas . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | Wyoming . . . . .                            | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Utah . . . . .      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <b>Total</b> (equals<br>Question 2-15) . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**2-17 At what domestic location did your company perform the largest dollar amount of R&D in 2013?**

**Address 1**

**Address 2**

**City**

**State**

**ZIP**

**2-18 How much of the amount reported in Question 2-15 was from the location identified in Question 2-17?**

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





**R&D transactions between legal entities under common ownership**

**2-22 How much of the amount reported in Question 2-15 (domestic R&D performance) was paid for by your company's foreign subsidiaries through inter-company transactions?**

**Example:** Company Y owns a subsidiary in France. In order to complete the development of a product in 2013, the French subsidiary paid for R&D performed at Company Y's U.S. R&D center. The cost of the U.S. R&D that was paid for by the French subsidiary would be included in this item.

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

**2-23 How much of the amount reported in Question 2-13 (foreign R&D performance) was paid for by your company's domestic operations through inter-company transactions?**

**Example:** Company Z owns a subsidiary in France. In order to complete the development of a product in 2013, the domestic operations paid for R&D performed at its subsidiary's R&D center in France. The cost of the French subsidiary's R&D that was paid for by the domestic operations would be included in this item.

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

**R&D performed by others**

**2-24 Copy the amount from Question 2-11, column 1. This is the domestic R&D paid for by your company in 2013 that was performed by others.**

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

**2-25 How much of the amount reported in Question 2-24, was performed by the following types of organizations?**

|   | \$Bil.               | Mil.                 | Thou.                |
|---|----------------------|----------------------|----------------------|
| a. Companies located <u>inside</u> the United States . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Your company's foreign parent (if you are owned by a foreign parent). . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. Other companies located <u>outside</u> the United States . . . . .   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. U.S. federal government agencies or laboratories. . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. U.S. state and local government agencies or laboratories. . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| f. Foreign government agencies or laboratories . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| g. All other organizations <u>inside</u> the United States . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| h. All other organizations <u>outside</u> the United States . . . . .   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| i. <b>Total domestic R&amp;D paid for by your company that was performed by others</b> (equals Question 2-24) . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |

SECTION 2



**Indirect R&D charges**

**2-26** How much of the amount reported in Question 2-4 was for R&D costs your company plans to recoup through indirect charges on U.S. federal government contracts (IR&D or independent R&D)?

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

**Projected R&D for 2014**

**2-27** What are your company's projected 2014 costs for (1) domestic, (2) foreign, and (3) total worldwide R&D paid for by your company?

**NOTE:** These amounts are the 2014 projections for the amounts reported in Question 2-10, line I.

| (1) Domestic         |                      |                      | (2) Foreign          |                      |                      | (3) Total worldwide  |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                |
| <input type="text"/> |

**2-28** How much of the amount reported in Question 2-27, column 1, is for projected purchased R&D services and projected payments to business partners for collaborative R&D?

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

**Capital expenditures**

**2-29** What was the amount of your company's capital expenditures in the domestic United States in 2013?

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

**2-30** How much of the amount reported in Question 2-29 was for R&D operations?

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

**2-31** How much of the amount reported in Question 2-30 was for the following?

|   | \$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. <b>Total domestic capital expenditures for R&amp;D</b><br>(equals Question 2-30) ..... | <input type="text"/> | <input type="text"/> | <input type="text"/> |

SECTION 2



## Reporting information

**2-32** Is the information in this section reported for the 2013 calendar year?

Yes

No → Enter time period covered below:

From   (MM)     (YYYY) to   (MM)     (YYYY)



# SECTION 3

## Financial Schedule B

**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.

**What does this section cover?**

This section requests financial information about your company's costs for work that was funded, paid for, or reimbursed by others. This section requests information about these costs at multiple levels of detail: for your worldwide consolidated enterprise, for units or parts of your company defined by geography (countries, states), and for parts of your company defined by business code.

**3-1 What were your company's total worldwide costs (both direct and indirect) in 2013 for the following that were funded, paid for, or reimbursed by others not owned by your company?**

**Exclude:**

- Costs that were paid for by your company, such as those reported in Question 2-4
- Payments in excess of the actual cost of the work performed (such as profit or fees)

|  | \$Bil. | Mil.  | Thou. |
|--|--------|-------|-------|
| a. R&D that was reimbursed by your company's foreign parent (if you are owned by a foreign parent) . . . . .   | □ □    | □ □ □ | □ □ □ |
| b. Collaborative R&D that was reimbursed by business partners, such as through cost-sharing agreements. . . . .  | □ □    | □ □ □ | □ □ □ |
| c. R&D paid for by government or private foundation grants . . . . .   | □ □    | □ □ □ | □ □ □ |
| d. Defense RDT&E goods or services (including DOD 6.1 through 6.7 funding), provided as a prime or as a sub, to the government and/or government contractors . . . . . | □ □    | □ □ □ | □ □ □ |
| e. Medical nonclinical R&D services provided to others not owned by your company. . . . .  | □ □    | □ □ □ | □ □ □ |
| f. Medical clinical trial Phase I-III services provided to others not owned by your company (include pass-through costs) . . . . .                                     | □ □    | □ □ □ | □ □ □ |
| g. Nondefense custom software development and/or computer systems designed for others not owned by your company. . . . .   | □ □    | □ □ □ | □ □ □ |

**Exclude:**

- Software development that does not depend on a scientific or technological advance, such as adding functionality to existing application programs, debugging systems, and adapting existing software

|  |     |       |       |
|--|-----|-------|-------|
| h. Prototype development, production, and testing for customer's products prior to their introduction to the market (excluding defense-related prototyping reported in line d) . . . . . | □ □ | □ □ □ | □ □ □ |
| i. All other R&D services, not included above, provided to the Federal Government or to others not owned by your company. . . . .  | □ □ | □ □ □ | □ □ □ |
| j. <b>Total</b> . . . . .  | □ □ | □ □ □ | □ □ □ |

SECTION 3



**3-2** Copy the amount from Question 3-1, line j. This is the total R&D paid for by others in 2013.

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

**3-3** Is the amount entered in Question 3-2 greater than zero?

- Yes → Continue with Question 3-4
- No → Skip to Section 4 on page 35

**R&D paid for by others**

**3-4** Of the amount reported in Question 3-2, what costs were incurred by your company in the following locations?

|  | \$Bil.               | Mil.                 | Thou.                |
|--|----------------------|----------------------|----------------------|
| a. Domestic United States (50 states and D.C.) . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. All other countries (also, Puerto Rico) . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. <b>Total</b> (equals Question 3-2). . . . .           | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**3-5** Copy the amount from Question 3-4, line a. This is the total domestic R&D paid for by others in 2013.

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

**3-6** Copy the amount from Question 3-4, line b. This is the total foreign R&D paid for by others in 2013.

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



**3-7** How much of the (1) domestic, (2) foreign, and (3) total worldwide R&D paid for by others in 2013 was for each of the following types of costs?

|  | (1)<br>Domestic      |                      |                      | (2)<br>Foreign       |                      |                      | (3)<br>Total worldwide |                      |                      |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|------------------------|----------------------|----------------------|
|  | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.                 | Mil.                 | Thou.                |
| a. Salaries, wages, and fringe benefits  | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| b. Stock-based compensation  | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| c. Temporary staffing, including on-site consultants   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| d. Expensed equipment  | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| e. Materials and supplies  | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| f. Leased facilities and equipment   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| g. Depreciation and amortization on R&D property and equipment   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| h. Payments to business partners for collaborative R&D   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| i. Purchased R&D services (if your company is foreign-owned, include payments to your foreign owner for R&D) | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| j. All other purchased services except R&D   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| k. All other costs   | <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| l. <b>Total</b>  | <input type="text"/>   | <input type="text"/> | <input type="text"/> |

Total equals Question 3-5

Total equals Question 3-6

Total equals Question 3-2



**3-8 Add 3-7, lines h and i for each column, and enter the result here. This is R&D performed by others (e.g., subcontracted/passed-through R&D costs).**

| (1) Domestic         |                      |                      | (2) Foreign          |                      |                      | (3) Total worldwide  |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                |
| <input type="text"/> |

**3-9 Subtract 3-8 from 3-7, line l, for each column and enter the result here. This is R&D performed by your company that was paid for by others.**

| (1) Domestic         |                      |                      | (2) Foreign          |                      |                      | (3) Total worldwide  |                      |                      |
|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                |
| <input type="text"/> |

**3-10 Copy the amount from Question 3-9, column 2. This is the foreign R&D performed by your company that was paid for by others.**

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

**3-11 Of the amount reported in Question 3-10, how much R&D was performed in the following locations?** For full list of countries in each region see Question by Question Guidance at [econhelp.census.gov/brdis](http://econhelp.census.gov/brdis).

|                          | \$Bil.               | Mil.                 | Thou.                |                             | \$Bil.               | Mil.                 | Thou.                |
|--------------------------|----------------------|----------------------|----------------------|-----------------------------|----------------------|----------------------|----------------------|
| a. Canada . . . . .      | <input type="text"/> | <input type="text"/> | <input type="text"/> | j. Italy . . . . .          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Puerto Rico . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> | k. Luxembourg . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <b>Europe</b>            | <b>\$Bil.</b>        | <b>Mil.</b>          | <b>Thou.</b>         | l. Netherlands . . . . .    | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| a. Austria . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | m. Norway . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Belgium . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | n. Poland . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. Czech Rep. . . . .    | <input type="text"/> | <input type="text"/> | <input type="text"/> | o. Russia . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. Denmark . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | p. Spain . . . . .          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. Finland . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | q. Sweden . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| f. France . . . . .      | <input type="text"/> | <input type="text"/> | <input type="text"/> | r. Switzerland . . . . .    | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| g. Germany . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | s. Turkey . . . . .         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| h. Hungary . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> | t. United Kingdom . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| i. Ireland . . . . .     | <input type="text"/> | <input type="text"/> | <input type="text"/> |                             |                      |                      |                      |

Question continues on next page



**3-11 (Continued)**

|  | \$Bil.               | Mil.                 | Thou.                |   | \$Bil.               | Mil.                 | Thou.                |
|--|----------------------|----------------------|----------------------|---|----------------------|----------------------|----------------------|
| u. Other Europe . . . . .                          | <input type="text"/> | <input type="text"/> | <input type="text"/> | h. New Zealand . . . . .                      | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <b>Latin America/<br/>Other Western Hemisphere</b> |                      |                      |                      | i. Singapore . . . . .                        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| a. Argentina . . . . .                             | <input type="text"/> | <input type="text"/> | <input type="text"/> | j. South Korea . . . . .                      | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Brazil . . . . .                                | <input type="text"/> | <input type="text"/> | <input type="text"/> | k. Taiwan . . . . .                           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. Chile . . . . .                                 | <input type="text"/> | <input type="text"/> | <input type="text"/> | l. Thailand . . . . .                         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. Mexico . . . . .                                | <input type="text"/> | <input type="text"/> | <input type="text"/> | m. Other Asia/<br>Pacific . . . . .           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. Other Latin America/OWH                         | <input type="text"/> | <input type="text"/> | <input type="text"/> | <b>Middle East</b>                            | \$Bil.               | Mil.                 | Thou.                |
| <b>Asia and Pacific</b>                            |                      |                      |                      | a. Israel . . . . .                           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| a. Australia . . . . .                             | <input type="text"/> | <input type="text"/> | <input type="text"/> | b. Other Middle East . . . . .                | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. China . . . . .                                 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <b>Africa</b>                                 | \$Bil.               | Mil.                 | Thou.                |
| c. Hong Kong . . . . .                             | <input type="text"/> | <input type="text"/> | <input type="text"/> | a. South Africa . . . . .                     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. India . . . . .                                 | <input type="text"/> | <input type="text"/> | <input type="text"/> | b. Other Africa . . . . .                     | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. Indonesia . . . . .                             | <input type="text"/> | <input type="text"/> | <input type="text"/> | <b>Total</b> (equals Question 3-10) . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| f. Japan . . . . .                                 | <input type="text"/> | <input type="text"/> | <input type="text"/> |   |                      |                      |                      |
| g. Malaysia . . . . .                              | <input type="text"/> | <input type="text"/> | <input type="text"/> |   |                      |                      |                      |

**Domestic R&D performed by your company that was paid for by others**

**3-12** Copy the amount from Question 3-9, column 1. This is the domestic R&D performed by your company that was paid for by others.

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



**3-13 How much of the domestic R&D performed by your company that was paid for by others reported in Question 3-12 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<br>(see page 6) |  | \$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"/> | <input type="text"/> <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"/> | <input type="text"/> <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"/> | <input type="text"/> <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"/> | <input type="text"/> <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"/> | <input type="text"/> <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"/> | <input type="text"/> <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"/> | <input type="text"/> <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"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| i.                            | <b>Total</b> (equals Question 3-12).   | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |

**3-14 How much of the amount reported in Question 3-12 was paid for by each of the following?**

**If your company is a subcontractor or subgrantee, report the original source of funds.**

**Example:** Company Sub Inc. performs custom software development for a large defense company as a subcontractor on a contract with the U.S. Dept. of Defense. Even though Sub Inc. is working directly for the defense company, it reports the cost of this development in line d because the Dept. of Defense was the original source of funds.

|  | \$Bil.                                    | Mil.  | Thou.   |
|--|---|---|---|
| a. Other companies located <u>inside</u> the United States. . . . .              | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| b. Your company's foreign parent (if you are owned by a foreign parent). . . . . | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| c. Other companies located <u>outside</u> the United States . . . . .            | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| d. U.S. federal government agencies or laboratories. . . . .                     | <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |

**Question continues on next page**



**3-14 (Continued)**

|   | \$Bil.               | Mil.                 | Thou.                |
|---|----------------------|----------------------|----------------------|
| e. U.S. state government agencies or laboratories . . . . .           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| f. Foreign government agencies or laboratories . . . . .              | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| g. All other organizations <u>inside</u> the United States . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| h. All other organizations <u>outside</u> the United States . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| i. <b>Total</b> (equals Question 3-12). . . . .                       | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**3-15 Add Question 3-14, lines a, b, and c, and enter the result here. This is the R&D that was paid for by other companies.**

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

**3-16 Using the list of business codes printed below, allocate the amount reported in Question 3-15 based on the industries of the companies that paid for the R&D. As needed, enter additional codes from pages 46-47 in the spaces provided.**

| Business code  | Description   | \$Bil.               | Mil.                 | Thou.                |
|--|---|----------------------|----------------------|----------------------|
| a. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | Pharmaceutical, medicinal, and botanical products manufacturing . . . . . | <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"/> | Medical equipment and supplies manufacturing . . . . .                    | <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"/> | Fabricated metal products manufacturing . . . . .                         | <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"/> | Plastics and rubber products manufacturing . . . . .                      | <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"/> | Electrical equipment, appliances, and components manufacturing . . . . .  | <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"/> | Software publishers (except Internet). . . . .                            | <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"/> . . . . .  | <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"/> . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| i. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| j. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Question continues on next page



**3-16 (Continued)**

|    | Business code                                 | Description          | \$Bil.               | Mil.                 | Thou.                |
|----|---|----------------------|----------------------|----------------------|----------------------|
| k. | <input type="text"/>                          | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| l. | <input type="text"/>                          | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| m. | <input type="text"/>                          | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| n. | <input type="text"/>                          | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| o. | <b>Total</b> (equals Question 3-15) . . . . . |                      | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**3-17 Copy the amount from Question 3-14, line d. This is domestic R&D performed by your company that was paid for by the U.S. federal government.**

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

**3-18 How much of the amount reported in Question 3-17 was paid for by the following agencies?**

|  | \$Bil.               | Mil.                 | Thou.                |
|--|----------------------|----------------------|----------------------|
| a. Department of Defense . . . . .                         | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Department of Energy . . . . .                          | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. National Aeronautics and Space Administration . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| d. National Institutes of Health . . . . .                 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| e. Department of Homeland Security . . . . .               | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| f. Department of Transportation . . . . .                  | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| g. Environmental Protection Agency . . . . .               | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| h. National Science Foundation . . . . .                   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| i. All other, please specify:<br><input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| j. <b>Total</b> (equals Question 3-17). . . . .            | <input type="text"/> | <input type="text"/> | <input type="text"/> |



**3-19 How much of the amount reported in Question 3-17 was performed under the following types of agreements?**

|   | \$Bil.               | Mil.                 | Thou.                |
|---|----------------------|----------------------|----------------------|
| a. Contracts (include direct or prime contracts and subcontracts) . . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. Grants, reimbursements, and all other agreements . . . . .               | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. <b>Total</b> (equals Question 3-17) . . . . .                            | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**3-20 Subtract Question 3-17 from Question 3-12 and enter the result here. This is the domestic R&D performed by your company that was paid for by nonfederal sources.**

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

**3-21 How much of the following three amounts was performed in each state (including D.C.):**

- (1) Domestic R&D paid for by the U.S. federal government reported in Question 3-17
- (2) Domestic R&D paid for by nonfederal sources reported in Question 3-20
- (3) Total domestic R&D performed by your company that was paid for by others reported in Question 3-12

|             | (1) Federal          |                      |                      | (2) Nonfederal       |                      |                      | (3) Total            |                      |                      |
|-------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|             | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                | \$Bil.               | Mil.                 | Thou.                |
| Alabama     | <input type="text"/> |
| Alaska      | <input type="text"/> |
| Arizona     | <input type="text"/> |
| Arkansas    | <input type="text"/> |
| California  | <input type="text"/> |
| Colorado    | <input type="text"/> |
| Connecticut | <input type="text"/> |

Question continues on next page



**3-21 (Continued)**

|                      | <b>(1)<br/>Federal</b> |                      |                      | <b>(2)<br/>Nonfederal</b> |                      |                      | <b>(3)<br/>Total</b> |                      |                      |
|----------------------|------------------------|----------------------|----------------------|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                      | <u>\$Bil.</u>          | <u>Mil.</u>          | <u>Thou.</u>         | <u>\$Bil.</u>             | <u>Mil.</u>          | <u>Thou.</u>         | <u>\$Bil.</u>        | <u>Mil.</u>          | <u>Thou.</u>         |
| Delaware             | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| District of Columbia | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Florida              | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Georgia              | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Hawaii               | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Idaho                | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Illinois             | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Indiana              | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Iowa                 | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Kansas               | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Kentucky             | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Louisiana            | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Maine                | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Question continues on next page



**3-21 (Continued)**

|               | <b>(1)<br/>Federal</b> |                      |                      | <b>(2)<br/>Nonfederal</b> |                      |                      | <b>(3)<br/>Total</b> |                      |                      |
|---------------|------------------------|----------------------|----------------------|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|               | <u>\$Bil.</u>          | <u>Mil.</u>          | <u>Thou.</u>         | <u>\$Bil.</u>             | <u>Mil.</u>          | <u>Thou.</u>         | <u>\$Bil.</u>        | <u>Mil.</u>          | <u>Thou.</u>         |
| Maryland      | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Massachusetts | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Michigan      | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Minnesota     | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Mississippi   | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Missouri      | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Montana       | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Nebraska      | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Nevada        | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| New Hampshire | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| New Jersey    | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| New Mexico    | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| New York      | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Question continues on next page

SECTION 3



**3-21 (Continued)**

|                | <b>(1)<br/>Federal</b> |                      |                      | <b>(2)<br/>Nonfederal</b> |                      |                      | <b>(3)<br/>Total</b> |                      |                      |
|----------------|------------------------|----------------------|----------------------|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                | <u>\$Bil.</u>          | <u>Mil.</u>          | <u>Thou.</u>         | <u>\$Bil.</u>             | <u>Mil.</u>          | <u>Thou.</u>         | <u>\$Bil.</u>        | <u>Mil.</u>          | <u>Thou.</u>         |
| North Carolina | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| North Dakota   | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Ohio           | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Oklahoma       | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Oregon         | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Pennsylvania   | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Rhode Island   | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| South Carolina | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| South Dakota   | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Tennessee      | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Texas          | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Utah           | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Vermont        | <input type="text"/>   | <input type="text"/> | <input type="text"/> | <input type="text"/>      | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Question continues on next page

SECTION 3



**3-21 (Continued)**

|               | (1)<br>Federal                    |                      |                      | (2)<br>Nonfederal                 |                      |                      | (3)<br>Total                      |                      |                      |
|---------------|-----------------------------------|----------------------|----------------------|-----------------------------------|----------------------|----------------------|-----------------------------------|----------------------|----------------------|
|               | \$Bil.                            | Mil.                 | Thou.                | \$Bil.                            | Mil.                 | Thou.                | \$Bil.                            | Mil.                 | Thou.                |
| Virginia      | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> |
| Washington    | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> |
| West Virginia | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> |
| Wisconsin     | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> |
| Wyoming       | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> |
| <b>Total</b>  | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> | <input type="text"/>              | <input type="text"/> | <input type="text"/> |
|               | <i>Total equals Question 3-17</i> |                      |                      | <i>Total equals Question 3-20</i> |                      |                      | <i>Total equals Question 3-12</i> |                      |                      |

**3-22 At what domestic location did your company perform the largest dollar amount of R&D that was paid for by others in 2013?**

**Address 1**

**Address 2**

**City**

**State**

**ZIP**

**3-23 How much of the amount reported in Question 3-12 was from the location identified in Question 3-22?**

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



**3-24** At what domestic location did your company perform the second largest dollar amount of R&D that was paid for by others in 2013?

Address 1

Address 2

City

State

ZIP

**3-25** How much of the amount reported in Question 3-12 was from the location identified in Question 3-24?

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

**Projected R&D paid for by others in 2014**

**3-26** What are your company's projected 2014 costs for R&D that will be paid for by others?

**NOTE:** This amount is the 2014 projection for what is reported in Question 3-2.

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

**3-27** How much of the projected costs in 2014 for R&D that will be paid for by others reported in Question 3-26 will be performed by your company in the United States?

**NOTE:** This amount is the 2014 projection for what is reported in Question 3-12.

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

**3-28** How much of the projected costs in 2014 for domestic R&D performed by your company that will be paid for by others reported in Question 3-27 will be paid for by the U.S. federal government?

**NOTE:** This amount is the 2014 projection for what is reported in Question 3-17.

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



# SECTION 4

## Management and Strategy of R&D

**Who should answer this section?**

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

**What does this section cover?**

This section requests information about the characteristics of the R&D reported in Sections 2 and 3. This section requests information about your company's worldwide consolidated R&D and the R&D your company performs in the domestic United States.

**4-1** Copy the amount from Question 2-4. This is the total R&D paid for by your company in 2013.

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

**4-2** Is the amount entered in Question 4-1 greater than zero?

- Yes → **Continue with Question 4-3**
- No → **Skip to Question 4-17 on page 37**

**4-3** What percentage of the amount reported in Question 4-1 was directed toward business areas or product lines that are new to your company?

**Example:** Company A manufactures laptop computers. In 2013 Company A's management decided to attempt to enter the cellular phone market and used a portion of the company's R&D budget to develop cellular phones. Because this was a new line of business in 2013, Company A reports this R&D in this question.

|                      |                      |                      |                      |   |
|----------------------|----------------------|----------------------|----------------------|---|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | % |
|----------------------|----------------------|----------------------|----------------------|---|

### Characteristics of domestic R&D paid for and performed by your company

**4-4** Copy the amount from Question 2-15. This is the domestic R&D paid for and performed by your company.

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

**4-5** How much of the amount reported in Question 4-4 was for the following categories?

- a. Research—the planned, systematic pursuit of new knowledge or understanding. . . . .
- b. Development—the systematic use of research and practical experience to produce new or significantly improved goods, services, or processes . . . . .
- c. **Total** (equals Question 4-4). . . . .

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

SECTION 4



**4-6 If you reported any research in Question 4-5, line a, how much of that research was for the following categories?**

|  | \$Bil.               | Mil.                 | Thou.                |
|--|----------------------|----------------------|----------------------|
| a. <u>Applied research</u> —the activity aimed at solving a specific problem or meeting a specific commercial objective. . . . .                           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. <u>Basic research</u> —the activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use. . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. <b>Total</b> (equals Question 4-5, line a) . . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |

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

**NOTE: You may report the same R&D in multiple areas for Questions 4-7 to 4-11.**

**4-7 What percentage of the amount reported in Question 4-4 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?**

**Example:** Company B is a semiconductor manufacturer. Its products are not designed specifically for energy applications. In 2013, 10% of the domestic R&D performed by the company was focused on improving the energy efficiency of its products. Based on this, Company B reports "10%" for this question.

%

**4-8 What percentage of the amount reported in Question 4-4 had environmental protection applications, including pollution abatement?**

%

**4-9 What percentage of the amount reported in Question 4-4 had defense applications, including military applications and general security-related R&D?**

%

**4-10 What percentage of the amount reported in Question 4-4 had health or medical applications?**

%

**4-11 What percentage of the amount reported in Question 4-4 had agricultural applications?**

%

**Technology focus of domestic R&D paid for and performed by your company**

**NOTE: You may report the same R&D in multiple areas for Questions 4-12 to 4-16.**

**4-12 What percentage of the amount reported in Question 4-4 was for software products or software embedded in other projects or products?**

%

**4-13 What percentage of the amount reported in Question 4-4 was for optics and photonics—science and technology involving the emission, processing, and detection of light, or of the information carried by light?**

%

SECTION 4



**4-14** What percentage of the amount reported in Question 4-4 was for other projects or products enabled by optics and photonics science and technology □ □ □ %

**4-15** What percentage of the amount reported in Question 4-4 was for biotechnology—the use of cellular and bio-molecular processes to solve problems or make useful products? □ □ □ %

**4-16** What percentage of the amount reported in Question 4-4 was for nanotechnology—the science and technology involving work at the nanometer scale? □ □ □ %

**Domestic R&D performed by your company that was paid for by others**

**4-17** Copy the amount from Question 3-12. This is the domestic R&D performed by your company that was paid for by others. \$Bil.      Mil.      Thou.  
□ □      □ □ □      □ □ □

**4-18** Is the amount entered in Question 4-17 greater than zero?  
 Yes → **Continue with Question 4-19**  
 No → **Skip to Section 5 on page 40**

**4-19** How much of the amount reported in Question 4-17 was for the following categories? \$Bil.      Mil.      Thou.

|   |     |       |       |
|---|-----|-------|-------|
| a. <u>Research</u> —the planned, systematic pursuit of new knowledge or understanding. . . . .  | □ □ | □ □ □ | □ □ □ |
| b. <u>Development</u> —the systematic use of research and practical experience to produce new or significantly improved goods, services, or processes . . . . . | □ □ | □ □ □ | □ □ □ |
| c. <b>Total</b> (equals Question 4-17). . . . .   | □ □ | □ □ □ | □ □ □ |

**4-20** If you reported any research in Question 4-19, line a, how much of that research was for the following categories? \$Bil.      Mil.      Thou.

|  |     |       |       |
|--|-----|-------|-------|
| a. <u>Applied research</u> —the activity aimed at solving a specific problem or meeting a specific commercial objective. . . . .                           | □ □ | □ □ □ | □ □ □ |
| b. <u>Basic research</u> —the activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use. . . . . | □ □ | □ □ □ | □ □ □ |
| c. <b>Total</b> (equals Question 4-19, line a). . . . .  | □ □ | □ □ □ | □ □ □ |

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**NOTE: You may report the same R&D in multiple areas for Questions 4-21 to 4-25.**

**4-21** What percentage of the amount reported in Question 4-17 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?     %

**4-22** What percentage of the amount reported in Question 4-17 had environmental protection applications, including pollution abatement?     %

**4-23** What percentage of the amount reported in Question 4-17 had defense applications, including military applications and general security-related R&D?     %

**4-24** What percentage of the amount reported in Question 4-17 had health or medical applications?     %

**4-25** What percentage of the amount reported in Question 4-17 had agricultural applications?     %

**Technology focus of domestic R&D performed by your company that was paid for by others**

**NOTE: You may report the same R&D in multiple areas for Questions 4-26 to 4-30.**

**4-26** What percentage of the amount reported in Question 4-17 was for software products or software embedded in other projects or products?     %

**4-27** What percentage of the amount reported in Question 4-17 was for optics and photonics—science and technology involving the emission, processing, and detection of light, or of the information carried by light?     %

**4-28** What percentage of the amount reported in Question 4-17 was for other projects or products enabled by optics and photonics science and technology?     %

**4-29** What percentage of the amount reported in Question 4-17 was for biotechnology—the use of cellular and bio-molecular processes to solve problems or make useful products?     %

**4-30** What percentage of the amount reported in Question 4-17 was for nanotechnology—the science and technology involving work at the nanometer scale?     %



**Domestic R&D performed by your company that was paid for by the U.S. federal government**

**4-31** Copy the amount from Question 3-17. This is domestic R&D performed by your company that was paid for by the U.S. federal government.

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

**4-32** Is the amount entered in Question 4-31 greater than zero?

- Yes → Continue with Question 4-33
- No → Skip to Section 5 on page 40

**4-33** How much of the amount reported in Question 4-31 was for the following categories?

|  | \$Bil.               | Mil.                 | Thou.                |
|--|----------------------|----------------------|----------------------|
| a. <u>Research</u> —the planned, systematic pursuit of new knowledge or understanding. . . . .   | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. <u>Development</u> —the systematic use of research and practical experience to produce new or significantly improved goods, services, or processes. . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. <b>Total</b> (equals Question 4-31). . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**4-34** If you reported any research in Question 4-33, line a, how much of that research was for the following categories?

|  | \$Bil.               | Mil.                 | Thou.                |
|--|----------------------|----------------------|----------------------|
| a. <u>Applied research</u> —the activity aimed at solving a specific problem or meeting a specific commercial objective. . . . .                           | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| b. <u>Basic research</u> —the activity aimed at acquiring new knowledge or understanding without specific immediate commercial application or use. . . . . | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| c. <b>Total</b> (equals Question 4-33, line a). . . . .  | <input type="text"/> | <input type="text"/> | <input type="text"/> |

**4-35** What percentage of the amount reported in Question 4-31 was for software products or software embedded in other projects or products?     %

SECTION 4



# SECTION 5

## 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.

**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. Include employment data for operations or subsidiaries for which your company owned more than 50 percent.

**5-1 What was the total number of worldwide employees working at your company for the pay period that included March 12, 2013?**

**Include:**

- Full- and part-time employees

**Exclude:**

- Leased or temporary employees and on-site consultants

Number

|  |  |  |  |  |  |
|--|--|--|--|--|--|
|  |  |  |  |  |  |
|--|--|--|--|--|--|

**5-2 How many of the employees reported in Question 5-1 were employees of your company's domestic operations and foreign operations?**

**Domestic operations employees** include all employees whose payroll was reported on the first quarter filing of IRS Form 941, Employer's Quarterly Tax Return.

|                     | (1)<br>Domestic<br>operations   | (2)<br>Foreign<br>operations | (3)<br>Total<br>employees |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|---------------------|---|------------------------------|---------------------------|--|--|--|--|---|--|--|--|--|--|--|---|--|--|--|--|--|--|
| Employees . . . . . | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |                              |                           |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  |
|                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |

*Total equals  
Question 5-1*

**5-3 How many employees reported in Question 5-2 were R&D employees and how many were all other employees?**

**R&D employees include** all employees who work on R&D or who provide direct support to R&D, such as researchers, R&D managers, technicians, clerical staff, and others assigned to R&D groups. **Exclude** employees who provide only indirect support to R&D, such as corporate personnel, security guards, and cafeteria workers.

|                                     | (1)<br>Domestic<br>operations   | (2)<br>Foreign<br>operations | (3)<br>Total<br>employees |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|-------------------------------------|---|------------------------------|---------------------------|--|--|--|--|---|--|--|--|--|--|--|---|--|--|--|--|--|--|
| a. R&D employees . . . . .          | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |                              |                           |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
| b. All other employees . . .        | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |                              |                           |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
| c. <b>Total employees</b> . . . . . | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |                              |                           |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> <td style="border: 1px solid black; width: 25px; height: 25px;"></td> </tr> </table> |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |
|                                     |   |                              |                           |  |  |  |  |   |  |  |  |  |  |  |   |  |  |  |  |  |  |

*Total line equals Question 5-2*

SECTION 5



**R&D employees**

**5-4** Copy the numbers from Question 5-3, line a. These are your company's R&D employees.

|                         | (1)<br>Domestic<br>operations   | (2)<br>Foreign<br>operations  | (3)<br>Total R&D<br>employees   |
|-------------------------|---|---|---|
| R&D employees . . . . . | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |

**5-5** How many of the R&D employees reported in Question 5-4 were female employees and male employees?

|                                   | (1)<br>Domestic<br>operations   | (2)<br>Foreign<br>operations  | (3)<br>Total R&D<br>employees   |
|-----------------------------------|---|---|---|
| a. Female R&D employees           | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| b. Male R&D employees . .         | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| c. <b>Total R&amp;D employees</b> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |

Total line equals Question 5-4

**5-6** How many of the R&D employees reported in Question 5-4 worked in the occupations listed below?

|  | (1)<br>Domestic<br>operations   | (2)<br>Foreign<br>operations  | (3)<br>Total R&D<br>employees   |
|--|---|---|---|
| a. R&D scientists, engineers, and managers . . . . . | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| b. R&D technicians and technologists. . . . .        | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| c. R&D support staff (clerical and other) . . . .    | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |
| d. <b>Total R&amp;D employees</b>                    | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |

Total line equals Question 5-4

**5-7** How many of the R&D scientists, engineers, and managers reported in Question 5-6, line a, had the following level of education?

|   | (1)<br>Domestic<br>Operations   | (2)<br>Foreign<br>Operations  | (3)<br>Total  |
|---|---|---|---|
| PhD (excluding MD, JD, and EdD) . . . . . | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> | <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> |

SECTION 5



**Domestic full-time equivalents (FTEs)**

**5-8** Of the domestic R&D employees reported in Question 5-4, column 1, what was the number of full-time equivalents (FTEs) for R&D activity for full-time R&D employees, other full-time employees not working solely on R&D, and part-time employees?

a. FTEs for full-time R&D employees Number  
 Count the number of full-time employees who work only on R&D. . . . .

**Example:**  
 50 full-time R&D employees worked only on R&D = 50 FTEs

b. FTEs for other full-time employees not working solely on R&D  
 Use the share of the time they work on R&D to calculate the number of FTEs. . . . .

**Example:**  
 60 full-time employees averaged one-fourth of their time on R&D = 15 FTEs

c. FTEs for part-time employees working on R&D  
 Use the share of a full-time week (such as 40 hours) that they work on R&D to calculate the FTEs. . . . .

**Example:**  
 20 part-time employees averaged 20 hours a week on R&D activities = 10 FTEs

d. **Total FTEs** . . . . .

*Total FTEs should not exceed Question 5-4, column 1.*

SECTION 5



**5-9** Of the domestic R&D scientists, engineers, and managers reported in Question 5-6, row a, column 1, what was the number of full-time equivalents (FTEs) for R&D activity for full-time R&D employees, other full-time employees not working solely on R&D, and part-time employees?

a. FTEs for full-time R&D scientists, engineers, and managers

Number

Count the number of full-time employees who work only on R&D. . . . .

     

**Example:**

50 full-time R&D scientists worked only on R&D = 50 FTEs

b. FTEs for other full-time scientists, engineers, and managers not working solely on R&D

Use the share of the time they work on R&D to calculate the number of FTEs. . . . .

     

**Example:**

60 full-time managers averaged one-fourth of their time on R&D = 15 FTEs

c. FTEs for part-time scientists, engineers, and managers working on R&D

Use the share of a full-time week (such as 40 hours) that they work on R&D to calculate the FTEs. . . . .

     

**Example:**

20 part-time employees averaged 20 hours a week on R&D activities = 10 FTEs

d. **Total FTEs** . . . . .

     

*Total FTEs should not exceed Question 5-6, line a, column 1.*

**5-10** How many of the R&D scientists, engineers, and managers reported in Question 5-6, line a, column 1, were non-U.S. citizens employed in the United States under a temporary visa, such as H-1B or L-1?

(1)  
Domestic  
Operations

R&D scientists, engineers, and managers employed under a temporary visa. . . . .

     


## SECTION 6

### Intellectual Property and Technology Transfer

#### Who should answer this section?

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

#### What does this section cover?

This section requests information about intellectual property and technology transfer activities such as:

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

#### 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 companies. 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.

#### Patents

**6-1** How many patents did your company apply for in 2013 from the U.S. Patent and Trademark Office (USPTO)?

Number

   

**6-2** What percentage of the patent applications reported in Question 6-1 has your company applied for or plans to apply for in foreign jurisdictions?

    %

**6-3** What percentage of the patent applications reported in Question 6-1 was for inventions that originated within your company's organized R&D activities?

    %

**6-4** How many patents were issued to your company in 2013 by the USPTO?

Number

   

**6-5** What percentage of your company's inventions considered for patenting in 2013 resulted in patent applications?

    %

#### Patent licensing

**6-6** What was the amount of your company's patent licensing revenue in 2013?

\$Bil.      Mil.      Thou.

         


**6-7** How many new agreements did your company enter into during 2013 to license patents to others not owned by your company?

Number

**Intellectual property transfer activities**

**6-8** Did your company perform the following activities in 2013?

- a. Transferred intellectual property (IP) to others not owned by your company through participation in technical assistance or "know how" agreements . . . . .  Yes  No
- b. Received IP from others not owned by your company through participation in technical assistance or "know how" agreements . . . . .  Yes  No
- c. Transferred IP to a spin-off or spin-out of your company. . . . .  Yes  No
- d. Received IP from a parent company as part of a spin-off or spin-out. . .  Yes  No
- e. Acquired more than 50% ownership in another company for the primary purpose of acquiring their IP. . . . .  Yes  No
- f. Acquired any financial interest in another company in order to gain access to their IP . . . . .  Yes  No
- g. Participated in cross-licensing agreements—the 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
- h. 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
- i. Made use of open source patents or other freely available IP not owned by your company. . . . .  Yes  No

**Intellectual property protection**

**6-9** During 2013, 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"/> |



**Business codes**

(used in Sections 1, 2, and 3)

**Aerospace and Defense**

- 33642 Aircraft engine and engine parts manufacturing
- 33641 Aircraft 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
- 33643 Other aircraft parts and auxiliary equipment manufacturing

**Automobiles, Motorcycles, and Components**

- 33620 Motor vehicle body and trailer manufacturing
- 33630 Motor vehicle parts manufacturing
- 33610 Motor vehicles manufacturing
- 33691 Motorcycle, bicycle, and parts manufacturing
- 33651 Railroad rolling stock manufacturing
- 33660 Ship and boat building
- 33699 All other transportation equipment manufacturing

**Capital Equipment**

- 33311 Agricultural machinery and equipment manufacturing
- 33332 Commercial, service industry, temperature control, and airflow control machinery manufacturing
- 33312 Construction machinery manufacturing
- 33500 Electrical equipment, appliances, and components manufacturing
- 33360 Engine, turbine, and power transmission equipment manufacturing
- 33322 Industrial machinery manufacturing, except semiconductor machinery
- 33390 Metalworking and other general purpose machinery manufacturing
- 33319 Mining, oil, and gas field machinery and equipment manufacturing
- 33331 Photographic and photocopying equipment manufacturing

**Chemicals and Materials**

- 32402 Asphalt paving, roofing, and saturated materials manufacturing
- 32510 Basic chemicals manufacturing
- 32790 Cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing
- 32710 Clay and glass products manufacturing
- 21200 Mining
- 32592 Paint, adhesive, and other chemical manufacturing
- 32200 Paper manufacturing
- 32530 Pesticide, fertilizer, and other agricultural chemical manufacturing
- 32600 Plastics and rubber products manufacturing
- 33100 Primary metal manufacturing
- 32520 Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing
- 32591 Soap, cleaning compound, and toilet preparations manufacturing
- 32100 Wood products manufacturing
- 32403 Other petroleum and coal products manufacturing, including motor oil, hydraulic fluid, and charcoal

**Consumer Goods**

- 33430 Audio and video equipment manufacturing
- 31210 Beverage manufacturing
- 33200 Fabricated metal products manufacturing
- 31100 Food manufacturing
- 33700 Furniture and related products manufacturing
- 32300 Printing and related support activities
- 32591 Soap, cleaning compound, and toilet preparations manufacturing
- 31990 Textile, apparel, and leather products manufacturing
- 31220 Tobacco manufacturing
- 33990 Miscellaneous manufacturing not listed elsewhere (games, office supplies, slot machines, etc.)

**Energy and Mining**

- 33360 Engine, turbine, and power transmission equipment manufacturing
- 21200 Mining
- 33319 Mining, oil, and gas field machinery and equipment manufacturing
- 21100 Oil and gas extraction
- 32401 Petroleum refineries
- 21300 Support activities for mining, including oil and gas

**Finance, Insurance, and Real Estate**

- 52200 Finance: banking and credit intermediation
- 52400 Insurance carriers and related activities
- 53100 Real estate
- 52310 Securities, commodity contracts, and other financial investments and related activities (including funds and trusts)

**Healthcare**

- 32543 Biotechnology-based pharmaceutical and biological products (except diagnostics)
- 33451 Electromedical, electrotherapeutic, and irradiation apparatus manufacturing
- 62200 Hospitals and nursing care facilities
- 32542 In vitro diagnostic substances manufacturing
- 62150 Medical and diagnostic laboratories
- 33910 Medical equipment and supplies manufacturing
- 62110 Offices of physicians
- 32541 Pharmaceutical, medicinal, and botanical products manufacturing
- 54173 Research and development services in biotechnology
- 54174 Research and development services in physical, engineering, and life sciences (except biotechnology)
- 62199 Other ambulatory health care services (ambulance, dental, home health care)



**Information Technology - Goods and Services**

- 51801 Cloud computing applications and internet based software services
- 54150 Computer systems design and related services
- 33412 Computers and peripheral equipment manufacturing, including magnetic and optical media
- 51800 Data processing, hosting, and related services
- 33500 Electrical equipment, appliances, and components manufacturing
- 45411 Electronic shopping and electronic auctions
- 33459 Measuring and control instruments manufacturing (not listed elsewhere)
- 33422 Radio, television, and wireless communication equipment manufacturing
- 33440 Semiconductor and other electronic components manufacturing
- 33321 Semiconductor machinery manufacturing
- 51120 Software publishers (except Internet)
- 33421 Telephone apparatus manufacturing including routers, modems, and gateways
- 42500 Wholesale electronic markets and agents and brokers (business to business)
- 33429 Other communication equipment manufacturing (except radio, television, and wireless communication equipment)
- 51910 Other information services, including Internet publishing, broadcasting, and web search portals

**Professional, Scientific, and Technical Services**

- 54180 Advertising and related services
- 54130 Architectural, engineering, and related services
- 54150 Computer systems design and related services
- 54111 Legal, accounting, tax preparation, bookkeeping and payroll services
- 54160 Management, scientific, and technical consulting services
- 54190 Professional, scientific, and technical services (not listed elsewhere)
- 54173 Research and development services in biotechnology
- 54174 Research and development services in physical, engineering, and life sciences (except biotechnology)
- 54172 Research and development services in social sciences and humanities
- 54140 Specialized design services

**Telecommunications and Utilities**

- 51500 Broadcasting (except Internet)
- 51740 Satellite telecommunications
- 22100 Utilities
- 56200 Waste management and remediation services
- 51710 Wired telecommunications carriers
- 51720 Wireless telecommunications carriers (except satellite)
- 51790 Other telecommunications (not listed elsewhere)

**Other Services**

- 72000 Accommodation and food services
- 56100 Administrative and support services
- 71000 Arts, entertainment, and recreation
- 23000 Construction
- 49200 Couriers, messengers, and express delivery services
- 53300 Lessors of nonfinancial intangible assets (including patent licensing)
- 55100 Management of companies and enterprises
- 42300 Merchant wholesalers, durable goods
- 42400 Merchant wholesalers, nondurable goods
- 51200 Motion picture and sound recording (except Internet)
- 51110 Newspaper, periodical, book, and directory publishers (except Internet)
- 53200 Rental and leasing services
- 44000 Retail trade, except electronic shopping and electronic auctions
- 62400 Social assistance services
- 21300 Support activities for mining, including oil and gas
- 48000 Transportation
- 49300 Warehousing and storage
- 81000 Other services (not listed elsewhere)



**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 14.3 hours being the average. This includes time to read instructions, develop or assemble materials, 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](mailto:Paperwork@census.gov); use "Paperwork Project 0607-0912" as the subject.

~ **Thank you for completing your 2013 Business R&D and Innovation Survey** ~

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



# **2013 BRDIS - Guidelines**

## **General guidelines for reporting inter-company transactions in this survey:**

**Reporting for “worldwide activities”-** The reporting unit is your company, including all domestic and foreign subsidiaries that are more than 50% owned by your company for financial reporting purposes. All transactions between subdivisions within this reporting unit should be eliminated as inter-company transactions. For reporting purposes, your foreign parent (if you are foreign owned) and any foreign affiliates your company does not own by more than 50% should not be treated as part of ‘your company’ in your report. Transactions with these units should be treated the same as with any unrelated third parties such as business partners, customers, or suppliers you do not own.

**Reporting for “domestic operations”-** In this survey “domestic operations” refers to your company’s operations located in the 50 United States and D.C. When reporting for your domestic operations, include transactions with foreign subsidiaries. For example, Question 1-9 asks how much of your company’s total sales and revenues were from your company’s domestic operations. All revenue from the domestic operations, including sales to subsidiaries or affiliated companies overseas, should be reported in this question.

## **Section 1: Company Information**

### **1-1 Did another company other than a holding company own more than 50 percent of voting interest in your company during 2013?**

Question 1-1 asks about the ownership of the company receiving the survey. Special reporting instructions apply to companies that have been acquired by another company. If your answer is “No” skip to question 1-3. If your answer is “Yes” continue to question 1-2.

### **1-2 If you answered “Yes” to Question 1-1, is your company’s owner a foreign company?**

If your company is owned by a foreign parent, the reporting unit for the survey is your U.S.-located company, including all your majority-owned subsidiaries and divisions regardless of location. For reporting purposes, your foreign owner and any foreign affiliates your company does not own should be treated the same as any business partner, customer, or supplier you do not own.

If you pay your foreign parent for R&D services, those costs should be included in your responses in Section 2 as “costs for purchased R&D services.”

If your foreign parent pays or reimburses your company for R&D services, the costs for this R&D should be included in your responses in Section 3 as “costs funded, paid for, or reimbursed by others.”

Report your survey data using U.S. generally accepted accounting principles (U.S. GAAP) as recognized by the Financial Accounting Standard Board (FASB). If your company follows International Financial Reporting Standards (IFRS), we request that you make adjustments in order to conform to U.S. GAAP.

If your company is owned by a U.S. based company, check “No” and enter the owner’s EIN. If your company was purchased before April 1, 2013, answer question 1-6 on page 5 and return the survey to the Census Bureau. If your company was purchased between April 1, 2013 and December 31, 2013, report only for the period January 1, 2013 to the date of purchase.

Example 1: Company A was acquired by Company P (a US company) on Feb. 1, 2013. Because Company A was acquired by a US company prior to April 1, 2013, Company A is not required to complete this survey. Company A will answer question 1-6 and return the form to the Census Bureau.

Example 2: Company B is acquired by Company P (a US company) on July 1, 2013. Because Company B was acquired by a US company on or after April 1, 2013, Company B is instructed to complete the survey, reporting data for the period January 1, 2013 through July 1, 2013.

#### Why April 1?

The Census Bureau has determined that for this survey the benefit of collecting data from a company for a period less than one quarter of a year does not outweigh the burden placed on the company to report the data.

#### Why is this important?

Companies are asked this question for three reasons: to eliminate double counting in cases where both parties in a business acquisition receive the survey; to guide foreign-owned companies to special instructions; and to reduce the burden on companies who would otherwise be reporting data for a period less than one quarter of the year.

**1-3 Did your company own more than 50 percent of any company operations or subsidiaries outside the 50 United States and D.C. during 2013?**

Companies are instructed to include/consolidate data for their foreign subsidiaries on this survey. The reporting unit is your company, including all domestic and foreign subsidiaries in which your company owns more than 50 percent of the voting interest.

Entities in which your company does not have more than 50% ownership stake should not be included in this report as part of ‘your company’. Transactions with entities in which your company does not have more than 50% ownership stake should be reported as if they were unrelated, third parties

Why is this important? This information is needed in order to accurately measure the impact of globalization on R&D and innovation.

**1-4 Has your company ceased operations?**

Scenario 1: Your company ceased operations before April 1, 2013. Complete questions 1-1 through 1-4 and question 1-6 on page 5 and return the survey to the Census Bureau.

Scenario 2: Your company ceased operations between April 1, 2013 and December 31, 2013. You should complete the survey as instructed and report for the period from January 1, 2013 to the date your company ceased operations.

Why April 1?

The Census Bureau has determined that for this survey the benefit of collecting data from a company for a period less than one quarter of a year does not outweigh the burden placed on the company to report the data.

Why is this important?

Data from companies that have ceased operations during 2013 are needed in order to accurately measure the total activity of companies operating in the United States during 2013.

**1-5 Did your company have discontinued operations in 2013?**

Companies are instructed to include data for discontinued operations on this survey.

Why is this important?

This information is needed in order to accurately measure the total activity of companies operating in the United States in 2013.

## **1-6 Who is the survey coordinator?**

The survey coordinator is the person who is in charge of managing your company's responses to this survey and submitting the survey to the U.S. Census Bureau. The survey coordinator will need to collaborate with employees from other divisions/departments within your company such as the product development, R&D, human resources, finance and legal departments.

### Why is this important?

This information gives the Census Bureau a single point of contact at each company surveyed in case questions arise about survey responses. The point of contact for this survey may differ from that for other Census Bureau surveys.

## **Business codes**

### **1-7 Do the business code(s) listed below reflect all applicable codes from the list on pages 46-47 in which your company operated worldwide during 2013?**

Question 1-7 asks the company receiving the survey to identify all of its worldwide businesses in 2013 (Form BRDI-1) or identify the one business that accounted for the most of its worldwide activity in 2013 (Forms BRD-1S). Most companies only have one business (such as making engine parts or providing tax preparation services) and so would only report one code for Question 1-7. Larger companies, however, sometimes operate in more than one business. These larger companies should pick the business codes from the list that best match how they define their various businesses.

If more than one of the company's businesses falls under one of the listed business codes, the company should group those businesses together on the survey. For example, a company may have an office software business and a video game software business. For the purpose of this survey the company would group those two businesses together and report using the code for "Software publishers (except Internet)" (51120).

If more than one of the listed business codes applies to one of the company's businesses the company should estimate what percentage of its business falls under each applicable codes. If this is not possible the company may pick the one code that is the closest match or that accounts for the largest share of its business. In either case, companies should note what action was taken in the space for "Remarks" at the end of the survey.

Scenario 1: The business code(s) provided are incorrect. Check the "no" box, then find the correct code(s) on pages 46-47 and write the codes and descriptions in the boxes. Draw a line through the ones that are incorrect.

Scenario 2: No business code(s) are provided. Find the correct code(s) on pages 46-47 and write the codes and descriptions in the boxes.

For further assistance on identifying the appropriate business codes, visit the “Business Code Search Page” located on the Business Help Site at [econhelp.census.gov/brdis](http://econhelp.census.gov/brdis)

Why is this important?

This information is needed in order to tabulate more accurate and useful industry-level data.

**1-8 What was the amount of your company’s worldwide sales and revenues during 2013?**

Your company’s worldwide sales and revenue would include sales by your foreign operations and subsidiaries, as well as, revenues from domestic operations. If your company is owned by a foreign parent, report sales to your parent and those affiliates not owned by your company.

Include sales and operating revenues for discontinued operations.

Exclude non-operating income such as dividends and interest as well as excise, sales, and other revenue-based taxes.

**1-9 How much of the amount reported in Question 1-8 was attributable to or originated from domestic operations?**

“Domestic sales” does not mean sales to customers located in the United States. If your company is owned by a foreign parent, then sales to your parent and those affiliates not owned by your company are included.

**1-10 How much of the 2013 sales and operating revenue amounts was for each business code listed or amended in Question 1-7?**

Transactions between one business code and another should be reported as would normally be reflected in segmental reporting. Use Line i to eliminate inter-company sales.

See also:  
Question 1-7.

## Product (good or service) innovation

**1-11** During the three years 2011 to 2013, did your company introduce:

- a. New or significantly improved goods (Exclude the simple resale of new goods purchased from other companies and changes of a solely aesthetic nature)?
- b. New or significantly improved services?

For the purpose of this question, “new or significantly improved” is in reference to the company’s prior experience. For example, a computer manufacturer that introduced its first cell phone in 2011 would answer, “Yes” to line a, “New or significantly improved goods”.

**1-12** If you answered “yes” to either 1-11, line a, or 1-11, line b, were any of your product innovations during the three years 2011 to 2013: new to your market or new only to your company?

Question 1-12 asks whether any of the new or significantly improved product indicated in Question 1-11, lines a and b, were new or significantly improved to one of the company’s markets (i.e. first to market with a new or significantly improved product) or were only new to the company.

**1-13** Using the definitions above, please give the percentage of your total sales in 2013.

Question 1-13 asks how much of the company’s total worldwide sales in 2013 are attributable to different types of product innovations. Specifically, it asks what percent of the company’s total worldwide sales in 2013 that were from:

- a. Goods and services introduced during 2011 to 2013 that were new to one of your markets
- b. Goods and services introduced during 2011 to 2013 that were only new to your firm
- c. Goods and services that were unchanged or only marginally modified during 2011 to 2013 (include the resale of new goods or services purchased from other companies).

## Process innovation

- 1-14** During the three years 2011 to 2013, did your company introduce:
- New or significantly improved methods of manufacturing or producing goods or services?**
  - New or significantly improved logistics, delivery or distribution methods for your inputs, goods, or services?**
  - New or significantly improved supporting activities for your processes, such as maintenance systems or operations for purchasing, accounting, or computing?**

Question 1-14 asks whether the company introduced any process innovations over the past three years. For the purpose of this question, “new of significantly improved” is in reference to the company’s prior experience.

## Section 2: Financial Schedule A

### **2-1** What was the total worldwide R&D expense for your company in 2013?

Question 2-1 requests total worldwide R&D expense. The reporting unit is your company, including all domestic and foreign subsidiaries that are more 50% owned by your company for financial reporting purposes. All transactions between subdivisions within this reporting unit should be eliminated as inter-company transactions. Total worldwide R&D expense also includes payments by your company for R&D services performed by (i) unrelated third parties, (ii) affiliates for which your company has less than a 50% ownership stake and/or (iii) your foreign parent, if your company is foreign owned.

Scenario 1: Your company is publicly traded. Report worldwide R&D expense as reported on SEC Form 10-K as defined in FASB ASC Topic 730, Research and Development (FASB Statement No. 2, “Accounting for Research and Development Costs.”)

Scenario 2: Your company is foreign-owned. Report the R&D expense figure of the U.S.-located company and domestic and foreign subsidiaries that are more than 50% owned by your U.S.-located company, if any. Do not include expenses by your foreign parent or by any foreign affiliate your U.S.-located company does not own. For reporting purposes, these entities should be treated the same as any unrelated third party such as a customer or supplier you do not own.

Scenario 3: Your company is privately owned. You should follow the same procedures as public companies when reporting R&D expense and follow the guidance in FASB ASC Topic 730, Research and Development (FASB Statement No. 2, “Accounting for Research and Development Costs.”). Privately held companies that cannot report on this basis should note reporting principles and difficulties in the space for “Remarks” at the end of the survey.

The following are examples of activities that typically would be **excluded** from research and development in accordance with FASB Statement No. 2, “Activities Constituting Research and Development” (<http://www.fasb.org/pdf/fas2.pdf>) :

- a. Engineering follow-through in an early phase of commercial production.
- b. Quality control during commercial production including routine testing of products.
- c. Trouble-shooting in connection with break-downs during commercial production.
- d. Routine, on-going efforts to refine, enrich, or otherwise improve upon the qualities of an existing product.
- e. Adaptation of an existing capability to a particular requirement or customer's need as part of a continuing commercial activity.
- f. Seasonal or other periodic design changes to existing products.
- g. Routine design of tools, jigs, molds, and dies.
- h. Activity, including design and construction engineering, related to the construction, relocation, rearrangement, or start-up of facilities or equipment other than (1) pilot plants (see paragraph 9(h)) and (2) facilities or equipment whose sole use is for a particular research and development project (see paragraph 11(a)).
- i. Legal work in connection with patent applications or litigation, and the sale or licensing of patents.

Exclude from worldwide R&D expense:

- Costs for R&D that was paid for by a 3rd party such as R&D performed under contract.
- For medical products companies, exclude costs for phase IV clinical trials since these trials take place after products have achieved technical and market feasibility.

Research and development activity in software:

Does R&D include development of software and Internet applications?

- Yes, as long as the research and development activities include an element of uncertainty, are intended to close knowledge gaps, and meet scientific and technological needs.
- Report in this survey all software R&D as defined here regardless of the eventual user (internal or external).

R&D activity in software includes:

- Software development or improvement activities that expand scientific or technological knowledge
- Construction of new theories and algorithms in the field of computer science

R&D activity in software EXCLUDES:

- Software development that does not depend on a scientific or technological advance, such as:
  - supporting or adapting existing systems
  - adding functionality to existing application programs, and
  - routine debugging of existing systems and software

- Creation of new software based on known methods and applications
- Conversion or translation of existing software and software languages
- Adaptation of a product to a specific client, unless knowledge that significantly improved the base program was added in that process

For further guidance on accounting for software development costs see FASB Statement No. 86 (Accounting for the Costs of Computer Software to Be Sold, Leased); and FASB Interpretation No. 6 (Applicability of FASB Statement No. 2 to Computer Software).

## **2-2 Does the amount reported in Question 2-1 include any of the following costs?**

Although most companies share a general framework for R&D, we request that certain items be excluded for the sake of consistency. Certain costs and expenses are to be reported in Section 3 reflecting your company's R&D activities that was paid for by others.

Question 2-2 asks whether the company's R&D expense figure reported in Question 2-1 included costs for five specific categories:

- Collaborative research and development that was reimbursed by business partners, such as through cost-sharing agreements
  - These agreements are very common in the biotechnology and pharmaceutical industries, but less so in other industries.
- R&D paid for by government or private foundation grants
  - Examples include Small Business Innovation and Research (SBIR) grants, Department of Energy demonstration grants, and Gates Foundation research grants.
- Technical services not an integral part of an R&D project (such as product support provided by R&D employees)
  - This category most often applies to software and service companies where R&D staff also provide technical support and/or services to customers
- Bid and proposal costs
  - This category represents the costs a company incurs applying to win a contract. Some government contractors group these costs with their R&D spending.
- Expense your company claimed resulting from the acquisition of another company with unfinished R&D projects (In-process R&D).

### Why is this important?

Not all companies treat the five cost categories listed in this question consistently with respect to their inclusion or exclusion from R&D expense figures. This question allows the survey to measure and correct for these inconsistencies

See also: Question 2-3, Question 2-4

**2-3** If you answered “Yes” to any of the costs in Question 2-2, what was the amount of these costs that was included in your response to Question 2-1?

Question 2-3 asks the company to estimate the amount of its R&D expense figure reported in Question 2-1 that was from the categories listed in Question 2-2.

Why is this important?

The five cost categories listed in Question 2-2 are not treated consistently by all companies with respect to their inclusion or exclusion from R&D expense figures. This question allows the survey to measure and correct these inconsistencies.

See also: Question 2-2, Question 2-4

**2-4** Subtract Question 2-3 from Question 2-1 and enter the result here. This is the total R&D paid for by your company in 2013.

Question 2-4 asks the company to subtract the amount reported in Question 2-3 from the amount reported in Question 2-1. The resulting figure is the starting point for the subsequent questions in Section 2. This survey refers to this amount as “total R&D paid for by your company”.

Why is this important?

The five cost categories listed in Question 2-2 are not treated consistently by all companies with respect to their inclusion or exclusion from R&D expense figures. This question allows the survey to measure and correct for these inconsistencies.

See also: Question 2-2, Question 2-3

**2-5** Is the amount entered in Question 2-4 greater than zero?

Question 2-5 instructs the company to skip to Section 3 on page 21 if its response to Question 2-4 is zero.

## **R&D paid for by your company**

### **2-6 Of the amount reported in Question 2-4, what were the costs for each business code listed or amended on page 6 of this form?**

If the company does not track its R&D costs by line of business or product line, it should make a reasonable estimate.

If the company has R&D that applies to more than one business code, such as basic or applied research conducted by a central R&D group, it should allocate this R&D to all applicable business codes on a reasonable basis. Examples of allocation methods include allocating in proportion to sales by business code and allocating in proportion to R&D employees working for each business code.

See also: Question 1-7.

### **2-7 Of the amount reported in Question 2-4, what costs were incurred by your company in the following locations?**

This question requires the company to report where R&D costs were incurred, even in the case of purchased R&D services where the R&D may be performed in a different location.

This survey defines the domestic United States as the 50 states and the District of Columbia only. Costs incurred in Puerto Rico, Guam, and other U.S. territories should be reported in the category for “All other countries”.

Report R&D performed by domestic operations that are paid for by foreign subsidiaries in line a (Domestic U.S.).

Report R&D performed by foreign subsidiaries that are paid for by domestic operations in line b (All other countries).

Scenario 1: Your company has R&D operations in Washington state and in your subsidiary in Canada. All of the R&D costs (such as salaries of R&D employees) from the Washington R&D operations should be reported in the line for “Domestic U.S.” even if a portion of this R&D is for the benefit of your Canadian subsidiary.

### **2-8 Copy the amount from Question 2-7, line a. This is the total domestic R&D paid for by your company in 2013.**

Question 2-8 asks the company to copy the amount reported in Question 2-7 for R&D costs incurred in the domestic United States. This survey defines this amount as “total domestic R&D paid for by your company in 2013”.

**2-9** Copy the amount from Question 2-7, line b. This is the total foreign R&D paid for by your company in 2013.

Question 2-9 asks the company to copy the amount reported in Question 2-7 for R&D costs incurred in countries outside the domestic United States. This survey defines this amount as “total foreign R&D paid for by your company in 2013”.

**2-10** How much of the (1) domestic, (2) foreign, and (3) total worldwide R&D paid for by your company in 2013 was for each of the following types of costs?

Question 2-10 asks the company to report its domestic, foreign, and total worldwide R&D that it paid for in 2013 broken into 11 categories:

- a. Salaries, wages, and fringe benefits
  - Include costs for all compensation and benefits of R&D employees and officers that are included in the R&D paid for by the company.
  - Stock-based compensation should be reported in line b
  - Include payroll taxes such as Social Security and Medicare
- b. Stock-based compensation
  - Include the cost of both stock options and stock grants.
- c. Temporary staffing including on-site consultants
  - Include costs paid to Professional Employer Organizations (PEOs), staffing agencies, and on-site consultants for personnel contributing to R&D.
- d. Expensed equipment
  - Include all equipment purchases for R&D that are beneath the company’s capitalization threshold.
- e. Materials and supplies
  - Costs for materials and supplies consumed for R&D.
- f. Leased facilities and equipment
  - Costs for leased facilities and equipment used in the company’s R&D.
- g. Depreciation and amortization on R&D property and equipment
  - Includes depreciation on tangible R&D assets such as buildings or equipment as well as the amortization of intangible assets such as patents and capitalized in-process R&D used only for the company’s R&D activities.
- h. Payments to business partners for collaborative R&D
  - Include milestone payments and payments made under cost sharing agreements for joint R&D projects.
  - Payments made to contract research organizations or other parties performing R&D under contract for the company should be reported in line i, “Purchased R&D services”.
- i. Purchased R&D services
  - Include payments made to contract research organizations or other parties performing R&D under contract for the company.
- j. All other purchased services except R&D
  - Include payments for purchased services that support the company’s R&D, but are not themselves R&D.

- Examples of costs to report in this category include hazardous waste disposal services at the company's R&D lab and purchased computing time to run simulations for the company's R&D.
- k. All other costs
  - Include all other costs supporting the R&D the company paid for.
  - Examples of costs to report in this category include: travel and training, journal subscriptions, royalties or licenses paid for patents or software used in the company's R&D

**2-11** Add 2-10, lines h and i for each column, and enter the result here. This is **R&D performed by others.**

Question 2-11 asks the company to add the amounts reported in Question 2-10, lines h and i for each column. This survey defines this amount as “R&D performed by others”.

Why is this important?

The costs reported in lines h and i of Question 2-10 represent payments to 3<sup>rd</sup> parties (outsourcing) for R&D. Because the reporting company is not directly involved in the conduct of this R&D, it may not be able to provide the same amount of information on these costs as it could for the R&D it performs itself. This question allows the survey to address this limitation as well as address an interest in the nature of collaborative and contract R&D.

See also: Question 2-10

**2-12** Subtract 2-11 from 2-10, line l, for each column and enter the result here. This is **R&D performed by your company.**

Question 2-12 asks the company to subtract the amounts reported in Question 2-11 from those reported in Question 2-10, line l for each column. This survey defines this amount as “R&D performed by your company”.

Why is this important?

The costs reported in lines h and i of Question 2-10 represent payments to 3<sup>rd</sup> parties (outsourcing) for R&D. Because the reporting company is not directly involved in the conduct of this R&D, it may not be able to provide the same amount of information on these costs as it could for the R&D it performs itself. This question allows the survey to address this limitation as well as address an interest in the differences between R&D companies perform themselves versus R&D that is performed by collaborators and contractors.

See also: Question 2-11

**2-13** Copy the amount from Question 2-12, column 2. This is the foreign R&D paid for and performed by your company in 2013.

Question 2-13 asks the company to copy the amount reported in Question 2-12 for foreign R&D costs performed by the company. This survey defines this amount as “foreign R&D performed by your company in 2013”.

**2-14** Of the amount reported in Question 2-13, how much R&D was performed in the following locations?

Question 2-14 asks the company to report how much of the foreign R&D performed by the company in 2013 was performed in specific countries, including Puerto Rico.

Why is this important?

This information is needed in order to accurately measure the impact of globalization on R&D.

| <u>Country/Territory Name</u> | <u>Region</u>     |
|-------------------------------|-------------------|
| Afghanistan                   | Asia and Pacific  |
| Albania                       | Europe            |
| Algeria                       | Africa            |
| American Samoa (U.S.)         | Asia and Pacific  |
| Andorra                       | Europe            |
| Angola                        | Africa            |
| Antigua and Barbuda           | Latin America/OWH |
| Argentina                     | Latin America/OWH |
| Armenia                       | Asia and Pacific  |
| Aruba (Neth.)                 | Latin America/OWH |
| Australia                     | Asia and Pacific  |
| Austria                       | Europe            |
| Azerbaijan                    | Asia and Pacific  |
| Bahamas, The                  | Latin America/OWH |
| Bahrain                       | Middle East       |
| Bangladesh                    | Asia and Pacific  |
| Barbados                      | Latin America/OWH |
| Belarus                       | Europe            |
| Belgium                       | Europe            |
| Belize                        | Latin America/OWH |
| Benin                         | Africa            |
| Bermuda (U.K.)                | Latin America/OWH |
| Bhutan                        | Asia and Pacific  |
| Bolivia                       | Latin America/OWH |
| Bosnia and Herzegovina        | Europe            |
| Botswana                      | Africa            |
| Brazil                        | Latin America/OWH |
| Brunei                        | Asia and Pacific  |

|                                  |  |
|----------------------------------|--|
| Bulgaria                         | Europe                                   |
| Burkina Faso                     | Africa                                   |
| Burma                            | Asia and Pacific                         |
| Burundi                          | Africa                                   |
| Cambodia                         | Asia and Pacific                         |
| Cameroon                         | Africa                                   |
| Canada                           | Not assigned to a region in this survey. |
| Cape Verde                       | Africa                                   |
| Cayman Islands (U.K.)            | Latin America/OWH                        |
| Central African Republic         | Africa                                   |
| Chad                             | Africa                                   |
| Chile                            | Latin America/OWH                        |
| China                            | Asia and Pacific                         |
| Colombia                         | Latin America/OWH                        |
| Comoros                          | Africa                                   |
| Congo (Brazzaville)              | Africa                                   |
| Democratic Republic of the Congo | Africa                                   |
| Costa Rica                       | Latin America/OWH                        |
| Côte d'Ivoire/Ivory Coast        | Africa                                   |
| Croatia                          | Europe                                   |
| Cuba                             | Latin America/OWH                        |
| Cyprus                           | Europe                                   |
| Czech Republic                   | Europe                                   |
| Denmark                          | Europe                                   |
| Djibouti                         | Africa                                   |
| Dominica                         | Latin America/OWH                        |
| Dominican Republic               | Latin America/OWH                        |
| Ecuador                          | Latin America/OWH                        |
| Egypt                            | Africa                                   |
| El Salvador                      | Latin America/OWH                        |
| Equatorial Guinea                | Africa                                   |
| Eritrea                          | Africa                                   |
| Estonia                          | Europe                                   |
| Ethiopia                         | Africa                                   |
| Fiji                             | Asia and Pacific                         |
| Finland                          | Europe                                   |
| France                           | Europe                                   |
| Gabon                            | Africa                                   |
| Gambia, The                      | Africa                                   |
| Georgia                          | Europe                                   |
| Germany                          | Europe                                   |
| Ghana                            | Africa                                   |
| Greece                           | Europe                                   |
| Greenland (Denmark)              | Europe                                   |
| Grenada                          | Latin America/OWH                        |
| Guam (U.S.)                      | Asia and Pacific                         |

|                  |                   |
|------------------|-------------------|
| Guatemala        | Latin America/OWH |
| Guinea           | Africa            |
| Guinea-Bissau    | Africa            |
| Guyana           | Latin America/OWH |
| Haiti            | Latin America/OWH |
| Holy See         | Europe            |
| Honduras         | Latin America/OWH |
| Hong Kong        | Asia and Pacific  |
| Hungary          | Europe            |
| Iceland          | Europe            |
| India            | Asia and Pacific  |
| Indonesia        | Asia and Pacific  |
| Iran             | Middle East       |
| Iraq             | Middle East       |
| Ireland          | Europe            |
| Israel           | Middle East       |
| Italy            | Europe            |
| Jamaica          | Latin America/OWH |
| Japan            | Asia and Pacific  |
| Jordan           | Middle East       |
| Kazakhstan       | Asia and Pacific  |
| Kenya            | Africa            |
| Kiribati         | Asia and Pacific  |
| Kosovo           | Europe            |
| Kuwait           | Middle East       |
| Kyrgyzstan       | Asia and Pacific  |
| Laos             | Asia and Pacific  |
| Latvia           | Europe            |
| Lebanon          | Middle East       |
| Lesotho          | Africa            |
| Liberia          | Africa            |
| Libya            | Africa            |
| Liechtenstein    | Europe            |
| Lithuania        | Europe            |
| Luxembourg       | Europe            |
| Macau            | Asia and Pacific  |
| Macedonia        | Europe            |
| Madagascar       | Africa            |
| Malawi           | Africa            |
| Malaysia         | Asia and Pacific  |
| Maldives         | Asia and Pacific  |
| Mali             | Africa            |
| Malta            | Europe            |
| Marshall Islands | Asia and Pacific  |
| Mauritania       | Africa            |
| Mauritius        | Africa            |

|                                  |  |
|----------------------------------|--|
| Mexico                           | Latin America/OWH                        |
| Micronesia, Federated States of  | Asia and Pacific                         |
| Moldova                          | Europe                                   |
| Monaco                           | Europe                                   |
| Mongolia                         | Asia and Pacific                         |
| Montenegro                       | Europe                                   |
| Morocco                          | Africa                                   |
| Mozambique                       | Africa                                   |
| Namibia                          | Africa                                   |
| Nauru                            | Asia and Pacific                         |
| Nepal                            | Asia and Pacific                         |
| Netherlands                      | Europe                                   |
| New Zealand                      | Asia and Pacific                         |
| Nicaragua                        | Latin America/OWH                        |
| Niger                            | Africa                                   |
| Nigeria                          | Africa                                   |
| North Korea                      | Asia and Pacific                         |
| Norway                           | Europe                                   |
| Oman                             | Middle East                              |
| Pakistan                         | Asia and Pacific                         |
| Palau                            | Asia and Pacific                         |
| Panama                           | Latin America/OWH                        |
| Papua New Guinea                 | Asia and Pacific                         |
| Paraguay                         | Latin America/OWH                        |
| Peru                             | Latin America/OWH                        |
| Philippines                      | Asia and Pacific                         |
| Poland                           | Europe                                   |
| Portugal                         | Europe                                   |
| Puerto Rico (U.S.)               | Not assigned to a region in this survey. |
| Qatar                            | Middle East                              |
| Romania                          | Europe                                   |
| Russia                           | Europe                                   |
| Rwanda                           | Africa                                   |
| Saint Kitts and Nevis            | Latin America/OWH                        |
| Saint Lucia                      | Latin America/OWH                        |
| Saint Vincent and the Grenadines | Latin America/OWH                        |
| Samoa                            | Asia and Pacific                         |
| San Marino                       | Europe                                   |
| Sao Tome and Principe            | Africa                                   |
| Saudi Arabia                     | Middle East                              |
| Senegal                          | Africa                                   |
| Serbia                           | Europe                                   |
| Seychelles                       | Africa                                   |
| Sierra Leone                     | Africa                                   |
| Singapore                        | Asia and Pacific                         |
| Slovakia                         | Europe                                   |

|                                 |                   |
|---------------------------------|-------------------|
| Slovenia                        | Europe            |
| Solomon Islands                 | Asia and Pacific  |
| Somalia                         | Africa            |
| South Africa                    | Africa            |
| South Korea                     | Asia and Pacific  |
| South Sudan                     | Africa            |
| Spain                           | Europe            |
| Sri Lanka                       | Asia and Pacific  |
| Sudan                           | Africa            |
| Suriname                        | Latin America/OWH |
| Swaziland                       | Africa            |
| Sweden                          | Europe            |
| Switzerland                     | Europe            |
| Syria                           | Middle East       |
| Taiwan                          | Asia and Pacific  |
| Tajikistan                      | Asia and Pacific  |
| Tanzania                        | Africa            |
| Thailand                        | Asia and Pacific  |
| Timor-Leste                     | Asia and Pacific  |
| Togo                            | Africa            |
| Tonga                           | Asia and Pacific  |
| Trinidad and Tobago             | Latin America/OWH |
| Tunisia                         | Africa            |
| Turkey                          | Europe            |
| Turkmenistan                    | Asia and Pacific  |
| Turks and Caicos Islands (U.K.) | Latin America/OWH |
| Tuvalu                          | Asia and Pacific  |
| Uganda                          | Africa            |
| Ukraine                         | Europe            |
| United Arab Emirates            | Middle East       |
| United Kingdom                  | Europe            |
| Uruguay                         | Latin America/OWH |
| Uzbekistan                      | Asia and Pacific  |
| Vanuatu                         | Asia and Pacific  |
| Venezuela                       | Latin America/OWH |
| Vietnam                         | Asia and Pacific  |
| Virgin Islands (U.K.)           | Latin America/OWH |
| Virgin Islands (U.S.)           | Latin America/OWH |
| Yemen                           | Middle East       |
| Zambia                          | Africa            |
| Zimbabwe                        | Africa            |

Note: OWH = Other Western Hemisphere. ‘Latin America/OWH’ includes Bermuda and the geographical regions of the Caribbean, Central America, and South America.

**2-15** Copy the amount from Question 2-12, column 1. This is the domestic R&D paid for and performed by your company in 2013.

Question 2-15 asks the company to copy the amount reported in Question 2-12 for domestic R&D costs performed by the company. This survey defines this amount as “domestic R&D paid for and performed by your company in 2013”.

“Domestic R&D paid for and performed by your company” is the portion of your company’s total R&D expense associated with R&D performed by your company’s full-time, part-time, and temporary employees in the domestic United States. This amount excludes R&D performed by others not owned by your company, such as contract research organizations and universities.

**2-16** How much of the amount reported in Question 2-15 was performed in each state (including D.C.) in 2013?

If the company is unable to assign all its R&D costs to specific states, it should use a reasonable allocation method to report R&D by state. Companies should note their allocation method in the space for "Remarks" at the end of the survey.

Why is this important?

This information is very important to policy makers who are interested in the geographic distribution of R&D activity and its role in regional economic development.

**2-17** At what domestic location did your company perform the largest dollar amount of R&D in 2013?

Question 2-17 asks the company to identify the location where the largest dollar value of the domestic R&D it performed in 2013 took place.

**2-18** How much of the amount reported in Question 2-15 was from the location identified in Question 2-17?

If the company is unable to allocate its R&D costs to a specific location, it should provide a reasonable estimate. Companies should note their allocation method in the space for "Remarks" at the end of the survey.

**2-19** At what domestic location did your company perform the second largest dollar amount of R&D in 2013?

Question 2-19 asks the company to identify the location where the second largest dollar value of the domestic R&D it performed in 2013 took place.

**2-20** How much of the amount reported in Question 2-15 was from the location identified in 2-19?

If the company is unable to allocate its R&D costs to a specific location, it should provide a reasonable estimate. Companies should note their allocation method in the space for "Remarks" at the end of the survey.

**2-21** Of the domestic R&D performed by your company reported in Question 2-15, how much was for each business code reported in Question 2-6?

If the company does not track its R&D costs by line of business or product line it should make a reasonable estimate.

If the company has R&D that applies to more than one business code, such as basic or applied research conducted by a central R&D group, it should allocate this R&D to all applicable business codes on a reasonable basis. Examples of allocation methods include allocating in proportion to sales by business code and allocating in proportion to R&D employees working for each business code.

See also: Question 1-7; Question 2-6

## **R&D transactions between legal entities under common ownership**

Questions 2-22 and 2-23 are intended only for companies that own more than 50 percent of any operations or subsidiaries located outside the 50 United States and D.C. during 2013 (that is, your company provided a "Yes" response to Question 1-3).

**2-22** How much of the amount reported in Question 2-15 (domestic R&D performance) was paid for by your company's foreign subsidiaries through inter-company transactions?

Example: If an R&D activity were performed by employees in Texas U.S. [reported in 2-15], and charged both to operating units in the U.S. and to majority-owned subsidiaries in Belgium, then the costs charged to majority-owned subsidiaries in Belgium would be reported in 2-22.

Special Instruction for Foreign Owned Companies: Do not include payments from your company's foreign parent. R&D costs associated with these payments should be reported in Section 3.

**2-23** How much of the amount reported in Question 2-13 (foreign R&D performance) was paid for by your company’s domestic operations through inter-company transactions?

Example: If an R&D activity were performed by employees of your majority-owned subsidiaries in Berlin, Germany [reported in 2-13], and charged both to operating units in the U.S. and in Berlin, then the costs charged to operating units in the U.S. would be reported in 2-23.

## **R&D performed by others**

**2-24** Copy the amount from Question 2-11, column 1. This is the domestic R&D paid for by your company in 2013 that was performed by others.

This survey defines this amount as “total R&D performed by others in 2013”. This amount represents the R&D that your company outsourced or paid to third parties during 2013.

**2-25** How much of the amount reported in Question 2-24, was performed by the following types of organizations?

Question 2-25 asks the company to report how much of the domestic R&D paid for by your company in 2013 that was performed by eight specific types of organizations:

- a. Companies located inside the United States
  - o Include for-profit hospitals
- b. Your company’s foreign parent (if you are owned by a foreign parent)
- c. Other companies located outside the United States
- d. U.S. federal government agencies or laboratories
- e. U.S. state and local government agencies or laboratories
- f. Foreign government agencies or laboratories
- g. All other organizations inside the United States
- h. All other organizations outside the United States

## **Indirect R&D charges**

**2-26** How much of the amount reported in Question 2-4 was for R&D costs your company plans to recoup through indirect charges on U.S. federal government contracts (IR&D or independent R&D)?

Question 2-26 asks how much of the amount reported in Question 2-4 was a special category of R&D costs tracked by government contractors. In order to encourage business R&D in certain areas of interest to the government, federal agencies such as the Department of Defense allow companies to recoup certain R&D costs through indirect charges on government contracts. These R&D costs, called IR&D or independent R&D should only apply to Federal government contractors.

## Projected R&D for 2014

**2-27** What are your company's projected 2014 costs for (1) domestic, (2) foreign, and (3) total worldwide R&D paid for by your company?

Question 2-27 asks the company to project its domestic, foreign, and total worldwide R&D costs for 2014.

**2-28** How much of the amount reported in Question 2-27, column 1, is for projected purchased R&D services and projected payments to business partners for collaborative R&D?

Question 2-28 asks the company to project how much of the domestic R&D paid for by the company in 2014 will be for purchased R&D services and payments to business partners for collaborative R&D.

## Capital expenditures

**2-29** What was the amount of your company's capital expenditures in the domestic United States in 2013?

Exclude the cost of purchased land.

Assets acquired through merger and acquisition activities should not be included in your report.

**2-30** How much of the amount reported in Question 2-29 was for R&D operations?

Companies should allocate capital expenditures that benefit both R&D operations and other company operations on a reasonable basis. Companies should note their allocation method in the space for "Remarks" at the end of the survey.

### **2-31** How much of the amount reported in Question 2-30 was for the following?

Question 2-31 asks the company to report how much of the domestic capital expenditures for R&D operations may be classified in four specific types or capital expenditures:

- a. Structures
  - Include the costs of purchased or improved buildings and other facilities such as signal towers or windmills that are fixed to the land.
- b. Equipment
- c. Capitalized software
- d. All other capital expenditures for R&D operations
  - Include the costs of purchased patents or other intangible assets.

## **Reporting Information**

### **2-32** Is the information in this section reported for the 2013 calendar year?

If your company is reporting on a fiscal year that does not end Dec. 31, 2013, write what time period you are covering in the designated boxes.

## **Section 3: Financial Schedule B**

### **3-1** What were your company's total worldwide costs (both direct and indirect) in 2013 for the following that were funded, paid for, or reimbursed by others not owned by your company?

Costs should be considered “funded, paid for, or reimbursed by others” if the company has been or expects to be paid for the costs by a customer, business partner, or grant-making organization.

Note: Foreign-owned companies should report costs that are funded, paid for, or reimbursed by their foreign parent in this question.

Exclude payments in excess of the actual cost of the work performed (such as profits or fees).

Costs that were reported in Question 2-4 should not be double counted in this question.

If your company administers a federally-funded research and development center (FFRDC) for an agency of the federal government, all such R&D costs should be excluded for reporting to this survey. For a complete list of FFRDCs, see <http://www.nsf.gov/statistics/ffrdclist/>.

The categories in this question, listed below, define what the survey terms, “R&D paid for by others”:

- a. R&D that was reimbursed by your company's foreign parent (if you are owned by a foreign parent)

- b. Collaborative R&D that was reimbursed by business partners, such as through cost-sharing agreements
  - These agreements are very common in the biotechnology and pharmaceutical industries, but less so in other industries.
- c. R&D paid for by government or private foundation grants
  - Examples include Small Business Innovation and Research (SBIR) grants, Department of Energy demonstration grants, and Gates Foundation research grants.
- d. Defense RDT&E goods or services (including DOD 6.1 through 6.7 funding), provided as a prime or as a sub, to the government and/or government contractors
  - This category most often applies to defense contractors and subcontractors performing tasks such as designing, building, and testing prototypes of new military weapon systems and developing custom software for defense applications.
  - Include all defense R&D funded by the Department of Defense (DOD), the Department of Energy's weapons programs, the Department of Homeland Security, and other Federal agencies.
  - R&D funds from DOD include all funds for research, development, test, and evaluation (RDT&E) activities (6.1 through 6.7 budget appropriations).
  - Include defense R&D performed as a prime contractor and/or as a subcontractor.
- e. Medical nonclinical R&D services provided to others not owned by your company
  - Nonclinical (also known as preclinical) research and development involves research on potential medical products that does not involve human subjects. This R&D consists of both *in vitro* studies as well as studies using animal subjects.
- f. Medical clinical trial Phase I-III services provided to others not owned by your company (include pass-through costs)
  - This category involves the testing of potential medical products in human subjects. Phase I – III clinical trials must be successfully passed in order for a product to be approved for use in the general population.
  - Exclude costs for Phase IV clinical trials because these trials take place after a product has been approved for sale.
- g. Nondefense custom software development and/or computer systems designed for others not owned by your company
  - See definitions in “Research and development activity in software” under guidance for Question 2-1.
  - This category includes the development of new or significantly improved software, both as an end product and for use embedded in other products.
  - Exclude: Software development that does not depend on a scientific or technological advance such as adding functionality to existing application programs, debugging systems, and adapting existing software.
  - Software development for defense-related applications should be reported in line d.
- h. Prototype development, production, and testing for customer's products prior to their introduction to the market (excluding defense-related prototyping reported in line d)
  - Exclude quality control testing and other testing services for products already on the market.
- i. All other R&D, not included above, provided to the Federal Government or to others not owned by your company

**3-2** Copy the amount from 3-1, line j. This is the total R&D paid for by others in 2013.

Question 3-2 asks the company to copy the amount reported in Question 3-1, line j. This survey defines this amount as “total R&D paid for by others” in 2013.

**3-3** Is the amount entered in Question 3-2 greater than zero?

Question 3-3 instructs the company to skip to Section 4 on page 35 if its response to Question 3-2 is zero.

## **R&D paid for by others**

**3-4** Of the amount reported in Question 3-2, what costs were incurred by your company in the following locations?

This question requires the company to report where R&D costs were incurred, even in the case of purchased R&D services where the R&D may be performed in a different location.

This survey defines the domestic United States as the 50 states and the District of Columbia only. Costs incurred in Puerto Rico, Guam, and other U.S. territories should be reported in the category for “All other countries”.

**3-5** Copy the amount from Question 3-4, line a. This is the total domestic R&D paid for by others in 2013.

Question 3-5 asks the company to copy the amount reported in Question 3-4, line a, for R&D costs in the domestic United States. This survey defines this amount as “total domestic R&D paid for by others” in 2013.

**3-6** Copy the amount from Question 3-4, line b. This is the total foreign R&D paid for by others in 2013.

Question 3-6 asks the company to copy the amount reported in Question 3-4, line b, for R&D costs in countries outside the domestic United States. This survey defines this amount as “total foreign R&D paid for by others” in 2013.

**3-7** How much of the (1) domestic, (2) foreign, and (3) total worldwide R&D paid for by others in 2013 was for each of the following types of costs?

Question 3-7 asks the company to report its domestic, foreign, and total worldwide R&D paid for by others in 2013 broken into 11 categories:

- a. Salaries, wages, and fringe benefits
  - o Include costs for all compensation and benefits of R&D employees and officers that are included in the R&D paid for by others.
  - o Stock-based compensation should be reported in line b.
  - o Include payroll taxes such as Social Security and Medicare
- b. Stock-based compensation
  - o Includes the cost of both stock options and stock grants.
- c. Temporary staffing, including on-site consultants
  - o Include costs paid to Professional Employer Organizations (PEOs), staffing agencies, and on-site consultants for personnel contributing to R&D
- d. Expensed equipment
  - o Include all equipment purchases for R&D that are beneath the company's capitalization threshold.
- e. Materials and supplies
  - o Costs for materials and supplies consumed for R&D.
- f. Leased facilities and equipment
  - o Costs for leased facilities and equipment used in the R&D.
- g. Depreciation and amortization on R&D property and equipment
  - o Include depreciation on tangible R&D assets such as buildings or equipment as well as the amortization of intangible assets such as patents and capitalized in-process R&D used only for the company's R&D activities.
- h. Payments to business partners for collaborative R&D
  - o Include payments made to business partners for collaborative R&D, including milestone payments and payments made under cost sharing agreements for joint R&D projects.
  - o Payments made to contract research organizations or other parties performing R&D under contract for the company should be reported in line i, "Purchased R&D services".
- i. Purchased R&D services (if your company is foreign-owned, include payments to your foreign owner for R&D)
  - o Include payments made to contract research organizations or other parties performing R&D under contract for the company.
  - o Include defense R&D funding that your company received as a prime that is subcontracted to others not owned by your company
- j. All other purchased services except R&D
  - o Include payments for purchased services that support the company's R&D, but are not themselves R&D.
  - o Examples of costs to report in this category include hazardous waste disposal services at the company's R&D lab and purchased computing time to run simulations for the company's R&D.
- k. All other costs

- Include all other costs supporting the R&D the company paid for.
- Examples of costs to report in this category include: travel and training, journal subscriptions, royalties or licenses paid for patents or software used in the company's R&D.

**3-8** Add 3-7, lines h and i for each column, and enter the result here. This is **R&D performed by others** (e.g. subcontracted/passed-through R&D costs).

Question 3-8 asks the company to add the amounts reported in Question 3-7, lines h and i for each column. This survey defines this amount as “R&D performed by others”.

Why is this important?

The costs reported in lines h and i of Question 3-7 represent payments to 3<sup>rd</sup> parties for R&D. Because the reporting company is not directly involved in the conduct of this R&D, it may not be able to provide the same amount of information on these costs as it could for the R&D it performs itself. This question allows the survey to address this limitation as well as address an interest in the nature of collaborative and contract R&D.

See also: Question 3-7, Question 3-9

**3-9** Subtract 3-8 from 3-7, line l, for each column and enter the result here. This is **R&D performed by your company that was paid for by others**.

Question 3-9 asks the company to subtract the amounts reported in Question 3-8 from those reported in Question 3-7, line l for each column. This survey defines this amount as “R&D performed by your company that was paid for by others”.

Why is this important?

The costs reported in lines h and i of Question 3-7 represent payments to 3<sup>rd</sup> parties for R&D. Because the reporting company is not directly involved in the conduct of this R&D, it may not be able to provide the same amount of information on these costs as it could for the R&D it performs itself. This question allows the survey to address this limitation as well as address an interest in the differences between R&D companies perform themselves versus R&D that is performed by collaborators and contractors.

See also: Question 3-7, Question 3-8

**3-10** Copy the amount from Question 3-9, column 2. This is the **foreign R&D performed by your company that was paid for by others**.

Question 3-10 asks the company to copy the amount reported in Question 3-9 for foreign R&D costs performed by the company. This survey defines this amount as “foreign R&D performed by your company that was paid for by others”.

**3-11** Of the amount reported in Question 3-10, how much R&D was performed in the following locations?

Question 3-11 asks the company to report how much of the foreign R&D performed by the company that was paid for by others was performed in specific countries, including Puerto Rico.

Why is this important?

This information is needed in order to accurately measure the impact of globalization on R&D.

Countries and territories by region

As defined by the Business R&D and Innovation Survey

| <u>Country/Territory Name</u> | <u>Region</u>     |
|-------------------------------|-------------------|
| Afghanistan                   | Asia and Pacific  |
| Albania                       | Europe            |
| Algeria                       | Africa            |
| American Samoa (U.S.)         | Asia and Pacific  |
| Andorra                       | Europe            |
| Angola                        | Africa            |
| Antigua and Barbuda           | Latin America/OWH |
| Argentina                     | Latin America/OWH |
| Armenia                       | Asia and Pacific  |
| Aruba (Neth.)                 | Latin America/OWH |
| Australia                     | Asia and Pacific  |
| Austria                       | Europe            |
| Azerbaijan                    | Asia and Pacific  |
| Bahamas, The                  | Latin America/OWH |
| Bahrain                       | Middle East       |
| Bangladesh                    | Asia and Pacific  |
| Barbados                      | Latin America/OWH |
| Belarus                       | Europe            |
| Belgium                       | Europe            |
| Belize                        | Latin America/OWH |
| Benin                         | Africa            |
| Bermuda (U.K.)                | Latin America/OWH |
| Bhutan                        | Asia and Pacific  |
| Bolivia                       | Latin America/OWH |
| Bosnia and Herzegovina        | Europe            |
| Botswana                      | Africa            |
| Brazil                        | Latin America/OWH |
| Brunei                        | Asia and Pacific  |
| Bulgaria                      | Europe            |
| Burkina Faso                  | Africa            |
| Burma                         | Asia and Pacific  |
| Burundi                       | Africa            |
| Cambodia                      | Asia and Pacific  |

|                                  |  |
|----------------------------------|--|
| Cameroon                         | Africa                                   |
| Canada                           | Not assigned to a region in this survey. |
| Cape Verde                       | Africa                                   |
| Cayman Islands (U.K.)            | Latin America/OWH                        |
| Central African Republic         | Africa                                   |
| Chad                             | Africa                                   |
| Chile                            | Latin America/OWH                        |
| China                            | Asia and Pacific                         |
| Colombia                         | Latin America/OWH                        |
| Comoros                          | Africa                                   |
| Congo (Brazzaville)              | Africa                                   |
| Democratic Republic of the Congo | Africa                                   |
| Costa Rica                       | Latin America/OWH                        |
| Côte d'Ivoire/Ivory Coast        | Africa                                   |
| Croatia                          | Europe                                   |
| Cuba                             | Latin America/OWH                        |
| Cyprus                           | Europe                                   |
| Czech Republic                   | Europe                                   |
| Denmark                          | Europe                                   |
| Djibouti                         | Africa                                   |
| Dominica                         | Latin America/OWH                        |
| Dominican Republic               | Latin America/OWH                        |
| Ecuador                          | Latin America/OWH                        |
| Egypt                            | Africa                                   |
| El Salvador                      | Latin America/OWH                        |
| Equatorial Guinea                | Africa                                   |
| Eritrea                          | Africa                                   |
| Estonia                          | Europe                                   |
| Ethiopia                         | Africa                                   |
| Fiji                             | Asia and Pacific                         |
| Finland                          | Europe                                   |
| France                           | Europe                                   |
| Gabon                            | Africa                                   |
| Gambia, The                      | Africa                                   |
| Georgia                          | Europe                                   |
| Germany                          | Europe                                   |
| Ghana                            | Africa                                   |
| Greece                           | Europe                                   |
| Greenland (Denmark)              | Europe                                   |
| Grenada                          | Latin America/OWH                        |
| Guam (U.S.)                      | Asia and Pacific                         |
| Guatemala                        | Latin America/OWH                        |
| Guinea                           | Africa                                   |
| Guinea-Bissau                    | Africa                                   |
| Guyana                           | Latin America/OWH                        |
| Haiti                            | Latin America/OWH                        |

|                                 |                   |
|---------------------------------|-------------------|
| Holy See                        | Europe            |
| Honduras                        | Latin America/OWH |
| Hong Kong                       | Asia and Pacific  |
| Hungary                         | Europe            |
| Iceland                         | Europe            |
| India                           | Asia and Pacific  |
| Indonesia                       | Asia and Pacific  |
| Iran                            | Middle East       |
| Iraq                            | Middle East       |
| Ireland                         | Europe            |
| Israel                          | Middle East       |
| Italy                           | Europe            |
| Jamaica                         | Latin America/OWH |
| Japan                           | Asia and Pacific  |
| Jordan                          | Middle East       |
| Kazakhstan                      | Asia and Pacific  |
| Kenya                           | Africa            |
| Kiribati                        | Asia and Pacific  |
| Kosovo                          | Europe            |
| Kuwait                          | Middle East       |
| Kyrgyzstan                      | Asia and Pacific  |
| Laos                            | Asia and Pacific  |
| Latvia                          | Europe            |
| Lebanon                         | Middle East       |
| Lesotho                         | Africa            |
| Liberia                         | Africa            |
| Libya                           | Africa            |
| Liechtenstein                   | Europe            |
| Lithuania                       | Europe            |
| Luxembourg                      | Europe            |
| Macau                           | Asia and Pacific  |
| Macedonia                       | Europe            |
| Madagascar                      | Africa            |
| Malawi                          | Africa            |
| Malaysia                        | Asia and Pacific  |
| Maldives                        | Asia and Pacific  |
| Mali                            | Africa            |
| Malta                           | Europe            |
| Marshall Islands                | Asia and Pacific  |
| Mauritania                      | Africa            |
| Mauritius                       | Africa            |
| Mexico                          | Latin America/OWH |
| Micronesia, Federated States of | Asia and Pacific  |
| Moldova                         | Europe            |
| Monaco                          | Europe            |
| Mongolia                        | Asia and Pacific  |

|                                  |  |
|----------------------------------|--|
| Montenegro                       | Europe                                   |
| Morocco                          | Africa                                   |
| Mozambique                       | Africa                                   |
| Namibia                          | Africa                                   |
| Nauru                            | Asia and Pacific                         |
| Nepal                            | Asia and Pacific                         |
| Netherlands                      | Europe                                   |
| New Zealand                      | Asia and Pacific                         |
| Nicaragua                        | Latin America/OWH                        |
| Niger                            | Africa                                   |
| Nigeria                          | Africa                                   |
| North Korea                      | Asia and Pacific                         |
| Norway                           | Europe                                   |
| Oman                             | Middle East                              |
| Pakistan                         | Asia and Pacific                         |
| Palau                            | Asia and Pacific                         |
| Panama                           | Latin America/OWH                        |
| Papua New Guinea                 | Asia and Pacific                         |
| Paraguay                         | Latin America/OWH                        |
| Peru                             | Latin America/OWH                        |
| Philippines                      | Asia and Pacific                         |
| Poland                           | Europe                                   |
| Portugal                         | Europe                                   |
| Puerto Rico (U.S.)               | Not assigned to a region in this survey. |
| Qatar                            | Middle East                              |
| Romania                          | Europe                                   |
| Russia                           | Europe                                   |
| Rwanda                           | Africa                                   |
| Saint Kitts and Nevis            | Latin America/OWH                        |
| Saint Lucia                      | Latin America/OWH                        |
| Saint Vincent and the Grenadines | Latin America/OWH                        |
| Samoa                            | Asia and Pacific                         |
| San Marino                       | Europe                                   |
| Sao Tome and Principe            | Africa                                   |
| Saudi Arabia                     | Middle East                              |
| Senegal                          | Africa                                   |
| Serbia                           | Europe                                   |
| Seychelles                       | Africa                                   |
| Sierra Leone                     | Africa                                   |
| Singapore                        | Asia and Pacific                         |
| Slovakia                         | Europe                                   |
| Slovenia                         | Europe                                   |
| Solomon Islands                  | Asia and Pacific                         |
| Somalia                          | Africa                                   |
| South Africa                     | Africa                                   |
| South Korea                      | Asia and Pacific                         |

|                                 |                   |
|---------------------------------|-------------------|
| South Sudan                     | Africa            |
| Spain                           | Europe            |
| Sri Lanka                       | Asia and Pacific  |
| Sudan                           | Africa            |
| Suriname                        | Latin America/OWH |
| Swaziland                       | Africa            |
| Sweden                          | Europe            |
| Switzerland                     | Europe            |
| Syria                           | Middle East       |
| Taiwan                          | Asia and Pacific  |
| Tajikistan                      | Asia and Pacific  |
| Tanzania                        | Africa            |
| Thailand                        | Asia and Pacific  |
| Timor-Leste                     | Asia and Pacific  |
| Togo                            | Africa            |
| Tonga                           | Asia and Pacific  |
| Trinidad and Tobago             | Latin America/OWH |
| Tunisia                         | Africa            |
| Turkey                          | Europe            |
| Turkmenistan                    | Asia and Pacific  |
| Turks and Caicos Islands (U.K.) | Latin America/OWH |
| Tuvalu                          | Asia and Pacific  |
| Uganda                          | Africa            |
| Ukraine                         | Europe            |
| United Arab Emirates            | Middle East       |
| United Kingdom                  | Europe            |
| Uruguay                         | Latin America/OWH |
| Uzbekistan                      | Asia and Pacific  |
| Vanuatu                         | Asia and Pacific  |
| Venezuela                       | Latin America/OWH |
| Vietnam                         | Asia and Pacific  |
| Virgin Islands (U.K.)           | Latin America/OWH |
| Virgin Islands (U.S.)           | Latin America/OWH |
| Yemen                           | Middle East       |
| Zambia                          | Africa            |
| Zimbabwe                        | Africa            |

Note: OWH = Other Western Hemisphere. 'Latin America/OWH' includes Bermuda and the geographical regions of the Caribbean, Central America, and South America.

## **Domestic R&D performed by your company that was paid for by others**

**3-12** Copy the amount from Question 3-9, column 1. This is the domestic R&D performed by your company that was paid for by others.

Question 3-12 asks the company to copy the amount reported in Question 3-9 for domestic R&D costs performed by the company that was paid for by others. This survey defines this amount as “domestic R&D performed by your company that was paid for by others”.

**3-13** How much of the domestic R&D performed by your company that was paid for by others reported in Question 3-12 was for each business code listed or amended on page 6 of this form?

If the company does not track its R&D costs by line of business or product line, it should make a reasonable estimate.

If the company has R&D that applies to more than one business code, such as basic or applied research conducted by a central R&D group, it should allocate this R&D to all applicable business codes on a reasonable basis. Examples of allocation methods include allocating in proportion to sales by business code and allocating in proportion to R&D employees working for each business code.

**3-14** How much of the amount reported in Question 3-12, was paid for by each of the following?

Question 3-14 asks the company to report how much of the domestic R&D paid for by your company in 2013 that was performed by nine specific types of organizations:

- a. Other companies located inside the United States
  - o Include for-profit hospitals
- b. Your company’s foreign parent (if you are owned by a foreign parent)
- c. Other companies located outside the United States
- d. U.S. federal government agencies or laboratories
- e. U.S. state and local government agencies or laboratories
- f. Foreign government agencies or laboratories
- g. All other organizations inside the United States
- h. All other organizations located outside the United States

**3-15** Add Question 3-14, lines a, b, and c, and enter the result here. This is the R&D that was paid for by other companies.

Question 3-15 asks the company to enter the sum of Question 3-14, lines a, b, and c. This survey defines this amount as “R&D that was paid for by other companies”.

**3-16** Using the included list of business codes printed below, allocate the amount reported in Question 3-15 based on the industries of the companies that paid for the R&D. As needed, enter additional codes from pages 46-47 in the spaces provided.

These business codes should represent the industry of the company that is funding the R&D.

For example, if Company A specializes in R&D services in biotechnology (business code 54173) and is performing research and development for Company B, a pharmaceutical company (business code 32541), Company B’s business code (32541) should be listed here.

**3-17** Copy the amount from Question 3-14, line d. This is domestic R&D performed by your company that was paid for by the U.S. federal government.

Question 3-17 asks the company to copy the amount reported in Question 3-14, line d. This survey defines this amount as “domestic R&D performed by your company that was paid for by the U.S. federal government”.

**3-18** How much of the amount reported in Question 3-17 was paid for by the following agencies?

Question 3-18 asks the company to report the amount of R&D it performed in the domestic U.S. that was paid for by the U.S. Federal Government specific funding agencies.

**3-19** How much of the amount reported in Question 3-17 was performed under the following types of agreements?

- a. Contracts (include direct or prime contracts and subcontracts)
- b. Grants, reimbursements, and all other agreements

Question 3-19 asks the company to identify the amounts by type of agreements used for the company’s domestic R&D paid for by the U.S. federal government.

**3-20 Subtract Question 3-17 from Question 3-12 and enter the result here. This is the domestic R&D performed by your company that was paid for by nonfederal sources.**

Question 3-20 asks the company to subtract the amount reported in Question 3-17 from that reported in Question 3-12. This survey defines this amount as “domestic R&D performed by your company that was paid for by nonfederal sources”.

**3-21 How much of the following three amounts was performed in each state (including D.C.): (1) Domestic R&D paid for by the U.S. federal government reported in Question 3-17, (2) Domestic R&D paid for by nonfederal sources reported in Question 3-20, (3) Total domestic R&D performed by your company that was paid for by others reported in Question 3-12.**

Question 3-21 asks the company to report how much of the domestic R&D it performed that was paid for by others was performed in each state (including D.C.) in 2013. The question asks the company to report how much of the R&D in each state was paid for by the U.S. federal government as opposed to all other sources. If the company is unable to assign all its R&D costs to specific states, it should use a reasonable allocation method to report R&D by state. Companies should note their allocation method in the space for "Remarks" at the end of the survey.

Why is this important?

This information is very important to policy makers who are interested in the geographic distribution of R&D activity and its role in regional economic development.

**3-22 At what domestic location did your company perform the largest dollar amount of R&D that was paid for by others in 2013?**

Question 3-22 asks the company to identify the location where the largest dollar value of the domestic R&D it performed that was paid for by others in 2013 took place.

**3-23 How much of the amount reported in Question 3-12 was from the location identified in Question 3-22?**

If the company is unable to allocate its R&D costs to a specific location, it should provide a reasonable estimate. Companies should note their allocation method in the space for "Remarks" at the end of the survey.

**3-24** At what domestic location did your company perform the second largest dollar amount of R&D that was paid for by others in 2013?

Question 3-24 asks the company to identify the location where the second largest dollar value of the domestic R&D it performed that was paid for by others in 2013 took place.

**3-25** How much of the amount reported in Question 3-12 was from the location identified in Question 3-24?

If the company is unable to allocate its R&D costs to a specific location, it should provide a reasonable estimate. Companies should note their allocation method in the space for "Remarks" at the end of the survey.

## Projected R&D paid for by others in 2014

**3-26** What are your company's projected 2014 costs for R&D that will be paid for by others?

Question 3-26 asks the company to project its 2014 costs for R&D that will be paid for by others. This amount is the 2014 projection for what is reported in Question 3-2.

**3-27** How much of the projected costs in 2014 for R&D that will be paid for by others reported in Question 3-26 will be performed by your company in the United States?

Question 3-27 asks the company to project its 2014 costs for R&D it will perform in the domestic U.S. that will be paid for by others. This amount is the 2014 projection for what is reported in Question 3-12.

**3-28** How much of the projected costs in 2014 for domestic R&D performed by your company that will be paid for by others reported in Question 3-27 will be paid for by the U.S. federal government?

Question 3-28 asks the company to project its 2014 costs for R&D it will perform in the domestic U.S. that will be paid for by the U.S. federal government. This amount is the 2014 projection for what is reported in Question 3-17.

## Section 4: Management and Strategy of R&D

**4-1** Copy the amount from Question 2-4. This is the total R&D paid for by your company in 2013.

This number can be found on page 10 of Form BRDI-1.

**4-2** Is the amount entered in Question 4-1 greater than zero?

If no, questions 4-3 through 4-11 do not apply to your company. Please do not complete these questions. Skip to question 4-16 on page 37.

**4-3** What percentage of the amount reported in Question 4-1 was directed toward business areas or product lines that are new to your company?

Question 4-3 asks what percent of the R&D the company paid for in 2013 was aimed at expanding the company's areas of business or product lines outside of its existing areas of expertise. The characteristics that define a business area or product line as "new" may differ from company to company and industry to industry, but they generally involve technologies and customers that are new to the company. The following are examples of R&D projects that would be reported in this question:

- A pharmaceutical company that specializes in anti-viral medications invests in a research project to develop a cancer treatment.
- A computer manufacturer invests in a project to develop a smart phone.
- A software company that specializes in anti-virus software invests in an R&D project to develop office productivity software.
- A semiconductor company that specializes in central processing units for computers invests in an R&D project to develop graphics processors.
- A manufacturer and distributor of beer invests in an R&D project to develop an energy drink.

## Characteristics of domestic R&D paid for and performed by your company

**4-4** Copy the amount from Question 2-15. This is the domestic R&D paid for and performed by your company.

This number can be found on page 14 of Form BRDI-1.

**4-5 How much of the amount reported in Question 4-4 was for the following categories?**

Research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge or understanding of phenomena and observable facts. Research may be either “basic”, where the goal is primarily to increase understanding of a given topic without a specific commercial application in mind, or “applied”, where the goal is to solve a specific problem or achieve a specific commercial objective.

Development is defined as the systematic use of research and practical experience to produce new or significantly improved goods, services, or processes. In simple terms, the intended output of research is ideas and the intended output of development is products.

**4-6 If you reported any research in Question 4-5, line a, how much of that research was for the following categories?**

Research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge or understanding of phenomena and observable facts. Applied research has the goal of solving a specific problem or achieving a specific commercial objective. Basic research has the goal of increasing understanding of a given topic without a specific commercial application in mind.

For example, a project that aims to investigate the influence of different materials on fuel cell efficiency would be classified as basic research. A project that aims to improve fuel cell efficiency using new materials would be classified as applied research.

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

**4-7 What percentage of the amount reported in Question 4-4 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?**

The intent of this question is to measure the amount of R&D companies are investing in energy-related applications.

Only include costs for R&D projects where energy was an intended area of application from its inception. Do not include costs for R&D projects where energy was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with energy applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-7 through 4-11 could add to more than 100%.

**4-8** What percentage of the amount reported in Question 4-4 had environmental protection applications, including pollution abatement?

The intent of this question is to measure the amounts of R&D companies are investing in environmental protection applications.

Only include costs for R&D projects where environmental protection was an intended area of application from its inception. Do not include costs for R&D projects where environmental protection was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with environmental protection applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-7 through 4-11 could add to more than 100%.

**4-9** What percentage of the amount reported in Question 4-4 had defense applications, including military applications and general security-related R&D?

The intent of this question is to measure the amount of R&D companies are investing in defense applications. Defense applications include military applications and other national security applications. Exclude R&D for computer security applications such as anti-virus software unless it is intended for military/national security use.

Only include costs for R&D projects where defense was an intended area of application from its inception. Do not include costs for R&D projects where defense was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with defense applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-7 through 4-11 could add to more than 100%.

**4-10** What percentage of the amount reported in Question 4-4 had health or medical applications?

Question 4-10 asks the company to report what percent of the domestic R&D it performed in 2013 had health or medical applications. The intent of this question is to measure the amount of R&D companies are investing in health-related applications.

Only include costs for R&D projects where health was an intended area of application from its inception. Do not include costs for R&D projects where health was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with health/medical applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-7 through 4-11 could add to more than 100%.

Note: Include clinical trials.

**4-11** What percentage of the amount reported in Question 4-4 had agricultural applications?

This includes R&D into new and significantly improved fertilizers, pesticides, farm equipment, and crop management techniques. The intent of this question is to measure the amount of R&D companies are investing in agricultural-related applications.

Only include costs for R&D projects where agriculture was an intended area of application from its inception. Do not include costs for R&D projects where agriculture was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with agricultural applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-7 through 4-11 could add to more than 100%.

## Technology focus of domestic R&D paid for and performed by your company

### **4-12** What percentage of the amount reported in Question 4-4 was for software products or software embedded in other projects or products?

See definitions in “Research and development activity in software” under guidance for Question 2-1. Include R&D in software for both packaged software that is sold/licensed to consumers as well as R&D in software for internet applications that generate revenue. This includes R&D in software developed specifically for an R&D project that has no alternative future use as well as R&D in software that is developed to be installed or run in other products sold by the company.

Include the total cost of an R&D project with software applications in the calculation for this question, even if the project has other applications. This means that the percentages reported in Questions 4-12 through 4-16 could add to more than 100%.

### **4-13** What percentage of the amount reported in Question 4-4 was for optics and photonics- science and technology involving the emission, processing, and detection of light, or the information carried by light?

Optics and photonics can encompass any R&D project involved in the study of the emission, processing, and detection of light, or of the information carried by light. This includes the spectrum ranging from the far infrared to x-rays. The R&D may be directed at the manufacturing of the optics and photonics product itself, or to any level of the application supply chain in which they are used (from materials studies to systems development or even the end-use application). The following list provides examples of optics and photonics technologies. The list is not intended to be exhaustive, but it is indicative of the types of activities included in the definition of optics and photonics.

- Optical semiconductor components, such as LEDs, laser diodes, image sensors, focal plane arrays, point detectors, and integrated photonics
- Solar (photovoltaic) cells and panels
- Displays, display components and subassemblies
- Lasers and laser systems
- LEDs, LED backlights, LED lamps, and LED lighting
- Optical fiber, cabled fiber, and optical fiber devices, such as fiber sensors
- Passive optics, such as lenses, mirrors, prisms, and crystals
- Coatings and coating services for optics and optical devices
- Optical assemblies, such as lens systems, sensor subsystems, and camera modules
- Hardware and software design of the above products

Include the total cost of an R&D project with optics and photonics applications in the calculation for this question, even if the project has other applications. This means that the percentages reported in Questions 4-12 through 4-16 could add to more than 100%.

See also: Question 4-14.

**4-14** What percentage of the amount reported in Question 4-4 was for other projects or products enabled by optics and photonics science and technology?

This is meant to include any R&D investment that goes toward the design of photonics in a way that fundamentally enables a product or service. This definition is to be inclusive, not overly restrictive, and the product may be fundamentally dependent on other factors, too (such as electronics and software). It would not include R&D investment that adds no new value from the optics and photonics.

For example, it would include R&D invested to develop new LED lighting products, medical imaging systems based on new optical methods, or optical networking equipment. However, it would not include R&D for designing equipment that uses commodity LEDs as indicator lights, conventional displays that are used in conventional ways, or electronics and software development for IT systems that use optical transceivers only in a peripheral, conventional manner.

Include the total cost of an R&D project with optics and photonics enabled applications in the calculation for this question, even if the project has other applications. This means that the percentages reported in Questions 4-12 through 4-16 could add to more than 100%.

See also: Question 4-13

**4-15** What percentage of the amount reported in Question 4-4 was for biotechnology—the use of cellular and bio-molecular processes to solve problems or make useful products?

The following list provides examples of biotechnology techniques. The list is not intended to be exhaustive, but it is indicative of the types of activities included in the definition of biotechnology.

- DNA/RNA: Genomics, pharmacogenomics, gene probes, genetic engineering, DNA/RNA sequencing/synthesis/amplification, gene expression profiling, and use of antisense technology.
- Proteins and other molecules: Sequencing/synthesis/engineering of proteins and peptides (including large molecule hormones); improved delivery methods for large molecule drugs; proteomics, protein isolation and purification, signaling, identification of cell receptors.

- Cell and tissue culture and engineering: Cell/tissue culture, tissue engineering (including tissue scaffolds and biomedical engineering), cellular fusion, vaccine/immune stimulants, embryo manipulation.
- Process biotechnology techniques: Fermentation using bioreactors, bioprocessing, bioleaching, biopulping, biobleaching, biodesulphurisation, bioremediation, biofiltration and phytoremediation.
- Gene and RNA vectors: Gene therapy, viral vectors.
- Bioinformatics: Construction of databases on genomes, protein sequences; modeling complex biological processes, including systems biology.
- Nanobiotechnology: Applies the tools and processes of nano/microfabrication to build devices for studying biosystems and applications in drug delivery, diagnostics, etc.

Include the total cost of an R&D project with biotechnology applications in the calculation for this question, even if the project has other applications. This means that the percentages reported in Questions 4-12 through 4-16 could add to more than 100%.

**4-16** What percentage of the amount reported in Question 4-4 was for nanotechnology—the science and technology involving work at the nanometer scale?

Nanotechnology can encompass any R&D project involved in the study, creation, or use of objects at the nanoscale, which is generally considered to be 100 nanometers or smaller.

Many technologies related to conventional solid-state semiconductor manufacturing are capable of creating features smaller than 100 nanometers, so R&D involving these technologies should be included in this question.

Include the total cost of an R&D project with nanotechnology applications in the calculation for this question, even if the project has other applications. This means that the percentages reported in Questions 4-12 through 4-16 could add to more than 100%.

**Domestic R&D performed by your company that was paid for by others**

**4-17** Copy the amount from Question 3-12. This is the domestic R&D performed by your company that was paid for by others.

This number can be found on page 25 of your survey.

**4-18 Is the amount entered in Question 4-17 greater than zero?**

If no, the rest of section 4 does not apply to your company. Please skip to section 5 on page 40.

**4-19 How much of the amount reported in Question 4-17 was for the following categories?**

Research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge or understanding of phenomena and observable facts. Research may be either “basic”, where the goal is primarily to increase understanding of a given topic without a specific commercial application in mind, or “applied”, where the goal is to solve a specific problem or achieve a specific commercial objective.

Development is defined as the systematic use of research and practical experience to produce new or significantly improved goods, services, or processes. In simple terms, the intended output of research is ideas and the intended output of development is products.

**4-20 If you reported any research in Question 4-19, line a, how much of that research was for the following categories?**

Research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge or understanding of phenomena and observable facts. Applied research has the goal of solving a specific problem or achieving a specific commercial objective. Basic research has the goal of increasing understanding of a given topic without a specific commercial application in mind.

**4-21 What percentage of the amount reported in Question 4-17 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?**

The intent of this question is to measure the amount of R&D companies are investing in energy-related applications.

Only include costs for R&D projects where energy was an intended area of application from its inception. Do not include costs for R&D projects where energy was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with energy applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-21 through 4-25 could add to more than 100%.

**4-22** What percentage of the amount reported in Question 4-17 had environmental protection applications, including pollution abatement?

Only include costs for R&D projects where environmental protection was an intended area of application from its inception. Do not include costs for R&D projects where environmental protection was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with environmental protection applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-21 through 4-25 could add to more than 100%.

**4-23** What percentage of the amount reported in Question 4-17 had defense applications, including military applications and general security-related R&D?

Defense applications include military applications and other national security applications. Exclude R&D for computer security applications such as anti-virus software unless it is intended for military/national security use.

Only include costs for R&D projects where defense was an intended area of application from its inception. Do not include costs for R&D projects where defense was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with defense applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-21 through 4-25 could add to more than 100%.

**4-24** What percentage of the amount reported in Question 4-17 had health or medical applications?

The intent of this question is to measure the amount of R&D companies are investing in health-related applications.

Only include costs for R&D projects where health was an intended area of application from its inception. Do not include costs for R&D projects where health was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with health/medical applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-21 through 4-25 could add to more than 100%.

Note: Include clinical trials.

**4-25** What percentage of the amount reported in Question 4-17 had agricultural applications?

Question 4-25 asks the company to report what percent of the domestic R&D performed in 2013 that was paid for by others had agricultural applications. This includes R&D into new and significantly improved fertilizers, pesticides, farm equipment, and crop management techniques. The intent of this question is to measure the amount of R&D companies are investing in agricultural-related applications.

Only include costs for R&D projects where agriculture was an intended area of application from its inception. Do not include costs for R&D projects where agriculture was not an intended area of application until after the project was completed.

Include the total cost of an R&D project with agricultural applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-21 through 4-25 could add to more than 100%.

**Technology focus of domestic R&D performed by your company that was paid for by others**

**4-26** What percentage of the amount reported in Question 4-17 was for software products or software embedded in other projects or products?

See definitions in “Research and development activity in software” under guidance for Question 2-1. Include R&D in software for both packaged software that is sold/licensed to consumers as well as R&D in software for internet applications that generate revenue. This includes R&D in software developed specifically for an R&D project that has no alternative future use as well as R&D in software that is developed to be installed or run in other products sold by the company.

Include the total cost of an R&D project with software applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-26 through 4-30 could add to more than 100%.

**4-27** What percentage of the amount reported in Question 4-17 was for optics and photonics- science and technology involving the emission, processing, and detection of light, or the information carried by light?

Optics and photonics can encompass any R&D project involved in the study of the emission, processing, and detection of light, or of the information carried by light. This includes the spectrum ranging from the far infrared to x-rays. The R&D may be directed at the manufacturing of the optics and photonics product itself, or to any level of the application supply chain in which they are used (from materials studies to systems development or even the end-use application).

The following list provides examples of optics and photonics technologies. The list is not intended to be exhaustive, but it is indicative of the types of activities included in the definition of optics and photonics.

- Optical semiconductor components, such as LEDs, laser diodes, image sensors, focal plane arrays, point detectors, and integrated photonics
- Solar (photovoltaic) cells and panels
- Displays, display components and subassemblies
- Lasers and laser systems
- LEDs, LED backlights, LED lamps, and LED lighting
- Optical fiber, cabled fiber, and optical fiber devices, such as fiber sensors
- Passive optics, such as lenses, mirrors, prisms, and crystals
- Coatings and coating services for optics and optical devices
- Optical assemblies, such as lens systems, sensor subsystems, and camera modules
- Hardware and software design of the above products

Include the total cost of an R&D project with optics and photonics applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-26 through 4-30 could add to more than 100%.

See also: Question 4-28.

**4-28** What percentage of the amount reported in Question 4-17 was for other projects or products enabled by optics and photonics science and technology?

This is meant to include any R&D investment that goes toward the design of photonics in a way that fundamentally enables a product or service. This definition is to be inclusive, not overly restrictive, and the product may be fundamentally dependent on other factors, too (such as electronics and software). It would not include R&D investment that adds no new value from the optics and photonics.

For example, it would include R&D invested to develop new LED lighting products, medical imaging systems based on new optical methods, or optical networking equipment. However, it would not include R&D for designing equipment that uses commodity LEDs as indicator lights, conventional displays that are used in conventional ways, or electronics and software development for IT systems that use optical transceivers only in a peripheral, conventional manner.

Include the total cost of an R&D project with optics and photonics applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-26 through 4-30 could add to more than 100%.

See also: Question 4-27.

**4-29** What percentage of the amount reported in Question 4-16 was for biotechnology—the use of cellular and bio-molecular processes to solve problems or make useful products?

The following list provides examples of biotechnology techniques. The list is not intended to be exhaustive, but it is indicative of the types of activities included in the definition of biotechnology.

- DNA/RNA: Genomics, pharmacogenomics, gene probes, genetic engineering, DNA/RNA sequencing/synthesis/amplification, gene expression profiling, and use of antisense technology.
- Proteins and other molecules: Sequencing/synthesis/engineering of proteins and peptides (including large molecule hormones); improved delivery methods for large molecule drugs; proteomics, protein isolation and purification, signaling, identification of cell receptors.
- Cell and tissue culture and engineering: Cell/tissue culture, tissue engineering (including tissue scaffolds and biomedical engineering), cellular fusion, vaccine/immune stimulants, embryo manipulation.
- Process biotechnology techniques: Fermentation using bioreactors, bioprocessing, bioleaching, biopulping, biobleaching, biodesulphurisation, bioremediation, biofiltration and phytoremediation.
- Gene and RNA vectors: Gene therapy, viral vectors.
- Bioinformatics: Construction of databases on genomes, protein sequences; modeling complex biological processes, including systems biology.
- Nanobiotechnology: Applies the tools and processes of nano/microfabrication to build devices for studying biosystems and applications in drug delivery, diagnostics, etc.

Include the total cost of an R&D project with biotechnology applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-26 through 4-30 could add to more than 100%.

**4-30** What percentage of the amount reported in Question 4-17 was for nanotechnology—the science and technology involving work at the nanometer scale?

Nanotechnology can encompass any R&D project involved in the study, creation, or use of objects at the nanoscale, which is generally considered to be 100 nanometers or smaller.

Many technologies related to conventional solid-state semiconductor manufacturing are capable of creating features smaller than 100 nanometers, so R&D involving these technologies should be included in this question.

Include the total cost of an R&D project with nanotechnology applications in the calculation for this question even if the project has other applications. This means that the percentages reported in Questions 4-26 through 4-30 could add to more than 100%.

## **Domestic R&D performed by your company that was paid for by the U.S. federal government**

**4-31** Copy the amount from Question 3-17. This is domestic R&D performed by your company that was paid for by the U.S. federal government.

This number can be found on page 27 of your survey.

**4-32** Is the amount entered in Question 4-31 greater than zero?

If no, skip to section 5 on page 40. The rest of section 4 does not apply to your company; please do not complete these questions.

**4-33** How much of the amount reported in Question 4-31 was for the following categories?

Research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge or understanding of phenomena and observable facts. Research may be either “basic”, where the goal is primarily to increase understanding of a given topic without a specific commercial application in mind, or “applied”, where the goal is to solve a specific problem or achieve a specific commercial objective.

Development is defined as the systematic use of research and practical experience to produce new or significantly improved goods, services, or processes. In simple terms, the intended output of research is ideas and the intended output of development is products.

**4-34** If you reported any research in Question 4-33, line a, how much of that research was for the following categories?

Research is defined as experimental or theoretical work undertaken primarily to acquire new knowledge or understanding of phenomena and observable facts. Applied research has the goal of solving a specific problem or achieving a specific commercial objective. Basic research has the goal of increasing understanding of a given topic without a specific commercial application in mind.

For example, a project that aims to investigate the influence of different materials on fuel cell efficiency would be classified as basic research. A project that aims to improve fuel cell efficiency using new materials would be classified as applied research.

**4-35** What percentage of the amount reported in Question 4-31 was for software products or software embedded in other projects or products?

See definitions in “Research and development activity in software” under guidance for Question 2-1. Include R&D in software for both packaged software that is sold/licensed to consumers as well as R&D in software for internet applications that generate revenue. This includes R&D in software developed specifically for an R&D project that has no alternative future use as well as R&D in software that is developed to be installed or run in other products sold by the company.

## Section 5: Human Resources

**5-1** What was the total number of worldwide employees working at your company for the pay period that included March 12, 2013?

In order to collect consistent data from all companies, the employment figure reported should be for the pay period that included March 12, 2013. If this is not possible, companies should report employment for the date closest to March 12, 2013 possible.

Leased and temporary employees and consultants should be excluded from this question because this survey does not consider them employees of the reporting company.

**5-2** How many of the employees reported in Question 5-1 were employees of your company’s domestic operations and foreign operations?

Question 5-2 asks the company to report, of the employees reported in Question 5-1, the number of employees employed by domestic operations and the number of employees that were employed by operations outside of the United States.

**5-3** How many employees reported in Question 5-2 were R&D employees and how many were all other employees?

R&D employees include employees who work on R&D or who provide direct support to R&D such as researchers, R&D managers, technicians, clerical staff, and others assigned to R&D groups.

R&D employees exclude employees who provide indirect support to R&D, such as corporate personnel, security guards, and cafeteria workers.

The wages of the R&D employees reported in this question are included in the costs reported in sections 2 and 3 of this survey.

## R&D Employees

**5-4** Copy the numbers from 5-3, line a. These are your company's R&D employees.

Copy the number from 5-3, line a on page 40.

**5-5** How many of the R&D employees reported in Question 5-4 were female employees and male employees?

Question 5-5 asks the company to report its total R&D employees based on their sex and location.

**5-6** How many of the R&D employees reported in Question 5-4 worked in the occupations listed below?

The distinction between the different occupation categories is defined primarily by the nature of the employee's work, not the employee's level of education. The occupation categories "R&D scientists, engineers, and [their] managers" can be grouped together under the more generic category "Researchers". Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems and also in the management of the projects concerned.

R&D technicians and technologists are persons whose main tasks require technical knowledge and experience in one or more fields of science or engineering, but who contribute to R&D by performing technical tasks under the supervision of researchers. Biostatisticians supporting clinical trials would be reported in this category even though they may hold PhDs in their field.

The main distinction between researchers and technicians is that researchers contribute more to the creative aspects of R&D whereas technicians provide technical support. For example, a researcher (scientist or engineer) would design an experiment and a technician would run the experiment and assist in analyzing results.

R&D support staff is not directly involved with the conduct of a research project, but support the researchers and technicians. These employees might include clerical staff, report writers, regulatory experts, quality assurance, safety trainers, and other related employees.

Many Contract Research Organizations provide largely technical, regulatory, and administrative support to their customers for clinical trials. Most of these companies' R&D employees would be reported as R&D technicians or R&D support staff.

**5-7** How many of the R&D scientists, engineers, and managers reported in Question 5-6, line a, had the following level of education?

Question 5-7 asks the company to specify how many of the employed R&D scientists, engineers, and managers have a PhD.

### Domestics full-time equivalents (FTEs)

**5-8** Of the domestic R&D employees reported in Question 5-4, column 1, what was the number of full-time equivalents (FTEs) for R&D activity for full-time R&D employees, other full-time employees not working solely on R&D, and part time employees?

The headcount of full-time equivalent R&D employees should be adjusted to account for employees who work part time as well as those employees who split their time between R&D and other activities. The purpose of this question is to accurately measure the amount of effort employees are devoting to R&D in the business sector.

**5-9** Of the domestic R&D scientists, engineers, and their managers reported in Question 5-6, row a, column 1, what was the number of full-time equivalents (FTEs) for R&D activity for full-time R&D employees, other full-time employees not working solely on R&D, and part time employees?

The headcount of scientists and engineers should be adjusted to account for employees who work part time as well as those employees who split their time between R&D and other activities. The purpose of this question is to accurately measure the amount of effort scientists, engineers, and their managers are devoting to R&D in the business sector.

**5-10** How many of the R&D scientists, engineers, and managers reported in Question 5-8, line a, were non-U.S. citizens employed in the United States under a temporary visa such as H-1B or L-1?

Question 5-10 asks how many domestic R&D FTE employees are employed under a temporary visa.

## Section 6: Intellectual Property and Technology Transfer

### Patents

#### **6-1** How many patents did your company apply for in 2013 from the U.S. Patent and Trademark Office (USPTO)?

The intent of this question is to gather information about the output of companies' patenting activities. It is recognized that companies do not attempt to patent every invention, and that not every patent application results from an organized R&D activity.

Exclude the following types of continuing patent applications that do not add subject matter claimed in the parent patent application: continuation applications, requests for continued examination, divisional patent applications, and reissue applications. These types of patent applications are excluded to avoid double counting applications for the same subject matter. Continuation-in-part applications should be included because they add subject matter not claimed in the parent patent application.

Exclude provisional patent applications.

Foreign-owned companies that apply for U.S. patents on behalf of their foreign parents should only report the patent applications originating from its own operations. Patents filed on behalf of others not owned by the company (such as a foreign parent) should be excluded.

#### **6-2** What percentage of the patent applications reported in Question 6-1 has your company applied for or plans to apply for in foreign jurisdictions?

This information is useful as a measure of innovation both because it is an indicator of the potential global import of an invention and because it may indicate that the subject matter of the patent application is of high value.

#### **6-3** What percentage of the patent applications reported in Question 6-1 was for inventions that originated within your company's organized R&D activities?

Exclude patent applications where none of the named inventors are R&D employees.

**6-4 How many patents were issued to your company in 2013 by the USPTO?**

The intent of this question is to gather information about the output of companies' patenting activities. It is recognized that companies do not attempt to patent every invention, and that not every patent application results from an organized R&D activity.

Foreign-owned companies that apply for U.S. patents on behalf of their foreign parents should only report the patent grants that originated from its own operations. Patents filed on behalf of others not owned by the company (such as a foreign parent) should be excluded. In general, the company should only report patents for which it (the reporting company including its subsidiaries) is an assignee.

**6-5 What percentage of your company's inventions considered for patenting in 2013 resulted in patent applications?**

Many companies track this information through formal invention disclosure reports. This information is important because it provides a means to evaluate how useful patent applications are as a measure of innovation when comparing industries.

Exclude provisional patent applications.

## **Patent Licensing**

**6-6 What was the amount of your company's patent licensing revenue in 2013?**

Question 6-6 asks the company to report the revenue it earned in 2013 from licensing its patents. Companies should only report revenue from the licensing of patents it (the reporting company) owns. Exclude revenue from sub-licensing.

Companies should only report revenue from licensing of patents to companies/organizations not owned by the reporting company. If a reporting company is foreign-owned, it should report revenue generated from licensing patents to its foreign owner and to other affiliated companies it does not own.

**6-7 How many new agreements did your company enter into during 2013 to license patents to others not owned by your company?**

Question 6-7 asks the company to report how many new licensing agreements it entered into in 2013 to license its patents to other parties.

## Intellectual property transfer activities

### **6-8** Did your company perform the following activities in 2013?

Question 6-8 asks the company to indicate whether or not it performed any of a specific list of technology transfer activities in 2013.

## Intellectual property protection

### **6-9** During 2013, how important to your company were the following types of intellectual property protection?

Question 6-9 asks the company to indicate the importance of different methods of intellectual property protection to its business.