

47132-0001

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

FORM

BRD-1 (02-14-2019)

### 2018 BUSINESS RESEARCH AND DEVELOPMENT SURVEY

OMB No. 0607-0912: Approval Expires 02/29/2020

#### **DUE DATE:** Need help or have questions about filling out the form? Visit https://www.census.gov/ programs-surveys/brds/ information.html Here, you can access question-by-question detailed instructions and learn more about the survey. Call toll-free 1-800-772-7851, between 8:00 a.m. and 5:00 p.m. Eastern time, Monday through Friday. Please file your form electronically (see details Or mail your completed form to: U.S. CENSUS BUREAU 1201 EAST 10th STREET JEFFERSONVILLE, IN

# INTERNET REPORTING OPTION AVAILABLE Please complete this survey online at: https://portal.census.gov

(Please correct any errors in this mailing address)

#### **Authentication Code:**

**YOUR RESPONSE IS REQUIRED BY LAW.** Title 13, United States Code, Sections 8(b), 131, and 182, and Title 42, United States Code, Sections 1861-76 (National Science Foundation Act of 1950, as amended) authorize this collection. Title 13, United States Code, Sections 224 and 225 require your response. The U.S. Census Bureau is required by Section 9 of the same law to keep your information **CONFIDENTIAL** and can use your responses only to produce statistics. The Census Bureau is not permitted to publicly release your responses in a way that could identify your business, organization, or institution. Per the Federal Cybersecurity Enhancement Act of 2015, your data are protected from cybersecurity risks through screening of the systems that transmit your data.

**THIS COLLECTION HAS BEEN APPROVED** by the Office of Management and Budget (OMB). The eight-digit OMB approval number is 0607-0912 and appears at the upper right corner of this page. Without this approval, we could not conduct this survey.

We estimate this survey will take an average of 3.3 hours to complete. More information about this estimate and an address where you may write with comments is on the back of this form.

**THANK YOU – YOUR RESPONSE IS IMPORTANT.** Accurate and timely statistical information could not be produced without your cooperation and goodwill. Thank you.

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

#### **Table of Contents**

This survey is divided into seven sections based on subject matter. You may need to collaborate with colleagues in different departments to complete all sections. The following table of contents summarizes the subject matter covered by each section and what is required to complete them.

### 

Topics include company ownership, business activities, revenues, and employees.

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Topics include geographic location and accounting details related to R&D expenses.

#### Section 3: Costs Paid For by Others ......p.19

Topics include customer-sponsored work and activities funded through grants and/or reimbursements.

#### 

Topics include company expenditures for property, plant, and equipment including capitalized software.

#### 

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

#### 

Topics include your company's employees, focusing on those who work on R&D activities.

#### Section 7: Intellectual Property and Technology Transfer . . . . . . . . . . . . . . . . p.47

Topics include patenting, licensing, and other technology transfer activities.

#### Changes from the 2017 survey

Questions related to R&D on artificial intelligence were added to Section 5 (Management and Strategy of R&D). Questions asking for location of employees and R&D employees were added to Section 6 (Human Resources). A question asking for count of temporary and leased employees working on R&D was added to Section 6 (Human Resources). For a list of specific changes, go to <a href="https://www.census.gov/programs-surveys/brds/about/faq.html">https://www.census.gov/programs-surveys/brds/about/faq.html</a>.

#### **Electronic materials**

Electronic versions of the questionnaire and related information are available at https://www.census.gov/programs-surveys/brds/information.html.

Available materials include:

- PDF copy of the guestionnaire
- Excel worksheets for each section that can be completed and uploaded
- · Question-by-question instructions, definitions, and examples that provide clarification
- Answers to frequently asked questions, including how the data will be used

#### Filing electronically

You may submit your survey online via a secure website. Online submission allows you to save the data as you go, so you can exit and resume later where you left off. It also allows you to save an electronic copy of your completed survey. To submit online, follow the instructions at <a href="https://www.census.gov/programs-surveys/brds/information.html">https://www.census.gov/programs-surveys/brds/information.html</a>.

#### What is Research and Development (R&D)?

Research and development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge. 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 work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes (development). R&D includes both direct costs such as salaries of researchers as well as administrative and overhead costs clearly associated with the company's R&D.

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 2018, if possible, or for your company's fiscal year ending between April 2018 and March 2019.

#### **Estimates are acceptable**

Please report all items to the best of your ability.

#### To speak with a survey specialist, call 1-800-772-7851.

Survey specialists are available Monday through Friday, from 8:00 a.m. to 5:00 p.m. Eastern time, to help with any questions you may have.

	SECTION 1
	SECTION 1 Company Information
1-1	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, 2018 and December 31, 2018, report only for the period January 1, 2018 to the date your company ceased operations. If your company ceased operations before April 1, 2018, complete Question 1-7 and return this form to the Census Bureau - you are not required to complete the rest of this survey.
	□ No
1-2	Did another U.S. company other than a holding company own more than 50 percent of the voting interest in your company during 2018?
	Yes → Please provide the following information:
	Name of parent company
	EIN of owner (9 digits)  Date parent company purchased your company  (MM) (DD) (YYYY)
	REPORTING INSTRUCTIONS FOR U.SOWNED COMPANIES:  If your company was purchased between April 1, 2018 and December 31, 2018, report only for the period January 1, 2018 to the date of purchase. If your company was purchased before April 1, 2018, complete Question 1-7 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.
	□ No
1-3	Will the information in this survey be reported for the 2018 calendar year?
	□ Yes
	No → Enter time period covered below:  (MM) (YYYY) (MM) (YYYY)  From to

1-4	Was your company a majority-owned subsidiary of a foreign company in 2018?
	Name of parent company
	<b>REPORTING INSTRUCTIONS FOR FOREIGN-OWNED COMPANIES:</b> If you are owned by a foreign parent, the reporting unit for the survey is your U.Slocated 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
1-5	Did your company own more than 50 percent of any company operations or subsidiaries outside the 50 United States and D.C. during 2018?  ☐ Yes → Include data for these operations/subsidiaries in your survey responses ☐ No
1-6	Did your company have discontinued operations in 2018?
	<ul> <li>Yes → Include data for these operations in your survey responses</li> <li>No</li> </ul>
1-7	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
	Telephone Title Area code Number Extension
	E-mail address

1-8		umber of worldwide emp e pay period that include		
	<ul><li>Include:</li><li>Full- and part-time em</li></ul>	ployees		Number
	Exclude: • Leased or temporary	employees and consultants		
1-9		ployees reported in Ques estic operations and fore		yees of
	Domestic operations e	employees include all employe Form 941, Employer's Quarterly	es whose payroll was re	ported on the
		(1) Domestic operations	(2) Foreign operations	(3) Total employees
	Employees	000000		Total annula Quartier 10
	the amount reported in (	Question 1-9, column 1, was	less than 10, return th	Total equals Question 1-8
Би	reau – you are not requi	red to complete the rest of t	his survey.	
1-10		company's primary busin	ness activity during	2018.
	,	,		
_				
1-11	List all applicable buin 2018.	siness codes in which yo	ur company operate	d worldwide
	may differ from industryou search for approp	rill be used to describe both cry codes used by other gove riate business codes are ava v/programs-surveys/brds/inf	ernment surveys and r ilable at	eports. Tools to help
	Business code (see pages 49-50)		Description	
		_		

4.40 1006-4											
1-12 What was the amou during 2018?	int ot your compa	ny's <u>worldwide</u>									
Include:			\$Bil.	Mil. Thou.							
Sales and operating	revenues from discor	ntinued operations									
1-13 How much of the a		Question 1-12	was attributa	ole to or originated							
<ul><li>Include:</li><li>Sales and operating including foreign sul</li></ul>		ustomers,									
Example: U.S. Manufa			\$Bil.	Mil. Thou.							
customers around the voperations are located											
of its sales in this ques	tion.										
code listed or amen (1) Worldwide sale	4 How much of the 2018 sales and operating revenue code listed or amended in Question 1-11: (1) Worldwide sales and operating revenues reports (2) Sales and operating revenues from domestic op  (1)  Worldwide sales and operating revenues										
Business code		il. Thou.	\$Bil.	mestic operations Mil. Thou.							
a											
b											
c.											
d.											
е.											
f.											
g											
h.											
i. Less eliminations -			J								
the sales and revenues that are eliminated in order to consolidate the business codes			)(								
j. <b>Total</b>											
	Total equals	Question 1-12	Total ed	quals Question 1-13							

# **SECTION 2**

# **R&D Paid For by Your Company**

#### 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 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.

i:	What was the worldwide R&D expense (both direct and in 2018?	indirect)	for your co	ompany
	If your company is publicly traded, this amount is equivalent to that disclosed on SEC Form 10-K as defined in FASB ASC Topic	\$Bil.	Mil.	Thou
	730, Research and Development.	фон.	IVIII.	Hiou

If your company is foreign-owned, refer to the instructions on page 5. Additional guidance, such as for **privately owned** companies, is available online at https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q2-1

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

	i i i					
2-2	Does the amount reported in Question 2-1 include any of	the follow	ing	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 grants (government or private foundations) .			Yes		No
	c. R&D paid for by customers (customer-sponsored R&D)			Yes		No
	d. Technical services not an integral part of an R&D project (suc product support provided by R&D employees)			Yes		No
	e. Bid and proposal costs			Yes		No
	f. Expense your company claimed resulting from the acquisition another company with unfinished R&D projects (in-process R			Yes		No
	g. Phase IV clinical trials			Yes		No
2-3	If you answered "Yes" to any of the costs in Question	\$Bil.	Mil.		Thou	ı.
	2-2, what was the amount of these costs that was included in your response to Question 2-1?					
		¢D:I	Mil.		Thou	
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 2018.	\$Bil.	IVIII.		Thou	
	Is the amount entered in Question 2-4:					

 $$0 \rightarrow \text{(stop)}$  Skip to Section 3 on page 19.

Less than \$1 Million → Skip to Section 2 Worksheet on page 18 and then continue with Section 3 on page 19.

\$1 Million or greater → Continue with Question 2-5.

Indir	ect R&D charges	S Comments			
2-5	was for R&D costs through indirect ch	mount reported in Question 2-4 your company plans to recoup narges on U.S. federal government independent R&D)?	\$Bil.	Mil.	Thou.
R&D	paid for by you	r company			
2-6		orted in Question 2-4, what were the conded in Question 1-11?	osts for e	each busi	ness
		that are applicable to more than one busing opportion to operating revenues is acceptable unless appropriate.			able
	Business code	I	\$Bil.	Mil.	Thou.
	a				
	b				
	c				
	d				
	e				
	f.				
	g				
	h				
	i. <b>Total</b> (equals Que	estion 2-4)			
2-7	Of the amount repcompany in the fol	orted in Question 2-4, what costs were	incurred	by your	
	a. Domestic United S R&D performed b	States (50 states and D.C.) [Include y domestic operations that is paid sidiaries]	\$Bil.	Mil.	Thou.
	performed by fore	s (also, Puerto Rico) [Include R&D eign subsidiaries that is paid for ations]			
	c. <b>Total</b> (equals Que	estion 2-4)			

SBil. Mil. Thou. SBil. Mil. Thou. SBil. Mil. Thou. SBil. Mil. Thou.  a. Salaries, wages, and fringe benefits  b. Stock-based compensation  c. Leased employees and temporary staffing, including on-site consultants, working on R&D  d. Expensed equipment (not capitalized)  e. Materials and supplies  f. Leased facilities and equipment  g. Depreciation and amortization on R&D property, plant, equipment, and intangible assets  h. Royalties and licensing fees (including payments made to others for the use of patients and other forms of intellecture property used in your company's R&D)  i. Collaborative R&D payments (include joint development agreements)  k. Other purchased services	2-	8			mpan						f the f		3) world ving <u>ty</u> p				by	
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k. Other purchased services																		
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<u>88 888 888 888 888 888 888 888 888</u>																		
I. All other costs (including administrative and overhead costs clearly associated with your company's R&D)	k.	Of	ther pu	ırcha	sed se	rvice	S											
I. All other costs (including administrative and overhead costs clearly associated with your company's R&D)																		
	l.	Al	II other	cos	ts (inclu	ding a	dministr	ative :	and ove	rhead	costs cl	early	associate	d with y	our coi	mpany's I	R&D)	
Question continues on next page		-																

2-8 (Continue	ed)							
	(1) omestic /iil.	Thou.	\$Bil.	<b>(2)</b> Foreign Mil.	Thou.	\$Bil.	(3) Worldwide Mil.	Thou.
m. <b>Total</b>	_			_			_	
Total equals (	Question 2-	-7, line a	Total equ	ıals Question	2-7, line b	Tota	al equals Quest	ion 2-4
2-9 Add 2-8, This is R8				n, and ente	er the resu	ılt here.		
	(1) omestic (ii.	Thou.	\$Bil.	<b>(2)</b> Foreign Mil.	Thou.	\$Bil.	(3) Worldwide Mil.	Thou.
			_		_			
2-10 Subtract This is R8				ch column <u>pany</u> .	and enter	the resu	It here.	
_	(1) omestic (ii.	Thou.	\$Bil.	(2) Foreign Mil.	Thou.	\$Bil.	(3) Worldwide Mil.	Thou.
фВП. IV	····.	Tilou.	<b>Φ</b> DII.	IVIII.	Tilou.	фы.	IVIII.	
2-11 Of the an	nount rep	orted in (	Question	2-10, colu	mn 2, how	much R	&D was perf	formed
				of countries in of formation/brdsl			by Question Gui	dance at
	\$Bil.	Mil.	Thou.			\$Bil.	Mil.	Thou.
Canada				Germ	any			
Puerto Rico				Hung	ary			
Europe	\$Bil.	Mil.	Thou.	Irelan	d			
Austria				Italy				
Belgium				Luxer	nbourg			
Czech Rep				Nethe	erlands			
Denmark				Norw	ay			
Finland					·			
				Polan	d			
France								

2-15 (Continue	d)						
Spain				Malaysia			
Sweden				New Zealand			
Switzerland				Singapore			
Turkey				South Korea			
United Kingdom				Taiwan			
Other Europe				Thailand			
Latin America/				Other Asia/ Pacific			
Other Western Hemisphere	\$Bil.	Mil.	Thou.	Middle East	\$Bil.	Mil.	Thou.
Argentina				Israel			
Brazil				Other Middle East			
Chile				Africa	\$Bil.	Mil.	Thou.
Mexico				South Africa			
Other Latin America/OWH				Other Africa			
Asia and Pacific	\$Bil.	Mil.	Thou.	Total (equals			
Australia				Question 2-10, column 2)			
China							
Hong Kong							
India							
Indonesia							
Japan							

How much of the amount reported in Question 2-10, column 1, was performed in each state (including D.C.) in 2018?											
	\$Bil.	Mil.	Thou.	l	\$Bil.	Mil.	Thou.				
Alabama				Maine							
Alaska				Maryland							
Arizona				Massachusetts							
Arkansas				Michigan							
California				Minnesota							
Colorado				Mississippi							
Connecticut				Missouri							
Delaware				Montana							
District of Columbia				Nebraska							
Florida				Nevada							
Georgia				New Hampshire							
Hawaii				New Jersey							
Idaho				New Mexico							
Illinois				New York							
Indiana				North Carolina							
lowa				North Dakota							
Kansas				Ohio							
Kentucky				Oklahoma							
Louisiana				Oregon							
		Q	uestion conti	nues on next page							

2-12 (Continued							
	\$Bil.	Mil.	Thou.		\$Bil.	Mil.	Thou.
Pennsylvania				Vermont			
Rhode Island				Virginia			
South Carolina				Washington			
South Dakota				West Virginia			
Tennessee				Wisconsin			
Texas				Wyoming			
Utah				<b>Total</b> (equals Question 2-10, column 1)			
Address 2							
City					State	ZIP	
0001				000000			
2-14 How much column 1, Question 2	was from	nount rep the locat	orted in Q ion identif	uestion 2-10, fied in	\$Bil.	Mil.	Thou.

Address 2			
City		State Z	IP
How much of the	amount reported in Question 2-10,	\$Bil. Mil.	Т
column 1, was fro Question 2-15?	m the location identified in		
Business code		by your ( \$Bil. Mil.	company Ti
Busiliess Code		φσι. iviii.	
a		00 00	
b.			
		00 00	
с.		00 00	
c. d.		00 00	
c. d. e.			
c. d. e.			
c. d.			
c. d. g.			
c. d. g.			
c. d. f.			

R&D transactions between legal entities under comm	non owr	nership	
2-18 How much of the domestic R&D performed by your company's foreign sinter-company transactions?			
<b>Example:</b> Company Y owns a subsidiary in France. In order to complete the development of a product in 2018, 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.
2-19 How much of the foreign R&D performed by your comparation 2-10, column 2, was paid for by your company's domestic inter-company transactions?			
<b>Example:</b> Company Z owns a subsidiary in France. In order to complete the development of a product in 2018, 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.
R&D performed by others			
2-20 How much of the domestic R&D performed by others reported in Question 2-9, column 1, was performed by the following types of organizations?	\$Bil.	Mil.	Thou.
a. Companies located <u>inside</u> the United States			
b. Your company's foreign parent (if you are owned by a foreign parent)			
c. Other companies located <u>outside</u> the United States			
d. U.S. federal government agencies or laboratories			
e. U.S. state and local government agencies or laboratories			
f. Universities, colleges, and academic researchers (including principal investigators) located <u>inside</u> the United States			
g. All other organizations inside the United States			
h. All other organizations outside the United States			
i. Total domestic R&D paid for by your company that was performed by others (equals Question 2-9, column 1)			

Activities with academia	
2-21 In addition to the amount reported in Question 2-20, line f monetary gifts to U.S. universities or colleges in 2018 that  ☐ Yes → Continue with Question 2-22  ☐ No → Skip to Question 2-23	
2-22 What was the amount of monetary gifts made by your company to U.S. universities or colleges in 2018	\$Bil. Mil. Thou.
that was for R&D?  Projected R&D for 2019	
2-23 What are your company's projected 2019 costs for (1) dos (3) worldwide R&D paid for by your company?  NOTE: These amounts are the 2019 projections for the an	
reported in Question 2-8, line m.  (1)  Domestic  \$Bil. Mil. Thou. \$Bil. Mil. Thou.	(3) Worldwide \$Bil. Mil. Thou.
2-24 How much of the amount reported in Question 2-23, column 1, is for projected contract R&D services and projected payments to business partners for collaborative R&D?	<b>Domestic</b> \$Bil. Mil. Thou.

		_	
	SECTION 2 WORKSHEET		
	Complete if amount reported in Question 2-4 is less tha	n \$1 Mil	lion
1	Of the total R&D paid for by your company reported in Question 2 were incurred in the following locations?	?-4, what c	osts
	were incurred in the following locations:	<b>AB 4:1</b>	
	a. Domestic United States (50 states and D.C.) [Include R&D performed by domestic operations that is paid for by foreign subsidiaries]	\$Mil.	Thou.
	b. All other countries (also, Puerto Rico) [Include R&D performed by foreign subsidiaries that is paid for by domestic operations]		
	c. Total		
2	Have much of the amount reported in Associan 1 line a visa for a	ook of the	
	How much of the amount reported in Question 1, line a, was for e following types of costs?		
		\$Mil.	Thou.
	a. Salaries, wages, and fringe benefits		
	b. Collaborative R&D payments (include joint development agreements)		
	c. Contract R&D (include payments to your company's foreign parent for R&D)		
	d. All other costs (including administrative and overhead costs clearly associated with your company's R&D)		
	e. <b>Total</b> (equals Question 1, line a)		
3	Add Question 2, lines a and d, and enter the result here. This is the domestic R&D paid for and performed by your company in 2018.	\$Mil.	Thou.
4	Of the domestic R&D paid for and performed by your company representation 3, how much was for the following categories?	ported in	
	a. Basic research-activities aimed at acquiring new knowledge or understanding without specific immediate commercial	\$Mil.	Thou.
	applications or uses		
	b. Applied research—activities aimed at solving a specific problem or meeting a specific commercial objective		
	c. <u>Development</u> -systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes		
	d. <b>Total</b> (equals Question 3)		

# **SECTION 3**

# **Costs Paid For by Others**

#### Who should answer this section?

Persons familiar with accounting concepts and with access to financial records related to your company's activities paid for by others should complete this section.

#### What does this section cover?

Topics include customer-sponsored work and activities funded through grants, contracts, and/or reimbursements. Costs for these activities are requested 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	th	hat were your company's <u>worldwide costs</u> (both direct a e following that were funded, paid for, or reimbursed by our company?			
		xclude:	0 .:	0.4	
		Costs that were paid for by your company, such as those reported in Payments in excess of the actual cost of the work performed (such a			
			\$Bil.	Mil.	Thou.
	a.	R&D reimbursed by your company's foreign parent (if you are owned by a foreign parent)			
	b.	Collaborative R&D reimbursed by business partners, such as through cost-sharing agreements			
	c.	R&D paid for by grants (government or private foundations)			
	d.	Defense R&D goods or services provided as a prime or as a sub, to the government and/or government contractors			
		<ul> <li>Exclude:</li> <li>Costs for projects that have achieved technical feasibility, such as low-rate initial production. Additional guidance is available online at https://www.census.gov/programs-surveys/brds/information.html</li> </ul>			
	e.	Medical clinical trial Phase I-III services provided to others not owned by your company (include pass-through costs)			
	f.	Medical R&D services, other than clinical trials, provided to others not owned by your company			
	g.	Nondefense custom software development and/or computer systems designed for others not owned by your company			
		<ul> <li>Exclude:</li> <li>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</li> </ul>			
	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 provided to the Federal Government or to others not owned by your company			
	j.	Total			

3-1	(Continued)											
	The amount entere	ed in Question 3	B-1, line j is the <u>t</u>	otal R&D pai	d for by otl	<u>hers</u> in 2018.						
	Is this amount: \$0 → [570] If Question 2-4 was also \$0, then you have completed this survey,											
	\$0 → \$10 Ullestion 2-4 was also \$0, then you have completed this survey, otherwise skip to Section 4 on page 34.											
	Less than \$1 M continue with	illion → STOP Sk Section 4 on	ip to Section 3 page 34.	B Worksheet	t on page	33 and the	n					
	\$1 Million or gr	reater <b>→ Conti</b> i	nue with Quest	tion 3-2.								
R&D	) paid for by oth	iers										
3-2	Of the amount rep			j, what cost	s were inc	curred						
	by your company	in the followi	ng locations?		\$Bil.	Mil.	Thou.					
	a. Domestic United	States (50 stat	es and D.C.)									
	b. All other countries	es (also, Puerto	Rico)									
	c. <b>Total</b> (equals Qu	uestion 3-1, line	j)									
3-3	How much of the				wide R&D	paid for by	others					
	in 2018 was for ea	ach of the fol	lowing types o	£ 4 - 7								
		uo oo .o.		T COSTS?		(=)						
	(1) Domestic		(2) Foreign		¢D;I	(3) Worldwide	Thou					
	(1)	Thou. \$B	(2) Foreign		<u>\$Bil.</u>		Thou.					
	(1) <b>Domestic</b> \$Bil. <u>Mil.</u>	Thou. \$B	(2) Foreign		<u>\$Bil.</u>	Worldwide	Thou.					
a. Sal	(1) <b>Domestic</b> \$Bil. <u>Mil.</u>	Thou. \$B	(2) Foreign		\$Bil.	Worldwide	Thou.					
a. Sal	(1)  Domestic <u>\$Bil.</u> Mil.  aries, wages, and frin	Thou. \$B	(2) Foreign		\$Bil.	Worldwide	Thou.					
a. Sal	(1) Domestic  \$Bil. Mil.  aries, wages, and frin  ock-based compensati	Thou. \$B	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	(1)  Domestic <u>\$Bil.</u> Mil.  aries, wages, and frin	Thou. \$B	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	(1) Domestic  \$Bil. Mil.  aries, wages, and frin  ock-based compensati	Thou. \$B	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	(1) Domestic  \$Bil. Mil.  aries, wages, and frin  ock-based compensati	Thou. \$B nge benefits  on emporary staffi	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	(1) Domestic  \$Bil. Mil.  aries, wages, and frin  ock-based compensati	Thou. \$B nge benefits  on emporary staffi	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	pensed equipment (no	Thou. \$B nge benefits  on emporary staffi	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	(1) Domestic  \$Bil. Mil.  aries, wages, and frin  ock-based compensati	Thou. \$B nge benefits  on emporary staffi	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	pensed equipment (note that and supplies	Thou. \$B nge benefits  on emporary staffice ot capitalized)	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	pensed equipment (no	Thou. \$B nge benefits  on emporary staffice ot capitalized)	(2) Foreign Mil.	Thou.		Worldwide Mil.	Thou.					
a. Sal	pensed equipment (note that and supplies	Thou. \$B nge benefits  on emporary staffice ot capitalized)	(2) Foreign Mil.	Thou.		Worldwide Mil.						

3-3	(Cont	tinued)							
	•	(1)			_ (2)			(3)	
	\$Bil.	Domestic Mil.	Thou.	\$Bil.	Foreign Mil.	Thou.	\$Bil.	Worldwide Mil.	Thou.
g. D		on and amor			<del></del>			ole assets	
h. Ro	ovalties a	and licensing	fees (includir	ng pavments	made to others	s for the use	of patents and	other forms of	intellectual
pr	operty use	d in your compa	ny's R&D)	01 /		1	·		
-									
i. Co	ollaborat	ive R&D pay	ments (includ	e joint devel	opment agreen	nents)			
-									
j. Co	ontract F	R&D (include pa	ayments to yo	our company	's foreign par	ent for R&D)			
k. O	ther pur	chased servic	es						
_									
I. A	ll other o	costs (including	administrative	and overhea	d costs <b>clearl</b>	y associated	with your co	ompany's R&D	<b>)</b> )
m. <b>T</b> e	otal								
	Total eq	uals Question	3-2, line a	Total equ	als Question	3-2, line b	Total eq	uals Question	3-1, line j
3-4		3-3, lines i a is <mark>R&amp;D perf</mark> e						ah R&D co	ete)
	11113	(1)	ornica by c	<u> </u>	(2)	ractea/pa	33cu-tiii ou	(3) Worldwide	313/.
	\$Bil.	Domestic Mil.	Thou.	\$Bil.	<b>Foreign</b> Mil.	Thou.	\$Bil.	Worldwide Mil.	Thou.
							Ψ5		
3-5	Subt	ract 3-4 fror	n 3-3, line	m, for eac	ch column	and enter	the result	here.	
		is <u>R&amp;D perf</u>							
		(1) Domestic			(2) Foreign			(3) Worldwide	
	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.

\$Bil.	Mil.	Thou.	interior and inter	\$Bil.	Mil.	Thou.
			Switzerland			
			Switzeriand			
			Turkey			
\$Bil.	Mil.	Thou.	United Kingdom			
			Other			
			·			
			Latin America/ Other Western Hemisphere	\$Bil.	Mil.	Thou.
			Δrgentina			
			, a gontana			
			Brazil			
			Chile			
			America/OWH			
			Asia and Pacific	\$Bil.	Mil.	Thou.
			Australia			
			OI :			
			Cnina			
			Hong Kong			
			India			
			Indonesia			
			Japan			
			Malayois			
			Malaysia			
			New Zealand			
	\$Bil.  \$Bil.  \$Bil.  \$Compared to the compared	\$Bil. Mil.  \$Bil. Mil.  \$Bil. Mil.   \$COLUMN TO THE	\$Bil. Mil. Thou.  \$Bil. Mil. Thou.  \$Bil. Mil. Thou.   \$Director of the content o	\$Bil. Mil. Thou.  Switzerland  Turkey  Other Europe  Latin America/ Other Western Hemisphere  Argentina  Brazil  Chile  Other Latin America/OWH  Asia and Pacific Australia  China  Hong Kong  India	Switzerland  Turkey	SBil. Mil. Thou. Switzerland

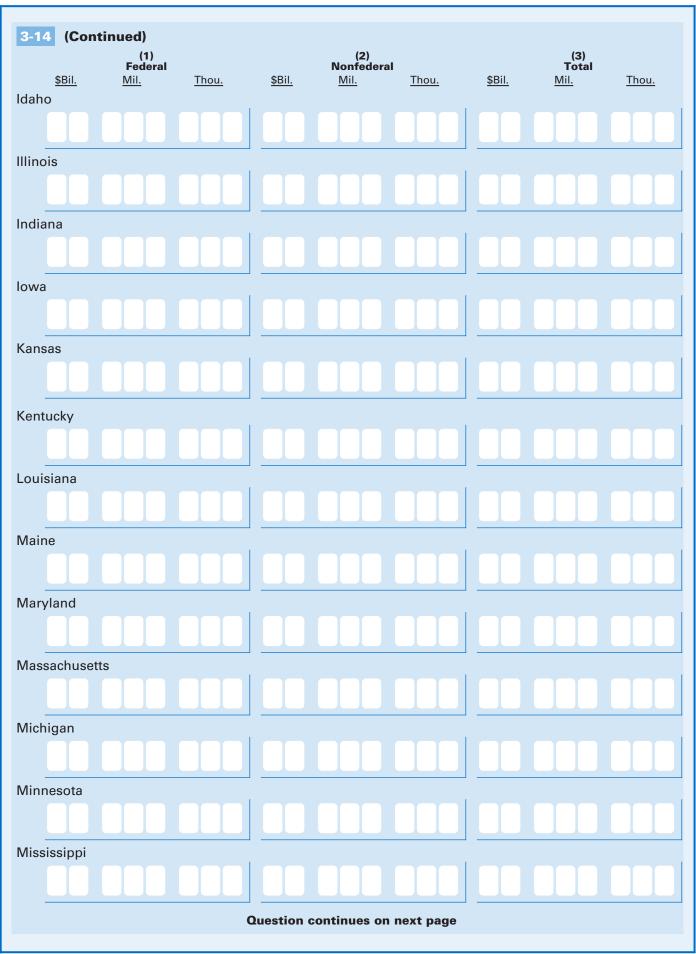
3-6 (Continue	<b>d)</b> \$Bil.	Mil.	Thou.	Africa	\$Bil.	Mil.	Thou.
				Atrica	φ5		) indu
South Korea				South Africa			
Taiwan				Other Africa			
Thailand				<b>Total</b> (equals Question 3-5, column 2)			
Other Asia/ Pacific				,			
Middle East	\$Bil.	Mil.	Thou.				
Israel							
Other Middle East							
others rep	orted in	Question	3-5, column	ı ı, was tor each t	Jusiliess		
amended Allocate R	in Quest &D that in proportion	ion 1-11? s applicable on to operati	e to more tha	n 1, was for each bean one business codes acceptable unless so	on a reas	sonable bas	
Allocate R Allocation i basis is mo	in Quest &D that in proportion	ion 1-11? s applicable on to operati	e to more tha	nn one business code	on a reas	sonable bas	
Allocate R Allocation i basis is mo	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operativiate.	e to more tha ing revenues is	nn one business code	e on a reas me alterna	sonable bas tive allocati	on
Allocate R Allocation i basis is mo	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operation in the control operation in the	e to more thating revenues is	an one business code s acceptable unless so	e on a reas me alterna	sonable bas tive allocati	on
Allocate R Allocation i basis is mo  Busine	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operation in the control operation in the	e to more thating revenues is	an one business codes acceptable unless so	e on a reas me alterna	sonable bas tive allocati	on
Allocate R Allocation i basis is mo  Busine a. b.	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operation in the control operation in the	e to more thating revenues is	an one business codes acceptable unless so	e on a reas me alterna	sonable bas tive allocati	on
Allocate R Allocation i basis is mo  Busine  a. b.	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operation in the control operation in the	e to more thating revenues is	an one business codes acceptable unless so	e on a reas me alterna	sonable bas tive allocati	on
Allocate R Allocation i basis is mo  Busine  a.  b.  c.  d.	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operation in the control operation in the	e to more thating revenues is	an one business codes acceptable unless so	e on a reas me alterna	sonable bas tive allocati	on
amended  Allocate R Allocation i basis is mo  Busine  a.  b.  c.  d.	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operation in the control operation in the	e to more thating revenues is	an one business codes acceptable unless so	e on a reas me alterna	sonable bas tive allocati	on
amended  Allocate R Allocation i basis is mo  Busine  a.  b.  c.  d.  e.	in Quest &D that in proportion re appropr	ion 1-11? s applicable on to operation in the control operation in the	e to more thating revenues is	an one business codes acceptable unless so	e on a reas me alterna	sonable bas tive allocati	on

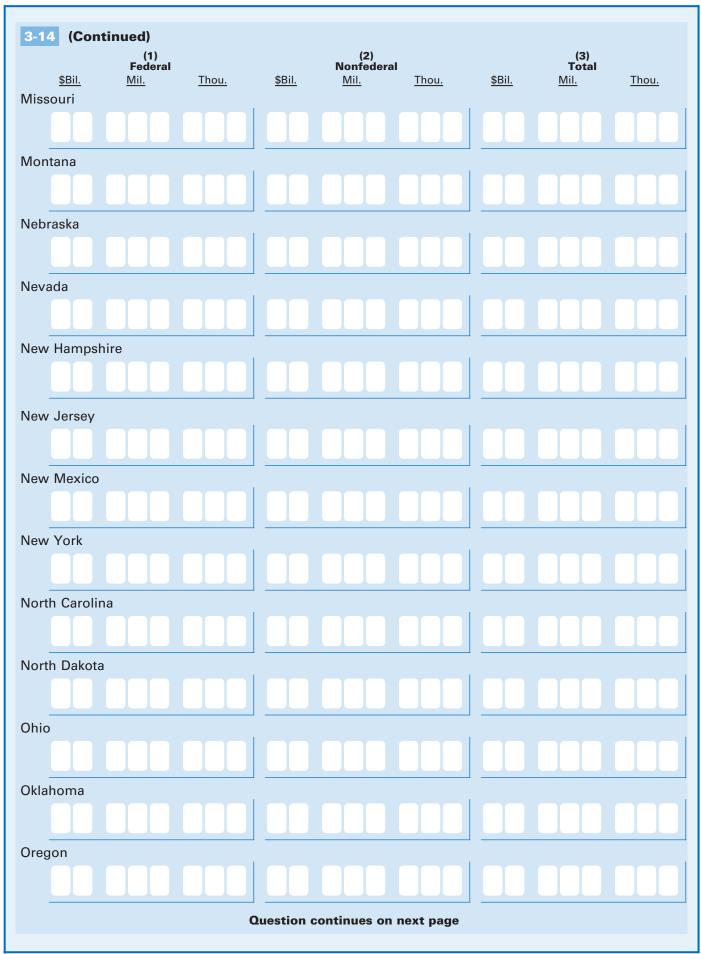
	of the following?  If your company is a subcontractor or subgrantee, report the or	iginal sou	rce of fund	ls.
	<b>Example:</b> Company Sub Inc. performs custom software development a subcontractor on a contract with the U.S. Dept. of Defense. Even the for the defense company, it reports the cost of this development in line was the original source of funds.	for a large ugh Sub Ir	defense cor c. is working	npany as g directly
		\$Bil.	Mil.	Thou.
	a. Other companies located <u>inside</u> the United States			
	b. Your company's foreign parent (if you are owned by a foreign parent)			
	c. Other companies located <u>outside</u> 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. Universities, colleges, and academic researchers (including principal investigators) located <u>inside</u> the United States			
	h. Universities and colleges located <u>outside</u> the United States			
	i. All other organizations <u>inside</u> the United States			
	j. All other organizations <u>outside</u> the United States			
	k. <b>Total</b> (equals Question 3-5, column 1)			
-9	Add Question 3-8, lines a, b, and c, and enter the result here. This is the domestic R&D performed by your company that was paid for by other companies.	\$Bil.	Mil.	Thou.

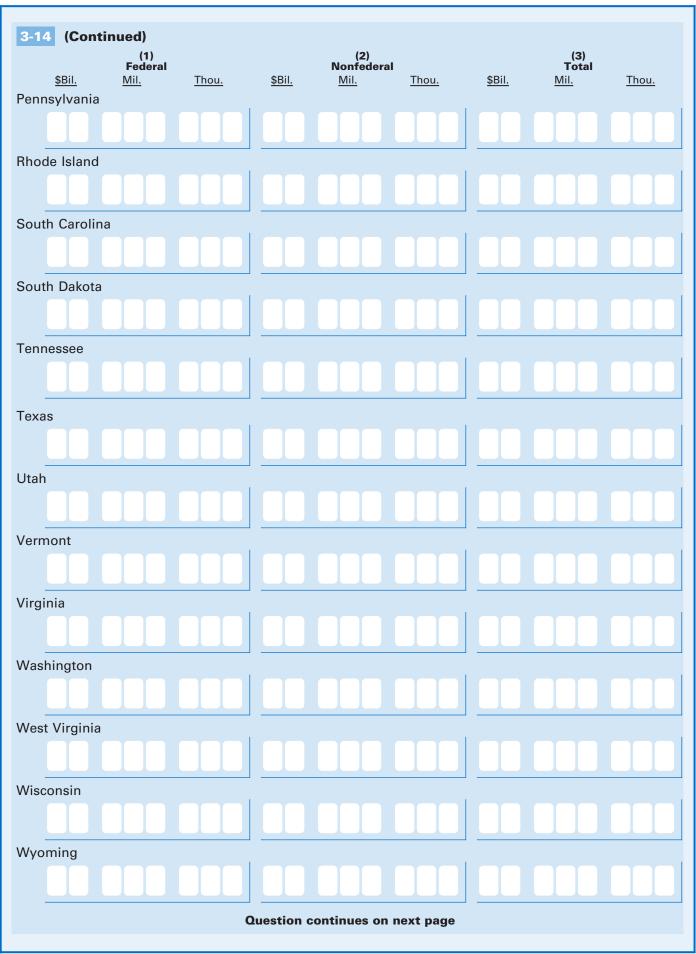
	В	usir	iess	cod	le	Description	\$Bil.	Mil.	Thou
a.	3	2	5	4	3	Biotechnology-based pharmaceutical and biological products (except diagnostics)	<b>Э</b> ВП.		Thou
b.	3	2	5	4	1	Pharmaceutical, medicinal, and botanical products manufacturing			
C.	3	3	5	0	0	Electrical equipment, appliances, and components manufacturing			
d.	3	3	4	4	0	Semiconductor and other electronic components manufacturing			
e.	3	3	9	1	0	Medical equipment and supplies manufacturing			
f.	3	3	6	1	0	Motor vehicles manufacturing			
g.									
h.									
i.									
i. j.	To	tal	(equ	uals	Que	estion 3-9)			
	To	tal	(equ	uals	Que	estion 3-9)			
	To	tal	(equ	uals	Que	estion 3-9)			
	То	tal	(equ	uals	Que	estion 3-9)			
	To	tal	(equ	uals	Que	estion 3-9)			
	To	tal	(equ	uals	Que	estion 3-9)			
	To	tal	(equ	uals	Que	estion 3-9)			
	To	tal	(equ	uals	Que	estion 3-9)			

3-11 How much of the amount reported in Question 3-8, line d was paid for by the following agencies?	<b>,</b> \$Bil.	Mil.	Thou.
a. Department of Defense			
b. Department of Energy			
c. National Aeronautics and Space Administration			
d. National Institutes of Health			
e. Department of Homeland Security			
f. Department of Transportation			
g. Environmental Protection Agency			
h. National Science Foundation			
i. All other, please specify:			
j. <b>Total</b> (equals Question 3-8, line d)			
3-12 How much of the amount reported in Question 3-8, line d was performed under the following types of agreements?		Mil.	Thou.
a. Contracts (include direct or prime contracts and subcontracts)	\$Bil.		
b. Grants, reimbursements, and all other agreements			
c. <b>Total</b> (equals Question 3-8, line d)			
3-13 Subtract Question 3-8, line d, from Question 3-8, line k, 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.
nomederal sources.			

3-14 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 3-8, line d  (2) Domestic R&D paid for by nonfederal sources reported in Question 3-13								
(3) Total domestic R&D performed by your company that was paid for by others reported in Question 3-5, column 1								
_	(1) Federal		, c, colum	(2) Nonfedera	al		(3) Total	
<u>\$Bil.</u>	Mil.	Thou.	\$Bil.	Mil.	Thou.	\$Bil.	Mil.	Thou.
Alabama								
Alaska								
 Arizona								
Alizona								
Arkansas								
California								
Colorado								
Colorado								
Connecticut								
Delaware								
D:								
District of Col	lumbia							
Florida								
Georgia								
3								
Hawaii								
	Question continues on next page							







3-14 (Continued)		(2)		(3)
Federal \$Bil. Mil.	Thou. \$Bil.	Nonfederal Mil. Thou.	<u>\$Bil.</u> <u>I</u>	Total  Mil. Thou.
Total				
Total equals Question	3-8, line d Total	equals Question 3-13	Total equals Q	uestion 3-5, column 1
	<u>c location</u> did your id for by others in		n the largest dol	lar amount of
Address 2				
City			State	ZIP
	amount reported om the location id		\$Bil.	Mil. Thou.
	<u>c location</u> did your hat was paid for b		n the second lar	gest dollar
00000				
Address 2				
City			State	ZIP
	e amount reported om the location id		\$Bil.	Mil. Thou.

R&D performed by others			
3-19 Of the domestic R&D performed by others reported in Question 3-4, column 1, how much was paid for by U.S. federal government agencies or laboratories?	\$Bil.	Mil.	Thou.
Projected R&D paid for by others in 2019			
3-20 What are your company's projected 2019 costs for R&D that will be paid for by others?	\$Bil.	Mil.	Thou.
NOTE: This amount is the 2019 projection for what is reported in Question 3-1, line j.			
3-21 How much of the projected costs in 2019 for R&D that will be paid for by others reported in Question 3-20 will be performed by your company in the United States?	\$Bil.	Mil.	Thou.
NOTE: This amount is the 2019 projection for what is reported in Question 3-5, column 1.			
3-22 How much of the projected costs in 2019 for domestic R&D performed by your company reported in Question 3-21 will be paid for by the U.S. federal government?	\$Bil.	Mil.	Thou.
NOTE: This amount is the 2019 projection for what is reported in Question 3-8, line d.			

# **SECTION 3 WORKSHEET**

Complete if amount reported in Question 3-1, line j is less	s than \$1	Million
Of the total R&D paid for by others reported in Question 3-1, linwere incurred in the following locations?	e j, what co	<b>sts</b> Thou.
a. Domestic United States (50 states and D.C.)		
b. All other countries (also, Puerto Rico)		
c. <b>Total</b>		
How much of the amount reported in Question 1, line a, was for following types of costs?	each of the	Thou.
a. Salaries, wages, and fringe benefits	. 000	
b. Collaborative R&D payments (include joint development agreements)		
c. Contract R&D (include payments to your company's foreign parent for R&D)		
d. All other costs (including administrative and overhead costs clearly associated with your company's R&D)		
e. <b>Total</b> (equals Question 1, line a)		
Add Question 2, lines a and d, and enter the result here. This is the domestic R&D performed by your company that was paid for by others in 2018.	\$Mil.	Thou.
Of the domestic R&D performed by your company that was paid reported in Question 3, how much was for the following category		rs
Basic research–activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses	\$Mil.	Thou.
b. Applied research–activities aimed at solving a specific problem or meeting a specific commercial objective	. 000	
c. <u>Development</u> -systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes	. 000	
d. <b>Total</b> (equals Question 3)	. <u>UU</u>	

	SECTION 4								
	Capital Expenditures								
Person	Who should answer this section?  Persons familiar with your company's accounting for capital expenditures and with access to records related to those expenditures should complete this section.								
What does this section cover? This section requests financial information about your company's capital expenditures, specifically those for R&D operations.									
4-1	What was the amount of your company's capital expenditures in the domestic United States in 2018?	\$Bil.	Mil.	Thou.					
4-2	How much of the amount reported in Question 4-1 was for R&D operations?	\$Bil.	Mil.	Thou.					
4-3	How much of the amount reported in Question 4-2 was for the following?	\$Bil.	Mil.	Thou.					
	a. Land acquisition								
	b. Buildings and land improvement								
	c. Equipment								
	d. Capitalized software								
	<ul> <li>e. All other capital expenditures for R&amp;D operations</li> <li>f. Total domestic capital expenditures for R&amp;D (equals Question 4-2)</li> </ul>								
4-4	Was any of the amount reported in Question 4-2 funded, paid for, or reimbursed by others not owned by your company (including your foreign parent)?		☐ Yes	□ No					

# **SECTION 5**

# **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.

If the amount reported in Question 2-4 was less than \$1 Million, skip to Question 5-16 on page 37.

5-1 What percentage of the total R&D paid for by your company reported in Question 2-4 was directed toward business areas or product lines that are new to your company?

**Example:** Company A manufactures laptop computers. In 2018, 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 2018, Company A reports this R&D in this question.



Thou.

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

Copy the amount from Question 2-10, column 1. This is the domestic R&D paid for and performed by your company.

\$Bil.	Mil.	Thou.		

Mil.

\$Bil.

\$Bil.

5-3 How much of the amount reported in Question 5-2 was for the following categories?

b. Development-systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes ......

٠.		

- c. **Total** (equals Question 5-2).....

If you reported any research in Question 5-3, line a, how much of that research was for the following categories?

m	uch of that research was for the following categories?	\$Bil.	Mil.	Thou.
a.	Applied research—activities aimed at solving a specific problem or meeting a specific commercial objective			

b. Basic research-activities aimed at acquiring new knowledge or understanding without specific immediate 

Area	s of application for domestic R&D paid for and performed by yo	our company
NOTE	: You may report the same R&D in multiple areas for Questions 5-5 to 5-9	
5-5	What percentage of the amount reported in Question 5-2 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?	
	<b>Example:</b> Company B is a semiconductor manufacturer. Its products are not designed specifically for energy applications. In 2018, 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.	%
5-6	What percentage of the amount reported in Question 5-2 had environmental protection applications, including pollution abatement?	%
5-7	What percentage of the amount reported in Question 5-2 had defense applications, including military applications and homeland security-related R&D?	%
5-8	What percentage of the amount reported in Question 5-2 had health or medical applications?	%
5-9	What percentage of the amount reported in Question 5-2 had agricultural applications?	%
Tech	nnology 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 5-10 to 5-	13.
5-10	What percentage of the amount reported in Question 5-2 was for software products or software embedded in other projects or products?	%
5-11	What percentage of the amount reported in Question 5-2 was for biotechnology? For list-based definition see Question by Question Guidance at https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-11	
	<b>Biotechnology</b> – The application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services.	%
5-12	What percentage of the amount reported in Question 5-2 was for nanotechnology? For list-based definition see Question by Question Guidance at https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-12	
	<b>Nanotechnology</b> – The application of science and technology to organisms, organic and inorganic materials, as well as parts, products, and models thereof, at the nanometer-scale (but not exclusively below 1000 nanometers).	%
5-13	What percentage of the amount reported in Question 5-2 was for artificial intelligence (AI)? For a detailed definition see Question by Question Guidance at https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-13	
	<b>Artificial Intelligence (AI)</b> – A branch of computer science and engineering devoted to making machines intelligent. Intelligence is that quality that enables an entity to perceive, analyze, determine response, and act appropriately in its environment.	%

Characteristics of foreign R&D paid for and performe	d by you	ur comp	any
5-14 Copy the amount from Question 2-10, column 2. This is the foreign R&D paid for and performed by your company.	\$Bil.	Mil.	Thou.
5-15 How much of the <u>foreign R&amp;D paid for and performed</u> by your company reported in Question 5-14 was for the following categories?	\$Bil.	Mil.	Thou.
a. Research-planned, systematic pursuit of new knowledge or understanding			
b. <u>Development</u> –systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes			
c. <b>Total</b> (equals Question 5-14)			
TIP If the amount reported in Question 3-1, line j was less than \$1 Million  5-16 Copy the amount from Question 3-5, column 1. This is the domestic R&D performed by your company that was paid for by others.	shil.	Section 6	on page 40.
5-17 How much of the amount reported in Question 5-16 was for the following categories?	\$Bil.	Mil.	Thou.
a. Research-planned, systematic pursuit of new knowledge or understanding			
<ul> <li>Development-systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes</li> </ul>			
c. <b>Total</b> (equals Question 5-16)			
5-18 If you reported any research in Question 5-17, line a, how much of that research was for the following categories?	\$Bil.	Mil.	Thou.
<ul> <li>a. <u>Applied research</u>—activities aimed at solving a specific problem or meeting a specific commercial objective</li> </ul>			
b. Basic research—activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses			

NOTE: You may report the same R&D in multiple areas for Questions 5-19 to 5	<b>5-23</b> .
5-19 What percentage of the amount reported in Question 5-16 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?	%
5-20 What percentage of the amount reported in Question 5-16 had environmental protection applications, including pollution abatement?	%
5-21 What percentage of the amount reported in Question 5-16 had defense applications, including military applications and homeland security-related R&D?	%
5-22 What percentage of the amount reported in Question 5-16 had health or medical applications?	%
5-23 What percentage of the amount reported in Question 5-16 had agricultural applications?	<b>%</b>
Technology focus of domestic R&D performed by your company paid for by others	that was
NOTE: You may report the same R&D in multiple areas for Questions 5-24 to 5	<b>5-27</b> .
5-24 What percentage of the amount reported in Question 5-16 was for software products or software embedded in other projects or products?	<b>%</b>
What percentage of the amount reported in Question 5-16 was for biotechnology? For list-based definition see Question by Question Guidance at https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-25	
<b>Biotechnology</b> – The application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services.	<b>%</b>
5-26 What percentage of the amount reported in Question 5-16 was for nanotechnology? For list-based definition see Question by Question Guidance at https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-26	
<b>Nanotechnology</b> – The application of science and technology to organisms, organic and inorganic materials, as well as parts, products, and models thereof, at the nanometer-scale (but not exclusively below 1000 nanometers).	%
What percentage of the amount reported in Question 5-16 was for artificial intelligence (AI)? For a detailed definition see Question by Question Guidance at https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-27	
<b>Artificial Intelligence (AI)</b> – A branch of computer science and engineering devoted to making machines intelligent. Intelligence is that quality that enables an entity to perceive, analyze, determine response, and act appropriately in its environment.	%

Domestic R&D performed by your company that was U.S. federal government	paid f	or by the	
5-28 Copy the amount from Question 3-8, line d. This is the domestic R&D performed by your company that was paid for by the U.S. federal government.	\$Bil.	Mil.	Thou.
5-29 How much of the amount reported in Question 5-28 was for the following categories?	\$Bil.	Mil.	Thou.
a. Research-planned, systematic pursuit of new knowledge or understanding			
b. <u>Development</u> -systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes			
c. <b>Total</b> (equals Question 5-28)			
5-30 If you reported any research in Question 5-29, line a, how much was for the following categories?	\$Bil.	Mil.	Thou.
<ul> <li>a. Applied research—activities aimed at solving a specific problem or meeting a specific commercial objective</li> </ul>			
<ul> <li><u>Basic research</u>–activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses</li></ul>			
c. <b>Total</b> (equals Question 5-29, line a)			
5-31 What percentage of the amount reported in Question 5-28 for software products or software embedded in other proor products?			%
Characteristics of foreign R&D performed by your co for by others	mpany	y that wa	s paid
5-32 Copy the amount from Question 3-5, column 2. This is the foreign R&D performed by your company and paid for by others.	\$Bil.	Mil.	Thou.
5-33 How much of the amount reported in Question 5-32 was for the following categories?	\$Bil.	Mil.	Thou.
a. Research-planned, systematic pursuit of new knowledge or understanding			
b. <a href="Development">Development</a> —systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes			
c. <b>Total</b> (equals Question 5-32)			

# **SECTION 6**

### **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.

6-1	How many employees reported in Question 1-9 were R&D employees and how many were all other employees?
	<b>R&amp;D employees include</b> all employees who work on R&D or who provide direct support

**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) Domestic operations	(2) Foreign operations	(3) Total employees
a. R&D employees			
b. All other employees			
c. Total employees		000000	000000

Total line equals Question 1-9

6-2	How many of the employees reported in Question 6-1, column 1, were employed in
	each state (including D.C.)?

(1) R&D employees	(2) Total employees	(1) R&D employees	(2) Total employees
Alabama		Colorado	
Alaska		Connecticut	
		000000	
Arizona		Delaware	
Arkansas		District of Columbia	
California		Florida	

**Question continues on next page** 

(1) R&D employees	(2) Total employees	(1) R&D employees	(2) Total employee
Georgia		Minnesota	
Hawaii		Mississippi	
ldaho		Missouri	
Illinois		Montana	
Indiana		Nebraska	
lowa		Nevada	
Kansas		New Hampshire	
Kentucky		New Jersey	
Remadeky		Thew delisely	
Levisiene		New Maries	
Louisiana		New Mexico	
Maine		New York	
Maryland		North Carolina	
Massachusetts		North Dakota	
Michigan		Ohio	
	Question continue		

(1)	(2)	(1)	(2)
R&D employees	Total employees	R&D employees	Total employe
Oklahoma		Utah	
Oregon		Vermont	
Pennsylvania		Virginia	
Rhode Island		Washington	
South Carolina		West Virginia	
South Dakota	ı	Wisconsin	
Tennessee	1 1	Wyoming	
Texas		Total	
How many of the or	mployage reported in O	uestion 6.1 column 2 we	are employed in
How many of the ereach location (inclu	mployees reported in Q	uestion 6-1, column 2, we	ere employed i
each location (inclu	iding Puerto Rico)?	(1)	(2)
each location (inclu (1) R&D employees	iding Puerto Rico)?	(1) R&D employees	(2)
each location (inclu	iding Puerto Rico)?	(1)	(2)
each location (inclu (1) R&D employees	iding Puerto Rico)?	(1) R&D employees	(2)
each location (inclu (1) R&D employees	iding Puerto Rico)?	(1) R&D employees	(2)
each location (inclu (1) R&D employees Canada	iding Puerto Rico)?	(1) R&D employees Czech Rep	(2)
each location (inclu (1) R&D employees Canada	iding Puerto Rico)?	(1) R&D employees Czech Rep	(2)
each location (inclu- (1) R&D employees Canada  Puerto Rico	iding Puerto Rico)?	(1) R&D employees Czech Rep	(2)
each location (inclu- (1) R&D employees Canada  Puerto Rico  Europe	iding Puerto Rico)?	(1) R&D employees Czech Rep  Denmark	(2)
each location (inclu- (1) R&D employees Canada  Puerto Rico	iding Puerto Rico)?	(1) R&D employees Czech Rep  Denmark	(2)
each location (inclu- (1) R&D employees Canada  Puerto Rico  Europe	iding Puerto Rico)?	(1) R&D employees Czech Rep  Denmark	(2)
each location (incluent) R&D employees Canada Puerto Rico Europe Austria	iding Puerto Rico)?	R&D employees Czech Rep  Denmark  Finland	
each location (inclu- (1) R&D employees Canada  Puerto Rico  Europe	iding Puerto Rico)?	R&D employees Czech Rep  Denmark  Finland	(2)

Hungary Ireland Luxembourg Netherlands Norway	Other Europe  Latin America/Other Western Hemispher Argentina  Brazil  Chile  Mexico
Ireland Italy Luxembourg Netherlands Norway	Latin America/Other Western Hemispher Argentina Brazil Chile
Ireland  Italy  Luxembourg  Netherlands  Norway	Latin America/Other Western Hemispher Argentina Brazil Chile
Italy Luxembourg Netherlands Norway	Argentina  Brazil  Chile
Italy Luxembourg Netherlands Norway	Argentina  Brazil  Chile
Luxembourg  Netherlands  Norway	Argentina  Brazil  Chile
Luxembourg  Netherlands  Norway	Chile
Netherlands Norway	Chile
Netherlands Norway	Chile
Netherlands Norway	
Norway	
Norway DDD	Mexico
	Mexico
	IVICATOU
	Other Latin America/OWH
Poland	
Russia	Asia and Pacific  Australia
nussia	Australia
Spain	China
Sweden	Hong Kong
Switzerland	India
Turkey	Indonesia

R&D employees	(2) Total employees	(1) R&D employees	(2) Total employe
Japan		Middle East	
		Israel	
Malaysia			
		Other Middle East	
New Zealand			
New Zealand			
		Africa	
Singapore		South Africa	
South Korea		Other Africa	
Taiwan		Total	
Thailand			
Other Asia/Pacific			
employees			
	&D employees reported ir	Question 6-1, line a,	were <u>female</u>
How many of the Riemployees and male	e employees?	(2)	(3)
	e employees?		
	e employees? (1) Domestic Operations	(2)	(3)
a. Female R&D emplo	e employees? (1) Domestic Operations  Dyees	(2)	(3)
employees and male	e employees? (1) Domestic Operations  Dyees	(2)	(3)
a. Female R&D emplo	Domestic Operations  oyees  ees	(2)	(3)

-5 I	occupations listed below		(2)	(2)
ć	a. Researchers (including R&D scientists, engineers, and their managers)	(1) Domestic Operations	(2) Foreign Operations	(3) Total R&D employee
I	b. R&D technicians and equivalent staff		000000	00000
(	c. R&D support staff (clerical and other)		000000	000001
Ó	d. Total R&D employees	Total	line equals Question 6-1,	line a
		rotar	mic equals Question o 1,	inic a
	How many of the researc	hers reported in Ques	stion 6-5, line a, had	the following
	level of education?	(1) Domestic Operations	(2) Foreign Operations	(3) Total
	PhD (excluding MD, JD, and EdD)			
ome	estic full-time equiva	lents (FTEs)		
-7	Of the <u>domestic R&amp;D em</u> was the number of full-ti employees, other full-tim	ployees reported in O me equivalents (FTEs)	for R&D activity fo	r full-time R&D
-7	Of the domestic R&D em was the number of full-ti employees, other full-tim employees?	ployees reported in O me equivalents (FTEs) e employees not wor	for R&D activity fo	r full-time R&D
-7	Of the <u>domestic R&amp;D em</u> was the number of full-ti employees, other full-tim	ployees reported in Ome equivalents (FTEs) ie employees not wor	) for R&D activity fo king solely on R&D,	r full-time R&D and part-time Number
-7	Of the domestic R&D em was the number of full-ti employees, other full-timemployees?  a. FTEs for full-time R&D en	ployees reported in Ome equivalents (FTEs) ie employees not work mployees -time employees who w	) for R&D activity fo king solely on R&D,	r full-time R&D and part-time Number
-7	Of the domestic R&D em was the number of full-ti employees, other full-timemployees?  a. FTEs for full-time R&D en Count the number of full Example:	ployees reported in Ome equivalents (FTEs) is employees not work mployees -time employees who was worked only on R&D = 5	ofor R&D activity fo king solely on R&D, work only on R&D	r full-time R&D and part-time Number
-7	Of the domestic R&D emwas the number of full-timemployees, other full-timemployees?  a. FTEs for full-time R&D en Count the number of full  Example: 50 full-time R&D employee	ployees reported in Ome equivalents (FTEs) re employees not work mployees -time employees who were sworked only on R&D = 5 employees not working see they work on R&D to one	of for R&D activity fo king solely on R&D, work only on R&D	r full-time R&D and part-time Number
-7	Of the domestic R&D emwas the number of full-timemployees, other full-timemployees?  a. FTEs for full-time R&D encount the number of full  Example: 50 full-time R&D employee  b. FTEs for other full-time eduse the share of the time	ployees reported in Ome equivalents (FTEs) re employees not work reported in Ome employees not work results worked only on R&D = 5 remployees not working set they work on R&D to on R&D t	or R&D activity fo king solely on R&D	r full-time R&D and part-time Number
-7	Of the domestic R&D emwas the number of full-timemployees, other full-timemployees?  a. FTEs for full-time R&D en Count the number of full  Example: 50 full-time R&D employee  b. FTEs for other full-time en Use the share of the time number of FTEs  Example: 60 full-time employees ave	ployees reported in Ome equivalents (FTEs) re employees not work mployees -time employees who were sworked only on R&D = 5 -time ployees not working see they work on R&D to overaged one-fourth of their the contract of the second of the seco	or R&D activity fo king solely on R&D	r full-time R&D and part-time Number
-7	Of the domestic R&D emwas the number of full-timemployees, other full-timemployees?  a. FTEs for full-time R&D en Count the number of full  Example: 50 full-time R&D employee  b. FTEs for other full-time en Use the share of the time number of FTEs	ployees reported in Ome equivalents (FTEs) is employees not work imployees who was worked only on R&D = 5 is employees not working so they work on R&D to consider aged one-fourth of their to be week (such as 40 home week (such as 40 home week)	or R&D activity fo king solely on R&D,  ork only on R&D  for FTEs  solely on R&D calculate the  ime on R&D = 15 FTEs  urs) that they work	r full-time R&D and part-time Number
-7	Of the domestic R&D emwas the number of full-timemployees, other full-timemployees?  a. FTEs for full-time R&D en Count the number of full  Example: 50 full-time R&D employee  b. FTEs for other full-time en Use the share of the time number of FTEs  Example: 60 full-time employees ave  c. FTEs for part-time employees the share of a full-time	ployees reported in Ome equivalents (FTEs) re employees not work as worked only on R&D = 5 remployees not working set they work on R&D to overaged one-fourth of their to byees working on R&D me week (such as 40 ho FTEs	or R&D activity fo king solely on R&D,  ork only on R&D  or FTEs  solely on R&D  calculate the	r full-time R&D and part-time  Number

6-8	Of the domestic researchers reported in Question 6-5, line a, column the number of full-time equivalents (FTEs) for R&D activity for full employees, other full-time employees not working solely on R&D, employees?	-time R&D
	a. FTEs for full-time researchers  Count the number of full-time employees who work only on R&D	Number
	<b>Example:</b> 50 full-time R&D scientists worked only on R&D = 50 FTEs	
	b. FTEs for other full-time researchers not working solely on R&D  Use the share of the time they work on R&D to calculate the number of FTEs	
	<b>Example:</b> 60 full-time managers averaged one-fourth of their time on R&D = 15 FTEs	
	c. FTEs for part-time researchers 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	
	<b>Example:</b> 20 part-time employees averaged 20 hours a week on R&D activities = 10 FTEs	3
	d. <b>Total FTEs</b>	6-5, line a, column 1.
6-9	How many of the domestic researchers reported in Question 6-5, li were non-U.S. citizens employed in the United States under a tempas H-1B or L-1?	ne a, column 1,
	Researchers employed under a temporary visa	
6-10	In addition to the R&D employees reported in Question 6-1, line a, leased employees and temporary staff, including on-site consultan in the occupations listed below?	
	a. Researchers (including R&D scientists, engineers, and their managers)	(3) Total leased and temporary employees working on R&D
	b. R&D technicians and equivalent staff	
	c. R&D support staff (clerical and other)	000000
	d. Total leased and temporary employees working on R&D	

## **SECTION 7**

## **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 your company's worldwide intellectual property and technology transfer activities such as: patents, patent licensing, protection of intellectual property, and transfer of intellectual property.

#### Are responses to this survey confidential?

Yes. Your responses are completely confidential under Title 13, United States Code, Section 9, and can only be used to produce statistics. The Census Bureau is not permitted to publicly release your responses in a way that could identify your business. The law 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.

Tota	al patents and utility patents			
7-1	How many total patents did your company <u>apply</u> for in 20 the U.S. Patent and Trademark Office (USPTO)?	18 from		Number
7-2	Of the patent applications reported in Question 7-1, what number of nonprovisional utility patent applications?	was the		Number
7-3	What percentage of the <u>nonprovisional utility patent</u> appl reported in Question 7-2 has your company applied for or apply for in foreign jurisdictions?			%
7-4	What percentage of the <u>nonprovisional utility patent</u> appl reported in Question 7-2 was for inventions that originate your company's organized R&D activities?			%
7-5	What percentage of your company's inventions considere patenting in 2018 resulted in nonprovisional utility paten		ions?	%
7-6	How many utility patents were issued to your company in the USPTO?	2018 by		Number
Util	ity patent sales and licensing to others			
7-7	How much revenue did your company receive in 2018 from the sale of utility patents?	\$Bil.	Mil.	Thou.
7-8	How much revenue did your company receive in 2018 from utility patent licensing?	\$Bil.	Mil.	Thou.
7-9	Was any of the revenue reported in Questions 7-7 or 7-8 received from companies or organizations		☐ Ye:	s 🗆 No

Utility patent purchases and licensing from others			
7-10 How much did your company pay others in 2018 to purchase utility patents?	Bil.	Mil.	Thou.
7-11 How much did your company pay others in 2018 to license utility patents?	Bil.	Mil.	Thou.
7-12 Were any of the payments reported in Questions 7-10 or 7-11 made to companies or organizations located outside the United States?		☐ Yes	□ No
Intellectual property transfer activities			
7-13 Did your company perform the following activities in 2018?  a. Transferred intellectual property (IP) to others not owned by you company through participation in technical assistance or "know how" agreements		□ Yes	□ No
<ul> <li>Received IP from others not owned by your company through participation in technical assistance or "know how" agreements.</li> </ul>		☐ 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
<ul> <li>g. Participated in cross-licensing agreements—the agreements in whom or more parties grant a license to each other for the use of the sumatter claimed in one or more of the patents owned by each parth. Allowed free use of patents or other IP owned by your company</li> </ul>	ubject	☐ Yes	□ No
(for example, open source software)		Yes	No
i. Made use of open source patents or other freely available IP not owned by your company		Yes	□ No
Intellectual property protection			
7-14 During 2018, how important to your company were the following types of intellectual property protection?	Very nportant	Somewhat important	Not important
a. Utility patents (patents for invention)			
b. Design patents (patents for appearance)			
c. Trademarks			
d. Copyrights			
e. Trade secrets			
f. Mask works (copyright protection for semiconductor products)			
Research and experimentation tax credit			
7-15 Did your company file for the tax credit for increasing research activities (IRS Form 6765) in 2018?		Yes	No

Pusinoss sodos		Consumer Goods		
Business codes (used in Sections 1, 2, and 3)		33333 Digital cameras manufacturing		
	ace and Defense	33430	Audio and video equipment manufacturing	
33642 33641 33644	Aircraft engine and engine parts manufacturing Aircraft manufacturing Guided missiles, space vehicles, and parts	31210 33200 31100	Beverage manufacturing Fabricated metal products manufacturing Food manufacturing	
33692	manufacturing Military armored vehicle, tank, and tank	33700 32300	Furniture and related products manufacturing Printing and related support activities	
33452	components manufacturing Search, detection, navigation, guidance,	32591	Soap, cleaning compound, and toilet preparations manufacturing	
00 102	aeronautical, and nautical system and instruments manufacturing	31990	Textile, apparel, and leather products manufacturing	
33660 33643	Ship and boat building Other aircraft parts and auxiliary equipment manufacturing	31220 33990	Tobacco manufacturing Miscellaneous manufacturing not listed elsewhere (games, office supplies, slot machines, etc.)	
Autom	obiles, Motorcycles, and Components			
33620 33630 33610 33691 33651 33660 33699	Motor vehicle body and trailer manufacturing Motor vehicle parts manufacturing Motor vehicles manufacturing Motorcycle, bicycle, and parts manufacturing Railroad rolling stock manufacturing Ship and boat building All other transportation equipment manufacturing	21200 33319 21100 32401 21300	and Mining  Engine, turbine, and power transmission equipment manufacturing  Mining  Mining, oil, and gas field machinery and equipment manufacturing  Oil and gas extraction  Petroleum refineries  Support activities for mining,	
Capital	Equipment	21300	including oil and gas	
33311	Agricultural machinery and equipment manufacturing	Financ	e, Insurance, and Real Estate	
33332	Commercial, service industry, temperature control, and airflow control machinery manufacturing	52200 52400 53100	Finance: banking and credit intermediation Insurance carriers and related activities Real estate	
33312 33500	Construction machinery manufacturing Electrical equipment, appliances, and components manufacturing	52310	Securities, commodity contracts, and other financial investments and related activities (including funds and trusts)	
33360	Engine, turbine, and power transmission equipment manufacturing	Health		
33322	Industrial machinery manufacturing, except semiconductor machinery	32543	Biotechnology-based pharmaceutical and	
33390	Metalworking and other general purpose machinery manufacturing	33451	biological products (except diagnostics) Electromedical, electrotherapeutic, and irradiation apparatus manufacturing	
33319	Mining, oil, and gas field machinery and equipment manufacturing	62200 32542	Hospitals and nursing care facilities	
33331	Photographic and photocopying equipment manufacturing	62150 33910	In vitro diagnostic substances manufacturing Medical and diagnostic laboratories Medical equipment and supplies manufacturing	
Chemic	cals and Materials	62110	Offices of physicians	
32402	Asphalt paving, roofing, and saturated	32541	Pharmaceutical, medicinal, and botanical products manufacturing	
32510	materials manufacturing Basic chemicals manufacturing	54173	Research and development services in biotechnology	
32790	Cement, concrete, lime, gypsum, and other nonmetallic mineral product manufacturing	54174	Research and development services in physical, engineering, and life sciences	
32710 21200	Clay and glass products manufacturing Mining	02100	(except biotechnology)	
32592	Paint, adhesive, and other chemical manufacturing	62199	Other ambulatory health care services (ambulance, dental, home health care)	
32200	Paper manufacturing			
32530	Pesticide, fertilizer, and other agricultural chemical manufacturing			
32600	Plastics and rubber products manufacturing			
33100 32520	Primary metal manufacturing Resin, synthetic rubber, and artificial synthetic fibers and filaments manufacturing			
32591	Soap, cleaning compound, and toilet preparations manufacturing			
32100 32403	Wood products manufacturing Other petroleum and coal products manufacturing, including motor oil, hydraulic fluid, and charcoal			

Inform	ation Technology - Goods and Services	Other	Services
33333 51801 54150 33412 51800 33500 45411 33459 33422 33440 33321 51120 33421	Digital cameras manufacturing Cloud computing applications and internet based software services Computer systems design and related services Computers and peripheral equipment manufacturing, including magnetic and optical media Data processing, hosting, and related services Electrical equipment, appliances, and components manufacturing Electronic shopping and electronic auctions Measuring and control instruments manufacturing (not listed elsewhere) Radio, television, and wireless communication equipment manufacturing Semiconductor and other electronic components manufacturing Semiconductor machinery manufacturing Software publishers (except Internet) Telephone apparatus manufacturing including routers, modems, and gateways	72000 56100 71000 23000 49200 53300 55100 42300 42400 51200 51110 53200 44000 62400 21300	Accommodation and food services Administrative and support services Arts, entertainment, and recreation Construction Couriers, messengers, and express deliver services Lessors of nonfinancial intangible assets (including patent licensing) Management of companies and enterprise Merchant wholesalers, durable goods Merchant wholesalers, nondurable goods Motion picture and sound recording (except Internet) Newspaper, periodical, book, and directory publishers (except Internet) Rental and leasing services Retail trade, except electronic shopping and electronic auctions Social assistance services Support activities for mining, including oil and gas
42500 33429	Wholesale electronic markets and agents and brokers (business to business) Other communication equipment manufacturing (except radio, television,	48000 49300 81000	Transportation Warehousing and storage Other services (not listed elsewhere)
51910	and wireless communication equipment) Other information services, including Internet publishing, broadcasting, and web search portals		
Profes	sional, Scientific, and Technical Services		
54180 54130 54150 54111 54160	Advertising and related services Architectural, engineering, and related services Computer systems design and related services Legal, accounting, tax preparation, bookkeeping and payroll services Management, scientific, and		
54190	technical consulting services Professional, scientific, and technical services (not listed elsewhere)		
54173 54174	Research and development services in biotechnology Research and development services in		
	physical, engineering, and life sciences (except biotechnology)		
54172 54140	Research and development services in social sciences and humanities  Specialized design services		
	•		
51500 51740 22100 56200 51710 51720	Immunications and Utilities  Broadcasting (except Internet) Satellite telecommunications Utilities Waste management and remediation services Wired telecommunications carriers Wireless telecommunications carriers		

51710 51720

51790

Wireless telecommunications carriers

Other telecommunications (not listed elsewhere)

(except satellite)

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Approximately how long did it take to complete this survey?	Hours Minutes
<b>Remarks</b> (Please use this space below for any explanations that may be essential in unreported data.)	nderstanding your
Thank You – Your Response is Important	
Accurate and timely statistical information could not be produced without your contant goodwill. Thank you.	tinued cooperation
We estimate this survey will take an average of 3.3 hours to complete, including the time instructions, searching existing data sources, gathering and maintaining the data needed and reviewing the collection of information. Send comments regarding this burden estimates aspect of this collection of information, including suggestions for reducing this burden,	d, and completing mate or any other
ERD Survey Comments 0607-0912 U.S. Census Bureau 4600 Silver Hill Road Room ERD-6H128 Washington, DC 20233	
You may email comments to erd.survey.comments@census.gov. Be sure to use "ERD S 0607-0912" as the subject.	Survey Comments