Question By Question Guidance

This survey is divided into eight sections based on subject matter. You may need to collaborate with colleagues in different departments to complete all sections. Some questions in these instructions may not apply to your company as this survey is administered to companies in a diverse set of industries.

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General Instructions

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 related to 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 majority-owned subsidiaries 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.

Inter-company transactions

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 District of Columbia. When reporting for your domestic operations, include transactions with foreign subsidiaries. For example, Question 1-13 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.

Reporting period

Report data for the calendar year 2024, if possible, or for your company's fiscal year ending between April 2024 and March 2025.

Estimates are acceptable

Please report all items to the best of your ability.

To speak with a survey specialist, call 1-800-416-3262.

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

Section 1: Company Information

1-1 Has your company ceased operations?

If your answer is "Yes", enter the date that your company ceased operations.

REPORTING INSTRUCTIONS:

If your company ceased operations between April 1, 2024 and December 31, 2024, report only for the period January 1, 2024 to the date your company ceased operations. If your company ceased operations before April 1, 2024, complete Question 1-7 and return this form to the Census Bureau – you are not required to complete the rest of this survey.

1-2 Did another U.S. company own more than 50% of the voting interest in your company during 2024?

Question 1-2 asks about the majority of the ownership of the voting interest of the company receiving the survey. Special reporting instructions apply to companies that have been acquired by another company. If your answer is "No", continue to Question 1-3. If your answer is "Yes", read the instructions below, enter the name of the parent company, the EIN of the owner, and the date that your parent company purchased your company.

In general, this survey asks companies to report consolidated data for all companies it owns. However, some companies may own other companies without taking an active role in those other companies' operations and management. In these cases, such as with some holding companies and private equity firms, the owners are unlikely to have the information needed to complete this survey. Therefore, if your company is owned by a holding company, private equity firm, or other party that does not take an active role in your company's management and operations we request that you complete this survey and report for your company and all other companies owned by your company.

REPORTING INSTRUCTIONS FOR U.S.-OWNED COMPANIES:

If your company was purchased on or after April 1, 2024 report only for the period January 1, 2024 to the date of purchase. If your company was purchased before April 1, 2024, then complete question 1-7 and return this form to the Census Bureau – you are not required to complete the rest of this survey.

Example 1: Company A was acquired by Company P (a U.S. company) on Feb. 1, 2024. Because Company A was acquired by a U.S. company prior to April 1, 2024, Company A is not required to complete this survey. Company A will answer Question 1-7 and return the form to the Census Bureau.

Example 2: Company B is acquired by Company P (a U.S. company) on July 1, 2024. Because Company B was acquired by a U.S. company on or after April 1, 2024, Company B must complete the survey, reporting data for the period January 1, 2024 through July 1, 2024.

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 Will the information in this survey be reported for the 2024 calendar year?

1-4 Was your company a majority-owned subsidiary of a foreign company in 2024?

Question 1-4 asks about the ownership of the company receiving the survey. Special reporting instructions apply to companies that were majority-owned by a foreign company. If your answer is "No", continue to Question 1-5. If your answer is "Yes", read the instructions below and enter the name of the parent company then proceed to Question 1-5.

REPORTING INSTRUCTIONS FOR FOREIGN-OWNED COMPANIES:

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 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.

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.

1-5 Did your company own more than 50 percent of any company operations or subsidiaries outside the 50 United States and D.C. during 2024?

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.

1-6 Did your company have discontinued operations in 2024?

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

If your answer is "Yes", include data for these operations in your survey responses, and continue to Question 1-7. If your answer is "No", continue to Question 1-7.

Why is this important? This information is needed in order to accurately measure the total activity of companies operating in the United States in 2024.

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.

Enter the following contact information for the survey coordinator: name, title, telephone number, and email address.

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.

1-8 What was the total number of your company's employees worldwide for the pay period that included March 12, 2024?

Question 1-8 asks the company to report its total number of employees (both R&D and non-R&D employees) for all locations, both foreign and domestic. In order to collect consistent data from all companies, the employment figure reported should be for the pay period that included March 12, 2024. If this is not possible, companies should report employment for the date closest to March 12, 2024.

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

1-9 How many of the employees reported in Question 1-8 were employees of your company's domestic operations and foreign operations?

Question 1-9 asks the company to report, of the employees reported in Question 1-8, the number of employees employed by domestic operations and the number of employees that were employed by operations outside of the United States.

Business codes

1-10 Please describe your company's primary business activity during 2024.

1-11 List all applicable business codes in which your company operated worldwide in 2024?

NOTE: These codes will be used to describe both business activities and R&D activities and may differ from industry codes used by other government surveys and reports. Typing in the description field will generate a list of possible matching business codes from which to choose. https://www.census.gov/programs-surveys/brds/information/brdshelp/business-codes.html

Question 1-11 asks the company receiving the survey to identify all of its worldwide businesses in 2024. 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 1-11. Larger companies, however, sometimes operate in more than one business. These companies should select 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 code. For example, a company may have a "healthcare" business that includes diagnostic devices and diagnostic substances. For this survey the company should report its healthcare business in two codes: 33451 (Electro-medical, electrotherapeutic, and irradiation apparatus manufacturing) and 32542 (In vitro diagnostic substances manufacturing). 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, company should note what action was taken in the space for "Remarks" at the end of the survey.

Why is this important?

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

1-12 What was the amount of your company's worldwide sales and revenues for the year 2024?

Your company's worldwide net sales and revenues 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 (except for financial services companies where this is operating income) as well as excise, sales, and other revenue-based taxes collected from customers and passed along to government taxing agencies.

1-13 How much of the amount reported in Question 1-12 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.

Include:

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

Licensing revenue, including software licensing, should be assigned to the country where the corresponding intellectual property is owned.

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.

1-14 How much of the 2024 sales and operating revenue amounts was for each business code listed or amended in Question 1-11:

(1) Worldwide sales and operating revenues reported in Question 1-12

(2) Sales and operating revenues from domestic operations reported in Question 1-13

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.

Section 2: R&D Paid for by Your Company

2-1 What was the worldwide R&D expense (both direct and indirect) for your company in 2024?

Question 2-1 requests worldwide R&D expense. 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. 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.

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.

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.

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. 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 ASC Topic 730, Research and Development:

a. Engineering follow-through in an early phase of commercial production.

b. Quality control during commercial production including routine testing of products.

c. Troubleshooting 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 and (2) facilities or equipment whose sole use is for a particular research and development project.

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 were paid for by a third 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 were paid for by others.

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

a. 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. These costs are requested in Section 3 of this survey.

b. R&D paid for by grants (government or private foundations)

- Examples include Small Business Innovation and Research (SBIR) grants, Department of Energy demonstration grants, and Gates Foundation research grants.
- These costs are requested in Section 3 of this survey.

c. R&D paid for by customers (customer-sponsored R&D)

- These costs are requested in Section 3 of this survey.

d. 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 provides technical support and/or services to customers.

e. 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.

f. Expenses for the acquisition of in-process R&D (IPR&D) or the impairment of intangible IPR&D assets.

- This category includes all expenses related to in-process R&D (IPR&D) including IPR&D expenses from the acquisition of another company with unfinished R&D projects, expenses related to the acquisition of IPR&D that was not part of a business combination, and the impairment of intangible IPR&D assets.

g. Phase IV clinical trials.

- These clinical trials are conducted after a drug is marketed to assess its safety and efficacy.

<u>Why is this important?</u>

Not all companies treat the 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.

2-3 If you answered "Yes" to any of the costs in Question 2-2, what was the amount of these costs that were 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 six 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.

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 were paid for by others.

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 2024.

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".

Information about R&D paid for by others such as customers or collaborators is collected in Section 3 of this survey

Why is this important?

The 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.

Indirect R&D charges

2-5 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 2-5 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. IR&D costs should be reported only in this section of the survey, not in Section 3.

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 in Question 1-11?

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.

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 in domestic locations, including R&D that is paid for by foreign subsidiaries, in line a (Domestic U.S.).

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

Scenario: 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 How much of the (1) domestic, (2) foreign, and (3) worldwide R&D paid for by your company in 2024 was for each of the following types of costs?

Question 2-8 asks the company to report its domestic, foreign, and worldwide R&D that it paid for in 2024 broken into the following 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. Leased employees or temporary staffing, including on-site consultants, working on R&D

- Include costs paid to Professional Employer Organizations (PEOs), staffing agencies, and on-site consultants for personnel contributing to R&D.

d. Expensed equipment (not capitalized)

- 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 property, plant, equipment, and intangible assets

- Include depreciation on tangible R&D assets such as buildings or equipment as well as the amortization of intangible assets such as patents used only for the company's R&D activities.
- Include depreciation on shared property, plant, and equipment that can be allocated to R&D.

h. Royalties and licensing fees (including payments made to others for the use of patents and other forms of intellectual property used in your company's R&D)

- Include payments made to others for patents and other intellectual property used in your company's R&D activities.

i. Collaborative R&D payments (include joint development agreements)

- 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.

- Payments made to contract research organizations or other parties performing R&D under contract for the company should be reported in line j, "Contract R&D".

j. Contract R&D (include payments to your company's foreign parent for R&D)

- Include payments made to contract research organizations or other parties performing R&D under contract for the company.

k. Other purchased services

- 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, payments to patients participating in clinical trials, and purchased computing time to run simulations for the company's R&D.

l. All other costs (including administrative and overhead costs **clearly associated with your company's R&D**)

- 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, information and telecommunications, utilities, and other administrative and overhead costs associated with R&D.

- Indirect costs that are allocated to R&D should be reported in the "All other costs" line only if no other category is applicable.
    - Example. A company maintains an on-site fitness center for all employees. A portion of the costs for this fitness center is allocated to R&D expense. These allocated costs should be reported in line a (salaries, wages, and fringe benefits).

    - Example. A company's R&D department shares a building with the customer support department. A portion of the depreciation on this building is allocated to R&D expense. These allocated costs should be reported in line g (depreciation and amortization).

- Example. A company leases a building that is occupied by its R&D department and the IT department. A portion of the lease on this building is allocated to R&D expense. These allocated costs should be reported in line f (leased facilities and equipment).

The domestic total should equal Question 2-7, line a, foreign total should equal Question 2-7, line b and worldwide should equal Question 2-4.

2-9 Add 2-8, lines i and j for each column, and enter the result here. This is R&D performed by others.

Question 2-9 asks the company to add the amounts reported in Question 2-8, lines i and j for each column. This survey defines this amount as "R&D performed by others".

Why is this important?

The costs reported in lines i and j of Question 2-8 represent payments to third 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.

2-10 Subtract 2-9 from 2-8, line m, for each column and enter the result here. This is R&D performed by your company.

Question 2-10 asks the company to subtract the amounts reported in Question 2-9 from those reported in Question 2-8, line m for each column. This survey defines this amount as "R&D performed by your company".

Why is this important?

The costs reported in lines i and j of Question 2-8 represent payments to third 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.

2-11 Of the amount reported in Question 2-10, column 2, how much R&D was performed in the following locations?

Question 2-11 asks the company to report how much of the foreign R&D performed by the company in 2024 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 Enterprise Research and Development Survey

Country/Territory Name	Region
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.

2-12 How much of the amount reported in Question 2-10, column 1, was performed in each state (including D.C.) in 2024?

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.

2-13 At what domestic location did your company perform the largest dollar amount of R&D in 2024?

Question 2-13 asks the company to identify the location where the largest dollar value of the domestic R&D it performed in 2024 took place.

2-14 How much of the amount reported in Question 2-10, column 1, was from the location identified in Question 2-13?

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.

2-15 At what domestic location did your company perform the second largest dollar amount of R&D in 2024?

Question 2-15 asks the company to identify the location where the second largest dollar value of the domestic R&D it performed in 2024 took place.

2-16 How much of the amount reported in Question 2-10, column 1, was from the location identified in Question 2-15?

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.

2-17 Of the domestic R&D performed by your company reported in Question 2-10, column 1, 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.

R&D transactions between legal entities under common ownership

Question 2-18 and Question 2-19 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 2024 (that is, your company provided a "Yes" response to Question 1-5).

2-18 How much of the domestic R&D performed by your company reported in Question 2-10, column 1, was paid for by your company's foreign subsidiaries?

Example: Company Y owns a subsidiary in France. In order to complete the development of a product in 2024, 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.

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.

2-19 How much of the foreign R&D performed by your company reported in Question 2-10, column 2, was paid for by your company's domestic operations?

Example: Company Z owns a subsidiary in France. In order to complete the development of a product in 2024, 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.

Projected R&D for 2025

2-20 What are your company's projected 2025 costs for (1) domestic, (2) foreign, and (3) worldwide R&D paid for by your company?

Question 2-23 asks the company to project its domestic, foreign, and worldwide R&D costs for 2025.

NOTE: These amounts are the 2025 projections for the amounts reported in Question 2-8, line m.

2-21 How much of the amount reported Question 2-20, column 1, is for projected contract R&D services and projected payments to business partners for collaborative R&D?

Question 2-24 asks the company to project how much of the domestic R&D paid for by the company in 2024 will be for purchased R&D services and payments to business partners for collaborative R&D.

Note: This amount is the 2025 projection for the amount reported in Question 2-9, column 1.

2-22 Who was primarily responsible for completing this section?

Section 2 Worksheet

Complete if amount reported in Question 2-4 is less than $1 Million

1. Of the total R&D paid for by your company reported in Question 2-4, what costs were incurred in the following locations?

This question requires the company to report where R&D costs were incurred, even in the case of

Include all other costs supporting the R&D the company paid for.

Examples of costs to report in this category include: materials and supplies, expensed equipment, depreciation, rent, travel and training, journal subscriptions, royalties or licenses paid for patents or software used in the company's R&D, office, information and telecommunications, utilities, and other administrative and overhead costs associated with R&D.

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 in domestic locations, including R&D that is paid for by foreign subsidiaries, in line a (Domestic U.S.).

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

Scenario: 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. How much of the amount reported in Question 1, line a, was for each of the following types of costs?

This question asks the company to report its domestic, foreign, and worldwide R&D that it paid for in 2024 broken into the following 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.
- Include payroll taxes such as Social Security and Medicare.

b. Depreciation and amortization on property, plant, equipment and intangible assets.

- Include depreciation on tangible R&D assets such as buildings or equipment as well as the amortization of intangible assets such as patents used only for the company's R&D activities.

c. Collaborative R&D payments (include joint development agreement)

- 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.
- Payments made to contract research organizations or other parties performing R&D under contract for the company should be reported in line d, "Contract R&D".

d. Contract R&D (include payments to your company's foreign parent for R&D)

- Include payments made to contract research organizations or other parties performing R&D under contract for the company.

e. All other costs (including administrative and overhead costs clearly associated with your company's R&D)

- Include all other costs supporting the R&D the company paid for.

3. Add Question 2, lines a, b and e, and enter the result here. This is the domestic R&D paid for and performed by your company in 2024.

Why is this important?

The costs reported in lines c and d of Question 2 represent payments to third 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.

4. Of the domestic R&D paid for and performed by your company reported in Question 3, how much 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 acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or "applied", where the goal is to solve a specific problem or meet a specific commercial objective.
- Development is defined as the systematic use of research and practical experience to produce new or improved goods, services, or processes. In simple terms, the intended output of research is ideas, and the intended output of development is products.

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.

Section 3: Costs paid for by others

3-1 What were your company's worldwide costs (both direct and indirect) in 2024 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. 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.

Include in this question R&D costs reported as costs of goods or services sold in your company's financial statements.

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). Also exclude costs that were reported in Question 2-4, as they 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 FFRDC R&D costs should be excluded for reporting to this survey. For a complete list of FFRDCs, see https://www.nsf.gov/statistics/ffrdclist/

The categories in this question, listed below, define the survey term, "R&D paid for by others":

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

- These agreements are very common in the biotechnology and pharmaceutical industries, but less so in other industries.

c. R&D paid for by grants (government or private foundations)

- Examples include Small Business Innovation and Research (SBIR) grants, Department of Energy demonstration grants, and Gates Foundation research grants.

d. Defense R&D goods or services provided as a prime or as a sub, to the government and/or government contractors

- Include defense R&D performed as a prime contractor and/or as a subcontractor.
- 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 costs for research, development, test, and evaluation activities that are funded through DOD's 6-1 through 6-6 budget appropriations.
- Exclude costs for activities that funded through DOD's 6-7 budget appropriations, Operational Systems Development.
- Exclude costs for non-experimental work on projects that have achieved technical feasibility, such as low-rate initial production.

e. 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 completed in order for a product to be approved for use in the general population.

- Include pass-through/out-of-pocket costs paid to investigators and patients participating in clinical trials.
- Exclude costs for Phase IV clinical trials because these trials take place after a product has been approved for sale.
- Offices of physicians, dentists, and other health practitioners with employees acting as investigators for clinical trials generally should report 0 (zero) to this item. These companies should only report compensation for sponsored studies if the investigators' role in the study extends beyond monitoring his/her own patients to the development and management of overall study protocols.

f. Medical R&D services, other than clinical trials, 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.

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. All other R&D services provided to the Federal Government or to others not owned by your company.

i. All other R&D services provided to the Federal Government or to others not owned by your company.

R&D paid for by others

3-2 Of the amount reported in Question 3-1, line j, 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".

3-3 How much of the (1) domestic, (2) foreign, and (3) total worldwide R&D paid for by others in 2024 was for each of the following types of costs?

Question 3-3 asks the company to report its domestic, foreign, and worldwide R&D paid for by others in 2024 in the following 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. Leased employees and temporary staffing, including on-site consultants, working on R&D

- Include costs paid to Professional Employer Organizations (PEOs), staffing agencies, and on-site consultants for personnel contributing to R&D.

d. Expensed equipment (not capitalized)

- 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 property, plant, equipment, and intangible assets

- Include depreciation on tangible R&D assets such as buildings or equipment as well as the amortization of intangible assets such as patents used only for the company's R&D activities.
- Include depreciation on shared property, plant, and equipment that can be allocated to R&D.

h. Royalties and licensing fees (including payments made to others for the use of patents and other forms of intellectual property used in your company's R&D)

- Include payments made to others for patents and other intellectual property used in your company's R&D activities.

i. Collaborative R&D payments (include joint development agreements)

- 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.
- Payments made to contract research organizations or other parties performing R&D under contract for the company should be reported in line j, "Contract R&D".

j. Contract R&D (include payments to your company's foreign parent for R&D)

- Include payments made to contract research organizations or other parties performing R&D under contract for the company.

k. Other purchased services

- 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, payments to patients participating in clinical trials, and purchased computing time to run simulations for the company's R&D.

- If your company is a contract research organization managing clinical trials, include compensation of medical professionals, investigators, and human subjects participating in clinical trials or reimbursement of out-of-pocket costs in this category.

l. All other costs (including administrative and overhead costs clearly associated with your company's R&D)

- 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, information and telecommunications, utilities, and other administrative and overhead costs associated with R&D.
- Indirect costs that are allocated to R&D should be reported in the "All other costs" line only if no other category is applicable.
    - Example. A company maintains an on-site fitness center for all employees. A portion of the costs for this fitness center is allocated to R&D expense. These allocated costs should be reported in line a (salaries, wages, and fringe benefits).

    - Example. A company's R&D department shares a building with the customer support department. A portion of the depreciation on this building is allocated to R&D expense. These allocated costs should be reported in line g (depreciation and amortization).

    - Example. A company leases a building that is occupied by its R&D department and the IT department. A portion of the lease on this building is allocated to R&D expense. These allocated costs should be reported in line f (leased facilities and equipment).

3-4 Add 3-3, line i and j for each column, and enter the result here. This is <u>R&D performed by others</u> (e.g., subcontracted/passed-through R&D costs).

Question 3-4 asks the company to add the amounts reported in Question 3-3, lines i and j for each column. This survey defines this amount as "R&D performed by others".

<u>Why is this important?</u>

The costs reported in lines i and j of Question 3-3 represent payments to third 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.

3-5 Subtract 3-4 from 3-3, line m, for each column and enter the result here. This is R&D performed by your company that was paid for by others.

Question 3-5 asks the company to subtract the amounts reported in Question 3-4 from those reported in Question 3-3, line m 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 line l of Question 3-3 represent payments by third parties for R&D. Because the reporting company is directly involved in the conduct of this R&D, it may be able to provide accurate information on these costs.

3-6 Of the amount reported in Question 3-5, column 2, how much R&D was performed in the following locations?

Question 3-6 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 Enterprise Research and Development Survey

Country/Territory Name	Region
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.

3-7 How much of the domestic R&D performed by your company that was paid for by others reported in Question 3-5, column 1, was for each business code listed or amended in Question 1-11?

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.

3-8 How much of the amount reported in Question 3-5, column 1, was paid for by each of the following?

Question 3-8 asks the company to report how much of the domestic R&D performed by your company in 2024 that was paid for by others was paid for by eight specific types of organizations:

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.

a. Other companies located inside the United States (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. Universities, colleges, and academic researchers (including principal investigators) located inside the United States

h. Universities and colleges located outside the United States

i. All other organizations inside the United States

j. All other organizations outside the United States

3-9 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.

Question 3-9 asks the company to enter the sum of Question 3-8, lines a, b, and c. This survey defines this amount as "R&D that was paid for by other companies".

3-10 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.

3-11 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 3-10

3) Total domestic R&D performed by your company that was paid for by others reported in Question 3-5, column 1

Question 3-11 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 2024. 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.

3-12 At what domestic location did your company perform the largest dollar amount of R&D that was paid for by others in 2024?

Question 3-12 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 2024 took place.

3-13 How much of the amount reported in Question 3-5, column 1, was from the location identified in Question 3-12?

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.

3-14 At what domestic location did your company perform the second largest dollar amount of R&D that was paid for by others in 2024?

Question 3-14 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 2024 took place.

3-15 How much of the amount reported in Question 3-5, column 1, was from the location identified in Question 3-14?

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.

R&D performed by others

3-16 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?

Projected R&D paid for by others in 2025

3-17 What are your company's projected 2025 costs for R&D that will be paid for by others?

Question 3-17 asks the company to project its 2025 costs for R&D that will be paid for by others.

Note: This amount is the 2025 projection for what is reported in Question 3-1, line j.

3-18 How much of the projected costs in 2025 for R&D that will be paid for by others reported in Question 3-17 will be performed by your company in the United States?

Question 3-18 asks the company to project its 2025 costs for R&D it will perform in the domestic U.S. that will be paid for by others.

Note: This amount is the 2025 projection for what is reported in Question 3-5, column 1.

3-19 How much of the projected costs in 2025 for domestic R&D performed by your company reported in Question 3-18 will be paid for by the U.S. federal government?

Question 3-19 asks the company to project its 2025 costs for R&D it will perform in the domestic U.S. that will be paid for by the U.S. federal government.

Note: This amount is the 2025 projection for what is reported in Question 3-8, line d.

3-20 Who was primarily responsible for completing this section?

Section 3 Worksheet

Complete if amount reported in Question 3-1, line j is less than $1 Million

1. Of the total R&D paid for by others reported in Question 3-1, line j, what costs were incurred 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 in domestic locations, including R&D that is paid for by foreign subsidiaries, in line a (Domestic U.S.).

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

Scenario: 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.”

2. How much of the amount reported in Question 1, line a, was for each of the following types of costs?

This question asks the company to report its domestic, foreign, and worldwide R&D that it paid for in 2024 broken into the following 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.
- Include payroll taxes such as Social Security and Medicare.

b. Depreciation and amortization on property, plant, equipment, and intangible assets.

- Include depreciation on tangible R&D assets such as buildings or equipment as well as the amortization of intangible assets such as patents used only for the company's R&D activities.

c. Collaborative R&D payments (include joint development agreement)

- 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.
- Payments made to contract research organizations or other parties performing R&D under contract for the company should reported in line d, "Contract R&D".

d. Contract R&D (include payments to your company's foreign parent for R&D)

- Include payments made to contract research organizations or other parties performing R&D under contract for the company.

e. All other costs (including administrative and overhead costs **clearly associated with your company's R&D**)

- Include all other costs supporting the R&D the company paid for.

3. Add Question 2, lines a, b and e, and enter the result here. This is the <u>domestic R&D performed by your company that was paid for by others in 2024.</u>

<u>Why is this important?</u>

The costs reported in lines c and d of Question 2 represent payments to third 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.

4. How much of the amount reported in Question 3, was paid for by each of the following?

Question 3 asks the company to report how much of the domestic R&D performed by your company in 2024 that was paid for by others was paid for by eight specific types of organizations:

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.

a. Other companies located inside the United States (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. Universities, colleges, and academic researchers (including principal investigators) located inside the United States

h. Universities and colleges located outside the United States

i. All other organizations inside the United States

j. All other organizations outside the United States

5. Of the domestic R&D performed by your company that was paid for by others reported in Question 3, how much 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 acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or "applied", where the goal is to solve a specific problem or meet a specific commercial objective.

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

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.

Section 4: Assets

4-1 What was the net worldwide value of the following assets owned or leased by your company at the end of 2024, according to your balance sheet?

Question 4-1 asks for the balance sheet value at the end of 2024 for three categories of long-term assets owned or leased by your company: property, plant, and equipment; goodwill; and identifiable intangible assets.

Exclude:

- Short term assets such as cash and cash equivalents, marketable securities, and inventory.
- Operating leases capitalized under Accounting Standards Codification (ASC) 842.

4-2 What were your company's worldwide expenditures for the following capitalized assets in 2024?

Question 4-2 asks for your company's expenditures in 2024 to purchase, lease, upgrade, or improve two categories of long-term capitalized assets. The amount includes your company's capital expenditures as well as the value of right-of-use (ROU) assets associated with leases recorded on your company's balance sheet.

4-3 How much of the expenditures for capitalized assets in Question 4-2 were for assets that were deployed in the following locations?

Question 4-3 asks for detail on your company's capital expenditures and recorded right-of-use assets associated with leases in 2024 based on the geographic location where the assets were placed in service or deployed: domestic (50 United States and the District of Columbia) and foreign (all other locations).

4-4 Of the amounts reported in Question 4-3, Column 1 (Domestic), how much was for R&D operations?

Question 4-4 asks for the amount of your company's domestic capital expenditures and recorded right-of-use assets associated with leases in 2024 that were for research and development operations. This includes assets that were acquired specifically for R&D activities (such as laboratory equipment) as well an allocation of expenditures on assets on a reasonable basis that benefit both R&D operations and other company operations (such as a new building shared between R&D and manufacturing operations). Companies should note their allocation method in the space for "Remarks" at the end of the survey.

4-5 How much of the amount reported in Question 4-4, line c, was for the following?

Question 4-5 asks the company to report how much of the domestic capital expenditures for R&D operations may be classified in six types of capital expenditures:

a. Land acquisition

- Include the costs of purchased or improved buildings and other facilities such as signal towers or windmills that are fixed to the land.

b. Buildings and land improvement

c. Machinery and equipment

d. Capitalized software

e. Other intellectual property

This category includes the costs for purchased patents, long-term licenses, or other intangible assets that are used in R&D and which have a useful life of more than one year. Other intangibles that can be reported in a unit's internal financial accounts, such as marketing assets or trademarks, should not be included

f. All other capital expenditures for R&D operations

The total domestic capital expenditures for R&D should equal what was reported in Question 4-4, line c

4-6 Who was primarily responsible for completing this section?

Section 5: Management and Strategy of R&D

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

Question 5-1 asks what percent of the R&D the company paid for in 2024 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.

Example: Company A manufactures laptop computers. In 2024, 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 2024, Company A reports this R&D in this question.

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

5-2 Copy the amount from Question 2-10, column 1. This is the <u>domestic</u> <u>R&D paid for and performed by your company</u>.

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

- <u>Research</u> 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 acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or "applied", where the goal is to solve a specific problem or meet a specific commercial objective. It is the planned, systematic pursuit of new knowledge or understanding.

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

5-4 If you reported any research in Question 5-3, 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 meeting a specific commercial objective. Basic research has the goal of acquiring new knowledge or 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.

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 **Question 5-5 to 5-8.**

5-5 What percentage of the amount reported in Question 5-2 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 Question 5-5 to 5-8 could sum to more than 100%.

5-6 What percentage of the amount reported in Question 5-2 was for biotechnology?

Biotechnology is 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.

The following list provides examples of biotechnology techniques and applications. 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, large-scale DNA synthesis, genome- and gene-editing, gene drive.
- **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, marker assisted breeding technologies, metabolic engineering.
- **Process biotechnology techniques**: Fermentation using bioreactors, biorefining, bioprocessing, bioleaching, biopulping, biobleaching, biodesulphurisation, bioremediation, biosensing, biofiltration and phytoremediation, molecular aquaculture.
- **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 5-5 to 5-8 could sum to more than 100%.

5-7 What percentage of the amount reported in Question 5-2 was for nanotechnology?

Nanotechnology is defined as the understanding of processes and phenomena and 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 100 nanometers) in one or more dimensions, where the onset of size-dependent phenomena usually enables novel applications. These applications utilize the properties of nanoscale materials that differ from the properties of individual atoms, molecules, and bulk matter for the production of knowledge, goods and services, like improved materials, devices, and systems that exploit these new properties.

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.

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

- **Nanomaterial**: material with any external dimension in the nanoscale or having internal structure or surface structure in the nanoscale
- **Nanoelectronics**: field of science and technology concerned with the development and production of functional electronic devices with nanoscale components.
- **Nanophotonics**: branch of photonics concerned with interaction of photons with nanomaterials aiming to design optical or optoelectronic components.
- **Nanomedicine**: medical application of nanotechnology (e.g., medical applications of nanomaterials and biological devices, to nanoelectronic biosensors, and even possible future applications of molecular nanotechnology such as biological machines).
- **Nanomagnetics**: the study of the magnetic response of nanomaterials to an applied magnetic field, and their applications.
- **Nanomechanics**: a branch of nanoscience studying fundamental mechanical (elastic, thermal and kinetic) properties of physical systems at the nanometer scale.
- **Nanofiltration**: a membrane filtration process used for the softening of water and the removal of organic matter; includes nano-membranes.
- **Nanotools**: multi-component tools and devices used for manipulation, nanolithography and nanofabrication.
- **Nanoinstruments or –devices**: multi-component instruments or devices used for observation, analysis or control of matter at the nanometer scale.
- **Nanomanufacturing**: intentional synthesis, generation or control of nanomaterials, or fabrication steps in the nanoscale, for commercial purposes.
- **Nanobiotechnology**: application of nanoscience or nanotechnology to biology or biotechnology. This includes the application of nanotechnology to human health and veterinary science.

- **Bionanotechnology**: application of biology to nanotechnology, i.e., the use of biological molecules in nanomaterials, nanoscale devices or nanoscale systems.
- **Catalysis**: the study and application of catalytic process that are based on nanotechnology-enabled components.
- **Software for modelling and simulation**: the development and application of software for the modelling and simulation of nanoscale phenomena (i.e., phenomena occurring at a length scale between 1 nm and 100 nm).

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 5-5 to 5-8 could sum to more than 100%.

5-8 What percentage of the amount reported in Question 5-2 was for artificial intelligence (AI)?

Artificial Intelligence (AI) – 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.

Systems with artificial intelligence perform functions including, but not limited to, speech recognition, machine vision, or machine learning:

- Speech recognition transforms human speech into a format useful for computer applications (for example, a digital assistant)
- Machine vision uses sensors and software that allow images to be used as an input for computer applications (for example, systems that sort or inspect objects or support navigation in mobile equipment)
- Machine learning uses statistical software and data to “learn” and make better predictions without reprogramming (for example, recommender systems for websites, or sales and demand forecasting)

Artificial Intelligence technologies also include virtual agents, deep learning platforms, decision management systems, biometrics, text analytics, and natural language generation and processing.

Include the total cost of an R&D project for AI in the calculation for this question, even if the project has other applications. This means that the percentages reported in Questions 5-5 to 5-8 could sum to more than 100%.

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

5-9 Copy the amount from Question 2-10, column 2. This is the foreign R&D paid for and performed by your company.

5-10 How much of the foreign R&D paid for and performed by your company reported in Question 5-9 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 acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or "applied", where the goal is to solve a specific problem or meet a specific commercial objective.

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

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

5-11 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.

5-12 How much of the amount reported in Question 5-11 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 acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or "applied", where the goal is to solve a specific problem or meet a specific commercial objective.

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

5-13 If you reported any research in Question 5-12, 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 meeting a specific commercial objective. Basic research has the goal of acquiring new knowledge or understanding of a given topic without a specific commercial application in mind.

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 5-14 to 5-17

5-14 What percentage of the amount reported in Question 5-11 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 5-14 to 5-17 could sum to more than 100%.

5-15 What percentage of the amount reported in Question 5-11 was for biotechnology?

Biotechnology is 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.

The following list provides examples of biotechnology techniques and applications. 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, large-scale DNA synthesis, genome- and gene-editing, gene drive.
- **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, marker assisted breeding technologies, metabolic engineering.
- **Process biotechnology techniques**: Fermentation using bioreactors, biorefining, bioprocessing, bioleaching, biopulping, biobleaching, biodesulphurisation, bioremediation, biosensing, biofiltration and phytoremediation, molecular aquaculture.
- **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 5-14 to 5-17 could sum to more than 100%.

5-16 What percentage of the amount reported in Question 5-11 was for nanotechnology?

Nanotechnology is defined as the understanding of processes and phenomena and 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 100 nanometers) in one or more dimensions, where the onset of size-dependent phenomena usually enables novel applications. These applications utilize the properties of nanoscale materials that differ from the properties of individual atoms, molecules, and bulk matter for the production of knowledge, goods and services, like improved materials, devices, and systems that exploit these new properties.

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.

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

- **Nanomaterial**: material with any external dimension in the nanoscale or having internal structure or surface structure in the nanoscale
- **Nanoelectronics**: field of science and technology concerned with the development and production of functional electronic devices with nanoscale components.
- **Nanophotonics**: branch of photonics concerned with interaction of photons with nanomaterials aiming to design optical or optoelectronic components.
- **Nanomedicine**: medical application of nanotechnology (e.g., medical applications of nanomaterials and biological devices, to nanoelectronic biosensors, and even possible future applications of molecular nanotechnology such as biological machines).
- **Nanomagnetics**: the study of the magnetic response of nanomaterials to an applied magnetic field, and their applications.
- **Nanomechanics**: a branch of nanoscience studying fundamental mechanical (elastic, thermal and kinetic) properties of physical systems at the nanometer scale.
- **Nanofiltration**: a membrane filtration process used for the softening of water and the removal of organic matter; includes nano-membranes.
- **Nanotools**: multi-component tools and devices used for manipulation, nanolithography and nanofabrication.
- **Nanoinstruments or –devices**: multi-component instruments or devices used for observation, analysis or control of matter at the nanometer scale.
- **Nanomanufacturing**: intentional synthesis, generation or control of nanomaterials, or fabrication steps in the nanoscale, for commercial purposes.
- **Nanobiotechnology**: application of nanoscience or nanotechnology to biology or biotechnology. This includes the application of nanotechnology to human health and veterinary science.
- **Bionanotechnology**: application of biology to nanotechnology, i.e., the use of biological molecules in nanomaterials, nanoscale devices or nanoscale systems.
- **Catalysis**: the study and application of catalytic process that are based on nanotechnology-enabled components.

- **Software for modelling and simulation**: the development and application of software for the modelling and simulation of nanoscale phenomena (i.e., phenomena occurring at a length scale between 1 nm and 100 nm).

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 5-14 to 5-17 could sum to more than 100%.

5-17 What percentage of the amount reported in Question 5-11 was for artificial intelligence (AI)?

Artificial Intelligence (AI) – 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.

Systems with artificial intelligence perform functions including, but not limited to, speech recognition, machine vision, or machine learning:

- Speech recognition transforms human speech into a format useful for computer applications (for example, a digital assistant)
- Machine vision uses sensors and software that allow images to be used as an input for computer applications (for example, systems that sort or inspect objects or support navigation in mobile equipment)
- Machine learning uses statistical software and data to "learn" and make better predictions without reprogramming (for example, recommender systems for websites, or sales and demand forecasting)

Artificial Intelligence technologies also include virtual agents, deep learning platforms, decision management systems, biometrics, text analytics, and natural language generation and processing.

Include the total cost of an R&D project for AI in the calculation for this question, even if the project has other applications. This means that the percentages reported in Questions 5-14 to 5-17 could sum to more than 100%.

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

5-18 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.

5-19 How much of the amount reported in Question 5-18 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 acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or "applied", where the goal is to solve a specific problem or meet a specific commercial objective.

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

5-20 If you reported any research in Question 5-19, line a, how much 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 meeting a specific commercial objective. Basic research has the goal of acquiring new knowledge or 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.

5-21 What percentage of the amount reported in Question 5-18 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.

Characteristics of foreign R&D performed by your company that was paid for by others

5-22 Copy the amount from Question 3-5, column 2. This is the foreign R&D performed by your company and paid for by others.

5-23 How much of the amount reported in Question 5-22 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 acquire new knowledge or understanding of a given topic without a specific commercial application in mind, or "applied", there the goal is to solve a specific problem or meet 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.

5-24 Who was primarily responsible for completing this section?

Section 6: Human Resources

6-1 How many employees reported in Question 1-9 were R&D employees and how many were all other employees?

Question 6-1 asks the company to report how many of its employees were R&D 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.

Counts of (1) Domestic operations, (2) Foreign operations, and (3) Total employees should be recorded for:

a. R&D employees

b. All other employees

c. Total employees

NOTE: The total employees line should equal the total for Question 1-9.

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.

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

When reporting counts of employees by location (country or state), assign workers to the business establishment to which they report. For employees who telework or travel frequently, this is typically the establishment where their manager is located or where their payroll is assigned.

Example: USA Tech LLC is a consulting company with a single physical office in Boston, MA. The company employs people who work remotely from Texas and California. For Question 6-2 this company should report all its employees in Massachusetts.

6-3 How many of the employees reported in Question 6-1, column 2, were employed in each location (including Puerto Rico)?

When reporting counts of employees by location (country or state), assign workers to the business establishment to which they report. For employees who telework or travel frequently, this is typically the establishment where their manager is located or where their payroll is assigned.

Countries and territories by region

As defined by the Business Enterprise Research and Development Survey

Country/Territory Name	Region
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.

R&D employees

6-4 How many of the R&D employees reported in Question 6-1, line a, were female employees and male employees?

Question 6-4 asks the company to report its total R&D employees based on their sex and location

6-5 How many of the R&D employees reported in Question 6-1, line a, 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. 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. Include R&D managers in the "Researchers" category.

R&D technicians and equivalent staff 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 should 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 should be reported as R&D technicians or R&D support staff.

6-6 How many of the researchers reported in Question 6-5, line a, had the following level of education?

Question 6-6 asks the company to specify how many of the employed R&D scientists, engineers, and managers have a PhD.

Domestic full-time equivalents (FTEs)

6-7 Of the domestic R&D employees reported in Question 6-1, line 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 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 activities.

6-8 Of the domestic researchers reported in Question 6-5, line 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 activities.

6-9 How many of the domestic researchers reported in Question 6-5, 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?

Question 6-9 asks how many domestic researchers are employed in the United States under a temporary visa.

6-10 In addition to the R&D employees reported in Question 6-1, line a, how many leased employees and temporary staff, including on-site consultants, 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. 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. Include R&D managers in the "Researchers" category.

R&D technicians and equivalent staff 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 should 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 should be reported as R&D technicians or R&D support staff.

6-11 Who was primarily responsible for completing this section?

Section 7: Intellectual Property and Technology Transfer

Total patents and utility patents

7-1 How many total patents did your company apply for in 2024 from the U.S. Patent and Trademark Office (USPTO)?

The intent of this question is to gather information about the output of companies' research and development and other innovative 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.

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.

7-2 Of the patent applications reported in Question 7-1, what was the number of nonprovisional utility patent applications?

Question 7-2 asks how many patent applications filed by your company were nonprovisional utility patent applications—also known as patents for invention. Exclude applications for design patents and plant patents.

Exclude provisional patent applications. Provisional patent applications are used to establish an early filing date, but they cannot result in an issued patent unless the applicant files a complete non-provisional patent application within one year of filing the provisional patent application.

7-3 What percentage of the nonprovisional utility patent applications reported in Question 7-2 has your company applied for or plans to apply for in foreign jurisdictions?

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

7-4 What percentage of the nonprovisional utility patent applications reported in Question 7-2 was for inventions that originated within your company's organized R&D activities?

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

7-5 What percentage of your company's inventions considered for patenting in 2024 resulted in nonprovisional utility 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 nonprovisional patent applications are as a measure of innovation when comparing industries.

Exclude provisional patent applications.

7-6 How many utility patents were issued to your company in 2024 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.

Utility patent sales and licensing to others

7-7 How much revenue did your company receive in 2024 from the sale of utility patents?

Question 7-7 asks the company to report the revenue it earned in 2024 from the sale of its utility patents.

7-8 How much revenue did your company receive in 2024 from utility patent licensing?

Question 7-8 asks the company to report how much revenue it received in 2024 from licensing its utility patents to other parties. Companies should only report revenue from the licensing of utility patents it (the reporting company) owns. Exclude revenue from sub-licensing.

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

Companies should include royalty payments received for licensing its patents.

7-9 Was any of the revenue reported in Questions 7-7 or 7-8 received from companies or organizations located outside the United States?

Question 7-9 asks whether the company licensed or sold utility patents to any foreign companies or organizations.

Utility patent purchases and licensing <u>from others</u>

7-10 How much did your company pay others in 2024 to purchase utility patents?

Question 7-10 asks the company to report how much it paid to others to purchase utility patents in 2024.

7-11 How much did your company pay others in 2024 to license utility patents?

Question 7-11 asks the company to report how much it paid to others to license utility patents in 2024.

Include royalty payments as well as on-time payments made to licensing its patents.

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?

Question 7-12 asks whether the company licensed or purchased utility patents from any foreign companies or organizations.

Intellectual property transfer activities

7-13 Did your company perform the following activities in 2024?

Question 7-13 asks the company to indicate whether or not it performed any of a specific list of technology transfer activities in 2024.

a. Transferred intellectual property (IP) to others not owned by your company through participation in technical assistance or "know how" agreements.

b. Received IP from others not owned by your company through participation in technical assistance or "know how" agreements.

c. Transferred IP to a spin-off or spin-out of your company.

d. Received IP from a parent company as part of a spin-off or spin-out.

e. Acquired more than 50% ownership in another company for the primary purpose of acquiring their IP.

f. Acquired any financial interest in another company in order to gain access to their IP.

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.

h. Allowed free use of patents or other IP owned by your company (for example, open source software).

i. Made use of open source patents or other freely available IP not owned by your company.

Intellectual property protection

7-14 During 2024, how important to your company were the following types of intellectual property protection?

Question 7-14 asks the company to indicate the level of importance (Very important, Somewhat important, Not important) were each type of intellectual property provision from a specific list.

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)

7-15 Who was primarily responsible for completing this section?

Section 8: Tax Topics

8-1 **Did your company file for the tax credit for increasing research activities (IRS Form 6765) in 2024?**

Note: Qualifying research expenditures as defined for this tax credit are not directly comparable to R&D expenditures collected elsewhere in this survey.

8-2 **Did your company file for any U.S. state tax credit for research activities in 2024?**

8-3 **Was your company charged for R&D performed by foreign subsidiaries in 2024 as part of any cost sharing arrangement?**

8-4 **Did your company charge foreign subsidiaries for R&D your company performed in 2024 as part of any cost sharing arrangement?**

8-5 **Who was primarily responsible for completing this section?**