2022 Annual Business Survey (ABS) Instructions

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Introduction

The 2022 Annual Business Survey (ABS) report form asks about activities occurring mostly in 2021. Since some questions do not reference the year 2021, the data collection year (2022) is used in its survey name rather than a single reference year, e.g., 2021.

Please respond for the business or nonprofit organization named in the address label or survey. Report for its domestic U.S. operations only, including all majority-owned U.S. subsidiaries, unless instructed otherwise. Carefully prepared estimates are acceptable if book figures are not readily available.

You can save and log out of your account at any time. Your responses will be saved, and you will be able to log back into the survey and complete more responses later. In addition, the survey will navigate you to the next applicable question. You may not be asked to complete all the questions included in these instructions.

Steps to report online:

1. Sign in or register at https://portal.census.gov
2. Add your authentication code.
3. Report by clicking on “REPORT NOW.” You can return to your account over multiple sessions to complete the survey.
4. For assistance completing this survey, please log in to your Census Bureau account at https://portal.census.gov and send us a secure message or call the customer help line at 1-888-824-9954, Monday through Friday, 8:30 a.m. to 6:00 p.m. Eastern time.
5. For additional information, please visit “How Do I Get Started?” at https://www.census.gov/content/census/en/topics/business-economy/information/response/get-started.html.
6. For information on logging into the respondent portal, please visit “How-To Videos” at https://www.census.gov/content/census/en/topics/business-economy/information/response/how-to-video.html
7. Please visit “Information for Respondents” at https://www.census.gov/abshelp and click on the link in the “Questionnaires” section to access the questions you will be asked on the survey prior to responding. The survey is provided for informational purposes only and should not be mailed to the Census Bureau.

The ABS collects information from different types of business and nonbusiness organizations, including nonprofits. Not all sections of the report form may apply to your business or organization. The online reporting tool will guide you to the sections with questions for which responses are required. Depending on the size of your business or nonbusiness organization, you may need to collaborate with colleagues in different departments to complete different sections.
of the survey. For more information, visit the “How Do I Share Survey Access?” section within the respondent portal.

Instructions are provided, identifiable by their screen titles, within the following sections of the survey:

• SECTION A: COMPANY INFORMATION
• SECTION B: OWNER CHARACTERISTICS
• SECTION C: RESEARCH ACTIVITIES AT NONPROFIT ORGANIZATIONS
• SECTION D: RESEARCH AND DEVELOPMENT FOR MICROBUSINESSES
• SECTION E: GOODS, SERVICES, AND BUSINESS PROCESSES AND TECHNOLOGY
• SECTION F: DESIGN AND INTELLECTUAL PROPERTY
• SECTION G: DOMESTIC AND FOREIGN TRANSACTIONS
• SECTION H: CORONAVIRUS PANDEMIC IMPACT ON RESEARCH AND DEVELOPMENT AND BUSINESS ACTIVITIES
• SECTION I: CONTACT INFORMATION

Each question is listed by Section letter, Owner designation (within SECTION B only), Question number, and Item letter (per row, if applicable).

For example:

• A.2 denotes the second question in SECTION A.
• B.2.1 denotes the first question in SECTION B, which asks for the characteristics of Owner #2.
• D.9 a. denotes item a. of the ninth question in SECTION D.
SECTION A: COMPANY INFORMATION

The following section collects information on the operations and structure of for-profit businesses. All businesses that receive this survey should answer questions in the upcoming section. The reporting unit for the survey is the U.S.-located company, including all majority-owned subsidiaries and divisions regardless of location. **Report only for domestic operations.**

**Reporting for “domestic operations”** - In this survey, “domestic operations” refers to this business’s or nonprofit organization’s operations located in the fifty United States and the District of Columbia. When reporting for domestic operations, include transactions with foreign subsidiaries. Include all your majority-owned subsidiaries and divisions located in the domestic United States.

**Reporting instructions for “foreign-owned companies”** - If this business or nonprofit organization is owned by a foreign parent, the reporting unit for this survey is your U.S.-located company or entity. For reporting purposes, this business’s foreign parent and any other foreign affiliates this business owns should be treated the same as any business partner, customer, or supplier you do not own.

**A.1 Ceased Operations**

Question: **A.1 Has this business ceased operations?**

Completion of the 2022 ABS is required even if this business or its owner(s):

- Suspended or ceased business operations during the coronavirus pandemic.
- Ceased business operations due to a court-approved bankruptcy, reorganization, or liquidation plan.

If the business ceased operations before January 2021, select “Yes,” and respond to the **A.2 Date Ceased Operations** question. If the business operated at any time in 2021, you should report your company’s operations for the part of 2021 that the company was in operation.

Otherwise, select “No,” and the survey will automatically skip to the **A.3 Business Ownership – Foreign-Owned Entity** question.

If another entity acquired or merged with this business during or after 2021, report for the part of 2021 that this business was in operation prior to its acquisition or merger. If the business’s name has changed, please complete the entire survey regardless of when the change took place. You may type the new business name and an explanation of what has occurred in the closing “Remarks” screen that appears before you submit the survey.
A.2 Date Ceased Operations

Question: A.2 Enter the month and year this business ceased operations.

Report the 2-digit month and 4-digit year that the business’s operations ceased.

Please submit the entire survey regardless of when the operations ceased.

If the ceased-operations date occurred after December 2020, respond to the survey questions about the business’s ownership, employment, revenue, etc., during 2021, even if this business is not currently operating.

If the ceased-operations date occurred before January 2021, the survey will automatically skip to the Section I: Contact Information section.

A.3 Business Ownership – Foreign-Owned Entity

Question: A.3 In 2021, was this business a majority-owned subsidiary of a foreign company?

Special reporting instructions apply if this business was majority-owned by a foreign entity (company or government) not created or organized in the United States.

All direct and indirect ownership interests held by the foreign entity in this business in 2021 should be summed to determine whether the foreign entity’s percentage of ownership was more than fifty percent.

When answering the remaining questions, report for the foreign entity’s U.S.-based operations only, which includes all majority-owned U.S. subsidiaries and divisions located in the domestic United States (fifty states and the District of Columbia) in 2021, unless explicitly instructed otherwise. For reporting purposes, the foreign parent and/or any other foreign affiliate, which was not owned by the U.S. subsidiary/division, should be treated the same as any business partner, customer, or supplier that the U.S.-based operations does not own.

If the U.S.-based subsidiary/division pays its foreign parent for R&D services or if the foreign parent pays or reimburses its U.S.-based subsidiary/division for R&D services, those costs should be included when responding to questions in SECTION D: RESEARCH AND DEVELOPMENT FOR MICROBUSINESSES.

Report this business’s information by 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), please estimate any adjustments that would be required to conform to U.S. GAAP.

A.4 Business Ownership – U.S. Entity
A.4 Business Ownership - U.S. Entity

Question: A.4 In 2021, did another U.S. company or other entity own more than 50 percent of this business? Examples of other entities include estates, trusts, employee stock ownership plans (ESOPs), associations, membership clubs, and cooperatives.

Responses to this question help to eliminate double counting in cases where both parties in a business acquisition receive this survey, and to identify businesses that were majority-owned by another business(es), or created or organized legal entity(ies) in 2021.

If you answer “Yes,” you will be directed to the A.6 Business - 10% or More Ownership question.

A.5 Business Ownership – Government or Tribal Entity

Question: A.5 In 2021, was this business owned by a government or tribal entity?

Answer “Yes” if:

- You are reporting on behalf of a government agency, or a federally or state-recognized Indian Nation (variously called a tribe, nation, band, pueblo, community, rancheria, or native village).

Answer “No” if:

- You are reporting as a self-employed person or on behalf of a nontribal-owned business, regardless of the owner’s or owners’ American Indian and Alaska Native enrolled or principal tribal affiliations.

A.6 Business - 10% or More Ownership

Question: A.6 In 2021, did at least one person own 10% or more of this business? Do not count parent companies, estates, trusts, or other entities.

For this survey, the word “person”:

- Refers to a human owning rights, claims, interests, or stock in this business in 2021, and
- Does not refer to ownership by another business, or a created or organized legal entity.

Answer “No”:

ONLY if no person owned ten percent or more of this business.
A.7 Number of Owners

Question: A.7 In 2021, how many people owned this business?

- Do not combine two or more owners to create one owner.
- Count spouses and partners as separate owners.
- Count owners who owned at least 10% of this business.

Report the number of people that directly owned the rights, claims, interests, or stock in this business in 2021. For this survey, sole proprietors and self-employed people are considered owners of independent businesses. If you are the sole proprietor or self-employed, you should report “1 person” (or “2 people” if you owned the business jointly with your spouse in 2021.)

Select “1 person” in situations where different companies, plus one individual person, held the ownership interests in this business in 2021.

Select “11 or more people” when the majority ownership in 2021 was dispersed among large numbers of owners, members, or shareholders, for example, a large publicly traded company, a civic association, a cooperative, a country club, a credit union, or a trade association.

Select “Business is owned by a parent company, estate, trust or other entity” when one of these types of organizations acted as a single entity in owning all of the rights, claims, interests, or stock in this business in 2021.

Select “Don’t know” if no individual person(s) owned the business in 2021; for example, an ownership by a holding company or a nonprofit organization operating a commercial business.

A.8 Number of W-2 Paid Domestic Employees or Employees/Owners

Question: A.8 For the pay period including March 12, 2021, how many people worked for this business, including those paid through grants?

- Include both full-time and part-time employees as well as yourself.
- Include only persons in the United States.
- Count each person only once. If none, report zero.

Please count each person only once and report the total number of owners (in line a) and employees (in line b) who worked for this business during the pay period including March 12, 2021, and were issued a 2021 W-2 form for full- or part-time employment, or other compensation. Report owners and employees from domestic operations only.

If a person served as both an owner and an employee in 2021, please count the person only once, in whatever was the person’s dominant role on March 12, 2021.
A.9 Number of Domestic Workers Who Did Not Receive a W-2

Question: A.9 Not including employees or employees/owners included in the previous question how many other people worked for this business, including those paid through grants?

- Include both full-time and part-time workers as well as yourself, if applicable.
- Include only persons in the United States.
- Count each person only once. If none, report zero.

For item a., report:
- The number of non-W-2 workers (such as contractors, subcontractors, independent contractors, outside consultants, and temporary workers), who worked during the pay period including March 12, 2021. These workers may have been issued a 2021 IRS Form 1099 or were compensated by another third-party business, such as a consulting firm or staffing agency.
- Nonemployee workers from domestic operations only.
- Any employee who is solely commission based and did not receive a W-2, regardless of the amount of commissions made.

A.10 Total Worldwide and Domestic Sales and Operating Revenues

Question: A.10 In 2021, what was the amount of this business's worldwide and domestic sales and operating revenues, including grants? Round to the nearest one thousand dollars. If none, report zero.

Use or adapt information to U.S. Generally Accepted Accounting Principles (U.S. GAAP) as recognized by the Financial Accounting Standard Board (FASB), when reporting total worldwide and domestic sales and operating revenues from this business, including grants.

If this business is a subsidiary or division of a foreign parent, report sales to its parent and other affiliates not owned by this business.

Do not include:
- Nonoperating income such as dividends and interest
- Excise, sales, and other revenue-based taxes.

For sole proprietors, this amount is equal to that reported on line 3 (gross receipts or sales minus returns and allowances) of IRS Schedule C (Form 1040), “Profit or Loss from Business” (Sole Proprietorship) or Schedule C-EZ (Form 1040), “Net Profit from Business (Sole Proprietorship).”
For other types of businesses, this amount may be equal to that reported on line 1c (gross receipts or sales minus returns and allowances) of IRS Form 1065, “U.S. Return of Partnership Income,” or any one of the 1120 corporation tax forms. Report this amount in thousands. For example, if the amount is $150,000, please enter 150.

A.11 Domestic Sales and Revenues

Question: A.11 How much of the <response generated from the A.10 Total Worldwide and Domestic Sales and Operating Revenues question> in 2021 sales, revenue, and grants, was attributable to or originated from domestic operations?

Include sales and operating revenues to foreign customers, including foreign subsidiaries.

For example, a U.S. manufacturing corporation sells parts to customers around the world; however, because all of its operations are located inside the United States, it reports all of its sales in this question.

Round to the nearest one thousand dollars. If none, report zero.

If the business had no foreign operations, please report the same dollar amount as you reported in response to the A.10 Total Worldwide and Domestic Sales and Operating Revenues question.

The A.11 Domestic Sales and Revenues question does not refer to this business’s receipts from customers located in the United States, but rather the receipts generated from its operations located in the United States. If this business is owned by a foreign parent, then sales to the parent and those affiliates not owned by this business should be included.

Include sales and operating revenues to foreign customers, including foreign subsidiaries, when those sales and revenue are generated from U.S.-located operations.

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 of its operations are located inside the United States, it reports 100 percent of its sales and revenues (which is the same dollar amount as it reported in response to the A.10 Total Worldwide and Domestic Sales and Operating Revenues question).

Report this amount in thousands. For example, if the amount is $150,000, please enter 150.
A.12 Sources of Domestic Sales and Revenues

Question: A.12 Approximately what share of this business’s <response generated from the A.11 Domestic Sales and Revenues question> in 2021 domestic sales and revenues, including grants, came from the following? If none, report zero.

- a. Selling goods to customers, including other businesses
- b. Selling services to customers, including other businesses
- c. Licensing or royalties
- d. Grants
- e. Other (specify)

Total = ‘100%’

The question asks how this business earned its revenue by: (a) selling physical goods, including software; (b) selling services; (c) collecting royalties or licensing intellectual property; (d) receiving grants; or (e) from some other source. The total should equal 100 percent. If you select “(e) Other,” please specify that source of revenue or sales in the space provided.

A.13 Types of Customers

Question: A.13 In 2021, which of the following types of customers accounted for 10% or more of this business’s total sales of goods and/or services? Select all that apply.

Assign one category per customer when categorizing the type(s) of customers that contributed to this business’s total sales of goods and/or services in 2021. Do not classify any one customer under two categories. For example, one customer should not fit into both the “U.S. federal government” and the “Other businesses, including distributors of your product(s)” categories.

A.14 Types of Workers

Question: A.14 In 2021, which of the following types of workers were used by this business? Select all that apply.

Assign one category per worker for both W-2 paid workers and workers who did not receive a W-2, when categorizing the types of workers used by this business. Do not classify any one worker under two categories. For example, if a “Paid day laborer” later became a “Full-time paid employee,” select the one category that best describes this worker in 2021.

A.15 Franchise Operation

Question: A.15 In 2021, did all or part of this business operate as a franchise?

Answer “Yes” if all or part of this business’s operations were overseen by an overarching company in 2021, which provided the business with its trade name, products, services, and/or techniques for running the business, for an agreed-upon fee.
A.16 Working from Home

Question: A.16 In 2021, did this business allow any employees to work from home?

This question asks if this business offered a work-from-home arrangement, such as telecommuting, to any of its employees in 2021, whose job duties permitted it. Please include employees only, that is, employees or owners who receive a W-2. Do not include contractors, subcontractors, independent contractors, outside consultants, and temporary workers.

Select “Yes” when at least one employee had both the capability and the business’s permission to perform job duties at his or her private residence in 2021, regardless of whether the employee chose to work from home.

Select “No” when working from home was never a viable option for any employee in 2021. For example, all employees’ job duties required full on-site presence at a construction site, a manufacturing plant, a warehouse, a storefront property, a commercial facility, or a customer’s/client’s location in 2021.

A.17 Percent of Employees Working from Home

Question: A.17 In 2021, what percent of all employees at this business worked from home at the following frequencies?

a. Never
b. Less than one day per week
c. One day per week
d. Two to four days per week
e. Five or more days per week

Total = ‘100%’

If none, report zero. Estimates are acceptable.

Thinking only of this business’s employees who were allowed to work from home in 2021, calculate the proportions of employees who worked at home on a weekly schedule. For situations regarding working at home that changed during the year, please use the most frequent work-at-home situation.

For “Never” in item a., calculate the proportion of eligible, work-from-home employees who did no at-home job duties in 2021.

Items a. through e. should total 100 percent of all employees allowed to work from home in 2021.
A.18 Factors Affecting Working from Home

Question: A.18 In 2021, did any of the following factors limit the ability of this business’s employees to work from home? Select all that apply.

This question asks about circumstances affecting the performance of job duties at employees’ private residences in 2021.

A.19 Primary Business Activity

Question: A.19 Describe this business’s primary business activity during 2021.

Write a brief, but comprehensive description of the chief economic activity conducted by this business in 2021, for the primary purposes of earning a profit and/or increasing the value of the business to its owner(s).
SECTION B: OWNER CHARACTERISTICS

The ABS is one of the only sources of statistics about the owner characteristics of approximately 6 million U.S. employer businesses. This information has been proven useful in helping to understand changes taking place in our dynamic and growing economy. In addition to comparing business owner demographics, the results will help to summarize changes in business performance and highlight conditions of business success and failure, as well as compare minority-/nonminority-, women-/men-, and veteran-/nonveteran-owned businesses.

The ethnicity and race categories in this section of the questionnaire are consistent with those mandated by the Office of Management and Budget (OMB). Both the Executive and Legislative Branches of the Federal Government developed these standards.

Based on information reported in SECTION A: COMPANY INFORMATION, you may be asked to complete SECTION B: OWNER CHARACTERISTICS by providing the characteristics for up to four people (1-4) owning this business in 2021. In this section, each question is listed by Section letter, an Owner designation (1-4 or an X variable, as applicable), followed by a Question number. Otherwise, the survey will automatically skip to SECTION E: GOODS, SERVICES, AND BUSINESS PROCESSES AND TECHNOLOGY, or to SECTION C: RESEARCH ACTIVITIES AT NONPROFIT ORGANIZATIONS or SECTION D: RESEARCH AND DEVELOPMENT FOR MICROBUSINESSES (if the reporting instrument randomly chooses the entity to complete these sections).

B.1 Percent Ownership

Question: B.1 For the person(s) owning the largest percentage(s) in this business in 2021, list each person’s name and percentage owned.

- Do not report percentages owned by parent companies, estates, trusts, or other entities.
- If more than 4 people owned this business equally, select any 4 people.
- Round percentages to whole numbers. For example, report 1/3 ownership as 33%.

This question asks how much each owner owns of this business, as a percent of total ownership. The four owners with the greatest stake in the business should report. Estimates are acceptable and should include the rounding of percentages to whole numbers for the elimination of fractions or decimals. The percentages do not need to total to 100 percent, but should not exceed 100 percent.

If there are no people who own at least 10 percent of this business (for example, if this business is owned fully by a parent company), please return to the A.6 Business - 10% or More Ownership question and select “No.” The survey will subsequently skip this section entirely.
B.1-4.1 Sex

Question: B.X.1 What is the sex of Owner X?

This question asks for one selection to describe the sex of the owner.

B.1-4.2 Ethnicity

Question: B.X.2 Is Owner X of Hispanic, Latino, or Spanish origin?

The definition of a person of Hispanic, Latino, or Spanish origin is a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.

B.1-4.3 Race

Question: B.X.3 What is Owner X’s race? Select all that apply. (For this survey, Hispanic origins are not races.)

The U.S. Census Bureau must adhere to the 1997 Office of Management and Budget (OMB) standards on race and ethnicity which guide the Census Bureau in classifying written responses to the race question. Race categories are defined as:

- **White.** A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

- **Black or African American.** A person having origins in any of the black racial groups of Africa.

- **American Indian or Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.

- **Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

- **Native Hawaiian or Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Mariana Islands, Samoa, or other Pacific Islands.

An owner’s response to the race question is based upon self-identification. Owners with more than one race may choose to provide multiple races in response to the race question. For example, if an owner identifies as “Asian” and “White,” respond by selecting the appropriate boxes that describe the owner’s racial identity and/or report these identities in the write-in spaces provided.
B.1-4.4 Military Service

Question: B.X.4 Has Owner X ever served in any branch of the U.S. Armed Forces, including the Coast Guard, the National Guard, or a Reserve component of any service branch?

If you answer “No,” you will be directed to the B.X.7 Initial Acquisition Year question.

B.1-4.5 Military Service Disability

Question: B.X.5 Is Owner X disabled as the result of illness or injury incurred or aggravated during military service?

Select the "Yes" box if the person has a Department of Veterans Affairs (VA) service-connected disability rating.

B.1-4.6 Other Military Service

Question: B.X.6 Do any of the following characteristics describe Owner X’s military service? Select all that apply.

This question is asked of respondents that reported “Yes” to the B.X.4 Military Service question. For each of the characteristics listed, select all that apply to the owner for which you are reporting.

B.1-4.7 Initial Acquisition Year

Question: B.X.7 In what year did Owner X initially acquire ownership of this business?

This question asks what year Owner X acquired the business. This includes, but is not limited to, creating the business, buying the business, and inheriting the business.

B.1-4.8 Primary Income Source

Question: B.X.8 In 2021, did this business provide Owner X’s primary source of personal income?

This question asks if this business supplied most of Owner X’s personal income, i.e., the highest source of income. If another venture other than the business named in the address label or survey provided more personal income for Owner X, please answer “No” to this question.
B.1-4.9 Prior Business Ownership

Question: B.X.9 Not including this business, what is the status of the previous business Owner X started most recently?

This question asks for the current standing of the immediate past business that Owner X established, but did not purchase. For example, if Owner X started a business in 1990 and bought a business in 1995, this question refers to the business started in 1990. If Owner X has no history of establishing any business, select “This is the owner’s first business.”

B.1-4.10 Education Prior to Owning this Business

Question: B.X.10 Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school Owner X completed? Select ONE box only.

- Less than high school / secondary school graduate
- High school / secondary school graduate - Diploma or GED
- Technical, trade, or vocational school
- Some college, but no degree
- Associate Degree (for example, AA, AS)
- Bachelor’s Degree (for example, BA, BS)
- Master’s Degree (for example, MA, MEng, MEd, MSW, MBA)
- Doctorate Degree (for example, PhD, EdD)
- Professional Degree, beyond a Bachelor’s Degree (for example, MD, DDS, DVM, LLB, JD)

Report schooling completed in foreign or ungraded schools as the equivalent level of schooling in the typical American school system.

For the Professional Degree, beyond a Bachelor’s Degree category, do not include certificates or diplomas for training in specific trades or occupations, such as computer and electronics technology, medical assistant, or cosmetology. Do not include post-bachelor’s certificates that are related to occupational training in such fields as teaching, accounting, or engineering.

If you do not report having at least a Bachelor’s Degree, you will be directed to the B.X.12 Age question.

B.1-4.11 Field of Highest Degree Prior to Owning this Business

Question: B.X.11 Prior to establishing, purchasing, or acquiring this business, what was the field of the highest degree completed for Owner X? Select all that apply.

Please indicate the specialized area(s) of study of the most advanced degree that the Owner achieved, prior to establishing, purchasing, or acquiring this business. The degree field(s) chosen
here should correspond to the highest degree selected in response to the B.X.10 Education Prior to Owning the Business question.

**B.1-4.12 Age**

Question: **What was the age of Owner X as of December 31, 2021?**

Select the age as of the date referenced for the owner of which you are reporting.

**B.1-4.13 Place of Birth**

Question: **B.X.13 Was Owner X born in the United States?**

“United States” refers to the fifty states, the District of Columbia, and the U.S. territories and various possessions.

Please answer this question and the B.X.14 U.S. Citizenship question. Data will be used only for statistical purposes and responses will be summarized to fully protect the confidentiality of individual respondents and their businesses.

**B.1-4.14 U.S. Citizenship**

Question: **B.X.14 Is Owner X a citizen of the United States?**

“A citizen of the United States” refers to a person who is either (1) a citizen born in the United States; (2) a citizen born in Puerto Rico, Guam, the U.S. Virgin Islands, or Northern Marianas; (3) a citizen born abroad of U.S. citizen parent or parents; or (4) a U.S. citizen by naturalization (the legal act or process by which a noncitizen in a country may acquire citizenship or nationality of that country).

Please answer this question and the B.1.X.13 Place of Birth question. Data will be used only for statistical purposes and responses will be summarized to fully protect the confidentiality of individual respondents and their businesses.

**B.1-4.15 Owner Disability**

Question: **B.X.15 Does Owner X have a physical or mental impairment that substantially limits one or more of his/her major life activities?**

*For this survey, major life activities can include both those in everyday and professional life.*

The terms “physical impairment,” “mental impairment,” “substantially limits,” and “major life activities” should be interpreted consistently with the findings and purposes of the current text of the Americans with Disabilities Act of 1990, AS AMENDED with ADA Amendments Act of 2008 or https://www.ada.gov/pubs/adastatute08.htm.
B.1-4.16 Reasons for Owning this Business

Question: B.X.16 How important to Owner X is each of the following reasons for owning this business? Select one (Very Important / Somewhat Important / Not Important) for each row.

- Wanted to be my own boss
- Flexible hours
- Balance work and family
- Opportunity for greater income
- Best avenue for my ideas/goods/services
- Unable to find employment
- Working for someone else didn’t appeal to me
- Always wanted to start my own business
- An entrepreneurial friend or family member was my role model
- Wanted to carry on the family business
- Wanted to help and/or become more involved in my community
- Other (specify)

Indicate the level of importance you consider for each row. If the reason provided is not applicable, please select “Not Important.” By selecting “Very Important” or “Somewhat Important” in the row for Other (specify), you are asked to describe the reason in the space provided.

The following question(s) will be asked when owner characteristics have been reported for Owner 2, Owner 3, and/or Owner 4:

B.5 One-Family-Majority Ownership

Question: B.5 In 2021, did two or more members of one family own the majority of this business? Family refers to spouses / unmarried partners, parents / guardians, children, siblings, or close relatives.

In general, “family” consists of those related to each other by birth, marriage, or adoption. Same-sex couples can self-identify as “family.”

B.6 Joint Ownership

Question: B.6 In 2021, did spouses / unmarried partners jointly own this business?

“Spouses / unmarried partners” include business owners who shared living quarters in 2021 and who also had an intimate relationship with each other. Same-sex couples can self-identify themselves by answering “Yes” to the B.5 One Family Majority Ownership, the B.6 Joint Ownership, and the B.7 Equal Ownership questions.
B.7 Equal Operation

Question: B.7 In 2021, was this business operated equally by both spouses / unmarried partners?

“Spouses/unmarried partners” include business owners who shared living quarters in 2021 and who also had an intimate relationship with each other. Same-sex couples can self-identify themselves by answering “Yes” to the B.5 One Family Majority Ownership, the B.6 Joint Ownership, and the B.7 Equal Operation questions.
SECTION C: RESEARCH ACTIVITIES AT NONPROFIT ORGANIZATIONS

The following section collects information from nonprofit organizations headquartered in the United States and asks about their performance and/or funding of research for the fiscal year ending in 2021. For the purposes of this survey, your organization is defined as all units included in the organization’s filing (or future filing) of one of the following Internal Revenue Service (IRS) forms for its fiscal year 2021:

- IRS Form 990, Return of Organization Exempt from Income Tax under section 501(c), 527, or 4947(a)(1) of the Internal Revenue Code (except private foundations)
- IRS Form 990-PF, Return of Private Foundation, or Section 4947 (a)(1) Trust Treated as Private Foundation

Use or adapt information to U.S. Generally Accepted Accounting Principles (U.S. GAAP) as recognized by the Financial Accounting Standard Board (FASB) when reporting for this organization. *Estimates are acceptable. Report all items to the best of your ability.*

C.1 Nonprofit Organizations: Organization Affiliation

Question: **C.1 Is your organization affiliated with or considered part of another for-profit, nonprofit, or higher education organization? For example, a specific hospital foundation, university research entity, etc.**

This question asks if the organization named in the mailing label is attached or associated with a different organized legal entity. Responses to this question may help to eliminate double counting in cases where related organizations are asked to respond to this survey. If “Yes,” please enter the organization affiliation name in the space provided.

C.2 Nonprofit Organizations: Total Expenses

Question: **C.2 What was the consolidated total amount of your organization’s expenses for 2021 as (would be) reported on your IRS Form 990s, line 18, or IRS Form 990-PFs, line 26 total expenses and disbursements for column (a) revenue and expenses per books? Round to the nearest one thousand dollars. If none, report zero.**

This question asks for this organization’s total expenses (in thousands) and provides the line number from this organization’s 2021 IRS report form(s) where this dollar amount is reported. Report this amount in thousands. For example, if the amount is $150,000, please enter 150.
C.3 Nonprofit Organizations: Number of Employees

Question: C.3 For the pay period including March 12, 2021, how many people worked for your organization?

Include:
- Full- and part-time employees.

Exclude:
- Temporary employees and consultants.

Please count each person only once and report the total number of full- and part-time employees who worked for this organization during the pay period including March 12, 2021, and were issued a 2021 W-2 form for full- or part-time employment, or other compensation.

C.4 Nonprofit Organizations: Fiscal Year End

Question: C.4 In what month did your organization’s Fiscal Year (FY) 2021 end?

Report the last month of the one-year period ending in 2021, which was used for financial reporting.

Section C: Research Activities at Nonprofit Organizations Instructions

The next questions ask about research performed and/or funded by your organization. Please read the information below before continuing.

By research we mean...
For the purposes of this survey, research includes research and experimental development.

Research and experimental development comprise creative and systematic work to:
- Increase the stock of knowledge, including knowledge of humankind, culture, and society OR
- Devise new applications of available knowledge, including materials, products, devices, processes, systems, or services

Research activities must be...
- Novel: projects that advance current knowledge or create new knowledge
- Creative: projects focused on original concepts and hypotheses
- Uncertain: project outcomes are unable to be completely determined at the outset
- Systematic: projects are planned and budgeted
- Transferable/Reproducible: project methodology and results are transferable/reproducible to other situations and locations
May meet the criteria for research

- Laboratory or animal studies
- Clinical trials
- Prototype development
- Outcomes research
- Development/measurement of new methods to deliver/measure social service outcomes
- Policy research
- Humanities research
- Research traineeships
- Other experimental studies

Most likely do not meet the criteria for research

- Internal program monitoring or evaluation
- Public service grants or outreach programs
- Education or training programs
- Quality control testing
- Market research
- Management studies/efficiency surveys
- Literary, artistic, or historical projects, such as films, music, or books and other publications
- Feasibility studies, unless included as part of an overall research project

How should costs related to clinical trials of experimental drugs and devices be reported on this survey?

In general, a clinical trial—the testing of a medical intervention in human patients to determine its safety and efficacy—is considered a research and development activity by this survey. However, not all organizations involved in clinical trials are required to report costs for these activities on this survey. Specifically, hospitals, clinics, and other health-related organizations with employees whose only role in the clinical trial is to follow the study protocols, monitor patients, and collect data generally should report “0” (zero) R&D for these activities. These organizations should only report compensation for clinical trials if the employees’ role in the studies extends beyond monitoring their own patients to the development and management of overall study protocols, such as when they are a primary investigator in a study.

See below for more examples of how costs for clinical trial activity should be reported on this survey:

<table>
<thead>
<tr>
<th>Clinical trial activity</th>
<th>Reporting instructions for the hospital</th>
</tr>
</thead>
</table>
| A hospital pays a contract research organization (CRO) in FY 2021 to manage an early phase trial for a medical device developed by a hospital employee. | • Select “Yes” in response to the C.6 Research Performed by Others question.  
• Include costs paid to the CRO in FY 2021 in question C.15. |
| A hospital receives a federal government grant to test the use of a chemotherapy approved to treat lymphoma to treat a different type of cancer. The primary investigators are hospital employees. | • Select “Yes” in response to the C.5. Research Performed by Your Organization question.  
• Include costs spent on the study in FY 2021 in questions C.7, C.8 a, C.9 b, and C.10 c column 1. |
A hospital agrees to act as a research site for a phase III clinical trial of a new COVID-19 vaccine developed by a pharmaceutical company. Hospital employees follow the study protocols, monitor patients, and collect data, but are not involved in the overall design and management of the study.

- Select “No” in response to the C.5 Research Performed by Your Organization question UNLESS the hospital has other in-scope research activities.
- Do not include costs spent on the study in FY 2021 when responding to the C.7 Funding for Research Performed by This Organization question.

C.5 Nonprofit Organizations: Research Performed by Your Organization

Question: C.5 Did your organization perform research in FY 2021?

Include:
- Research performed by your organization’s employees or contract employees. (Contract employees are individuals contracted to work on projects otherwise fully performed by your organization’s staff.)

Exclude:
- Research performed outside your organization by subcontractors or subawardees. (Report in ‘C.6 Research Performed by Others.’)

This question asks the organization to indicate whether it paid any employee to perform any of a variety of activities considered to be research. Report only for fiscal year 2021.

C.6 Nonprofit Organizations: Research Performed by Others

Question: C.6 Did your organization fund research performed by others outside your organization in FY 2021?

Include:
- All grants, contracts, subcontracts, and subawards awarded by your organization to external recipients to perform research.

Exclude:
- Research performed by your organization’s employees.
- Research performed by contract employees (Contract employees are individuals contracted to work on projects otherwise fully performed by your organization’s staff.)

This question asks the organization to indicate whether it paid or financed any person who was not an employee of the organization to perform any of a variety of R&D activities.

If “Yes” is selected and “No” has been selected in response to the ‘C.5 Research Performed by Your Organization’ question, this survey will automatically skip to the ‘C.16 Funding For Research Performed By Other Organizations’ question.
If “No” is selected and “No” has also been selected in response to the ‘C.5 Research Performed by Your Organization’ question, this survey will automatically skip to the ‘C.20 Burden Estimate’ question.

**C.7 Nonprofit Organizations: Funding for Research Performed by This Organization**

Question: **C.7 In FY 2021, how much was spent on research performed within your organization? Round to the nearest one thousand dollars. If none, report zero.**

**Include:**
- Direct costs, such as salaries and wages, travel, equipment, supplies, consulting, and other expenditures directly supporting your organization’s research projects.
- Indirect costs associated with research expenditures, such as general and administrative salaries and wages, fringe benefits, facility costs, depreciation, etc. These should be calculated using your organization’s applicable fringe, overhead, and General and Administrative (G&A) or Facilities and Administrative (F&A) rates.

**Exclude:**
- Capital expenditures (i.e., costs for construction or renovation of facilities). Report Capital expenditures in upcoming questions C.17, C.18 and C.19.
- Payments/funds in excess of the actual cost of the research work performed (e.g., fees).
- Payments made by your organization to subcontractors or subawardees performing research outside your organization.

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 for research performed within the organization, please type the number 150 as your answer, as this is registered as $150,000.

If less than $50,000 is reported in response to the **C.7 Funding for Research Performed by This Organization** question, the survey will automatically skip to the **C.20 Burden Estimate** question.

**C.8 Nonprofit Organizations: Research Funding Sources**

Question: **C.8 How much of the <response generated by the C.7 Funding for Research Performed by This Organization question> in funding for research performed by this organization came from each of the following sources? Round to the nearest one thousand dollars. If none, report zero.**

- **Internal funds:** Your organization’s own funds from your endowment, general donations, or other unrestricted sources.
- **Individual donors:** Gifts designated by the donors for research.
c. **Federal government**: Any agency of the United States government. Include funds your organization received as a subcontractor or subawardee for research activities on federal projects.

d. **State and local government**: Any state, county, municipality, or other local government entity in the United States.

e. ** Businesses**: Domestic or foreign for-profit organizations. Report funds from a company’s nonprofit foundation in Row f.

f. ** Foundations**: Domestic or foreign nonprofit grant-making organizations.

g. **Universities**: Domestic or foreign degree-granting institutions.

h. **All other nonprofits**: Domestic or foreign public charities and other nonprofit organizations not reported in Row f or g.

i. **Other, specify**: All other sources not reported above.

**Total** = ‘C.7 Funding for Research Performed by This Organization’

The total is calculated and displayed on the screen of the online report form. The total should equal the amount entered for ‘C.7 Funding for Research Performed by This Organization.’ If the calculated value is incorrect, please revisit the C.7 Funding for Research Performed by This Organization question and adjust your answer accordingly.

**C.9 Nonprofit Organizations: Research Performance by Field**

Question: C.9 How much of the <response generated from the C.7 Funding for Research Performed by This Organization question> in funding for research performed by this organization was spent in each of the following fields? **Round to the nearest one thousand dollars. If none, report zero.**

a. **Agricultural Sciences and Natural Resources and Conservation**: e.g., Agricultural sciences, Animal sciences, Applied horticulture, Fishing and fisheries science, Food science and technology, Forestry, Natural resources and conservation, Plant sciences, or Soil sciences

b. **Biological, Biomedical, and Health Sciences**: e.g., Biochemistry, biophysics, molecular biology; Biotechnology; Botany; Cell biology; Epidemiology; Genetics; Medicine; Neuroscience; Public health; Veterinary medicine; or Zoology

c. **Engineering**: e.g., Aerospace, aeronautical, and astronautical engineering; Bioengineering and biomedical engineering; Chemical engineering; Civil engineering; Electrical, electronic, and communications engineering; Industrial and manufacturing engineering; Mechanical engineering; or Metallurgical and materials engineering

d. **Geosciences, Atmospheric Sciences, and Ocean Sciences**: e.g., Atmospheric sciences and meteorology, Geological and earth sciences, or Ocean and marine sciences

e. **Mathematics, Statistics, and Computer and Information Sciences**: e.g., Computer sciences, Information sciences, Information technology, Mathematics, or Statistics
f. **Physical Sciences**: e.g., Astronomy and astrophysics, Chemistry, Materials science, or Physics

g. **Psychology and Social Sciences**: e.g., Anthropology; Archaeology; City, urban, community, and regional planning; Criminology; Economics; Geography; Linguistics; Political science and government; Psychology; Public policy analysis; or Sociology, demography, and population studies

h. **Humanities**: e.g., English language and literature, letters; Foreign languages and literature; History; or Philosophy and religious studies

i. **Other Fields**: e.g., Business management and business administration, Communication and communications technologies, Education, Law, Library science, Social work, or Visual and performing arts

**Total** = ‘C.7 Funding for Research Performed by This Organization’

The total is calculated and displayed on the screen of the online report form. The total should equal the amount entered for ‘C.7 Funding for Research Performed by This Organization.’ If the calculated value is incorrect, please revisit the C.7 Funding for Research Performed by This Organization question and adjust your answer accordingly.

### C.10 Nonprofit Organizations: Research Performance by Type of Research

**Question**: C.10 How much of the <response generated by the C.7 Funding for Research Performed by This Organization question> in funding for research performed by this organization was for basic research, applied research, and experimental development? **Round to the nearest one thousand dollars. If none, report zero.**

<table>
<thead>
<tr>
<th>Examples</th>
<th>Basic research</th>
<th>Applied research</th>
<th>Experimental development</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basic research</strong></td>
<td>A researcher is studying the properties of human blood to determine what affects coagulation.</td>
<td>A researcher is conducting research on how a new chicken pox vaccine affects blood coagulation.</td>
<td>A researcher is conducting clinical trials to test a newly developed chicken pox vaccine for young children.</td>
</tr>
<tr>
<td><strong>Applied research</strong></td>
<td>A researcher is investigating the properties of substances under various heat and cold conditions</td>
<td>A researcher is investigating the properties of substances under various heat and cold conditions with the objective of finding longer-lasting components for highway pavement.</td>
<td>A researcher is working with state transportation officials to conduct tests of a newly developed highway pavement under various types of heat and cold conditions.</td>
</tr>
<tr>
<td><strong>Experimental development</strong></td>
<td>A researcher is developing and testing software and support tools, based on fieldwork, to improve mathematics cognition for student special education.</td>
<td>A researcher is developing and testing software and support tools, based on fieldwork, to improve mathematics cognition for student special education.</td>
<td>A researcher is developing and testing software and support tools, based on fieldwork, to improve mathematics cognition for student special education.</td>
</tr>
</tbody>
</table>

A researcher is studying the implementation of a specific math curriculum to determine what teachers need to know to improve mathematics cognition for student special education.
manipulatives and then measuring what students have learned through standardized instruments.

<table>
<thead>
<tr>
<th></th>
<th>implement the curriculum successfully.</th>
</tr>
</thead>
</table>

Answer options include (1) Federal / (2) Nonfederal / (3) Total.

a. **Basic research**: Experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view.

b. **Applied research**: Original investigation undertaken in order to acquire new knowledge. It is directed primarily towards a specific, practical aim or objective.

c. **Experimental development**: Systematic work, drawing on knowledge gained from research and practical experience and producing additional knowledge, which is directed to producing new products or processes or to improving existing products or processes.

**Total**: The total for column (1) should equal the amount entered for ‘C.8.c Research Funding Sources - Federal Government’. Total for column (3) should equal the amount entered for ‘C.7 Funding for Research Performed by This Organization.’

The totals are calculated and displayed on the screen of the online report form. If a calculated value is incorrect, please revisit the C.8.c Research Funding Sources - Federal Government question or the C.7 Funding for Research Performed by This Organization question as needed and adjust your answer(s) accordingly.

**C.11 Nonprofit Organizations: Research Performance by Type of Cost**

**Question**: C.10 How much of the <response generated by the C.7 Funding for Research Performed by This Organization question> spent on research performed within this organization was for each of the following types of costs? **Round to the nearest one thousand dollars. If none, report zero.**

a. **Salaries, wages, and fringe benefits**
   - Include costs for all compensation and benefits of employees that are included in the total reported on C.7.
   - Include payroll taxes, such as Social Security and Medicare.

b. **Depreciation and amortization on property, plant, equipment, and intangible assets**
   - Include depreciation on tangible research assets such as buildings or equipment as well as the amortization of intangible assets such as patents.

c. **All other costs**
   - Include administrative and overhead costs clearly associated with your organization’s research.
Total = ‘C.7 Funding for Research Performed by This Organization’

The total is calculated and displayed on the screen of the online report form. The total should equal the amount entered for ‘C.7 Funding for Research Performed by This Organization.’ If the calculated value is incorrect, please revisit the ‘C.7 Funding for Research Performed by This Organization’ question and adjust your answer accordingly.

C.12 Nonprofit Organizations: Research Employees for Nonprofit Organizations

Question: C.12 Of the <response generated by the C.3 Number of Employees question> employees reported, how many worked on research activities in FY 2021?

Include:
- Only your organization’s paid employees.

Exclude:
- Contract employees. (Report in ‘C.14 Research Contract Employees for Nonprofit Organizations.’)

a. Researchers (including scientists, engineers, and their managers): Professionals engaged in the conception or creation of new knowledge.
b. Research technicians: Staff who work under the supervision of researchers to conduct research activities.
c. Other support personnel (clerical and other): Staff who provide direct support services for the research project.

This question refers to your earlier answer to the ‘C.3 Number of Employees’ question, which asks the nonprofit to report its total number of R&D employees.

C.13 Nonprofit Organizations: Research Full-Time Equivalents for Nonprofit Organizations

Question: C.13 How many full-time equivalents (FTEs) worked on research activities in FY 2021?

FTE research personnel are calculated as the total working (paid) hours spent working on research during a specific reference period (usually a calendar year) divided by the number of hours representing a full-time schedule within the same period. Include only your organization’s paid employees. For example, if you have three people working 20, 30, and 40 hours in a week on research activities and a full-time schedule is 40 hours a week at your organization, your research FTE calculation is (20 + 30 + 40)/40 = 2.25 FTE.

a. Researchers (including scientists, engineers, and their managers): Professionals engaged in the conception or creation of new knowledge.
b. Research technicians: Staff who work under the supervision of researchers to conduct research activities.
c. Other support personnel (clerical and other): Staff who provide direct support services for the research project.
Total = ‘C.13 Research Full-Time Equivalents for Nonprofit Organizations’

The calculation of full-time equivalent employees from the overall headcount accounts for employees who work part-time as well as those employees who split their time between R&D and other activities.

When estimating the number of full-time equivalents, round to the nearest tenth of a decimal. For example, if your nonprofit had one full-time R&D employee working 40 hours a week and two part-time R&D employees each working 5 hours a week, the answer to this question would be the full-time equivalent of 1.25 R&D employees \([40 + 5 + 5]/40 = 50/40\) or 1.25. As another example, if your nonprofit had only one part-time R&D employee working 3 hours a week, the answer to this question would be the full-time equivalent of 0.1 R&D employee \([3/40 = 0.075\), which rounds to 0.08].

The purpose of this question is to accurately measure the amount of effort employees are devoting to R&D in the nonprofit sector.

**C.14 Nonprofit Organizations: Research Contract Employees for Nonprofit Organizations**

Question: C.14

a. Did any contract employees work on your research activities in FY 2021?

*Contract employees are individuals contracted to work on projects otherwise fully performed by your organization staff.*

b. If “Yes,” how many contract employees worked on your research activities during FY 2021?

If “Yes,” please count each person only once and report the total number of paid contract employees who performed the research activities of this organization during FY 2021.

**C.15 Nonprofit Organizations: Research Volunteers for Nonprofit Organizations**

Question: C.15

a. Did any volunteers work on your research activities in FY 2021?

*Volunteers are unpaid workers contributing appreciable and essential activity to research performed by your organization. Their research skills should be comparable to those of your employees. Individuals funded by other sources to conduct research at your organization should not be considered volunteers.*

b. If “Yes,” how many volunteers worked on your research activities during FY 2021?
If “Yes,” please count each person only once and report the total number of unpaid workers who performed the research activities for this organization during FY 2021.

If “No” is selected, this survey will automatically skip to the C.20 Burden Estimate question.

C.16 Nonprofit Organizations: Funding for Research Performed by Other Organizations

Question: C.16 In FY 2021, how much funding did your organization provide to others to perform research activities?

Include:
- All grants, contracts, subcontracts, and subawards awarded by your organization to external recipients to perform research.
- For multi-year awards, include only the amount paid to the external recipient in FY 2021.

Exclude:
- Research performed by contract employees.

Answer options:

a. Research grants or contracts: Include grants and contracts awarded by your organization to external recipients to perform independent research.

b. Subcontracts and subawards: Include subcontracts and subawards awarded by your organization to external recipients to support your research activities.

Total = ‘C.16 Funding for Research Performed by Other Organizations’

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 in research grants or contracts, please type the number 150 as your answer, as this is registered as $150,000.

C.17 Nonprofit Organizations: Total Capital Expenditures for Your Organization

Question: C.17 What was the amount of your organization’s capital expenditures in 2021?

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 in total capital expenditures, i.e., costs for construction or renovation of facilities, please type the number 150 as your answer, as this is registered as $150,000.

C.18 Nonprofit Organizations: Total Capital Expenditures for Research Operations

Question: C.18 How much of the <response generated by the C.17 Total Capital Expenditures for Your Organization question> in capital expenditures was for research operations?

- Organizations should allocate capital expenditures that benefit both research and other operations on a reasonable basis.
• None of the costs reported here should be included in ‘C.7 Funding for Research Performed by your Organization.’

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 in total capital expenditures for research operations, i.e., costs for construction or renovation of facilities, please type the number 150 as your answer, as this is registered as $150,000.

C.19 Nonprofit Organizations: Total Capital Expenditures for Research Operations by Type of Cost

Question: **C.19 How much of the <response generated by the C.18 Total Capital Expenditures question> in capital expenditures for research operations was for the following? Round to the nearest one thousand dollars. If none, report zero.**

   a. **Land acquisition**: Land acquired for R&D use, including land purchased for building construction.

   b. **Buildings and land improvement**: Buildings constructed or purchased for R&D use. If the building is constructed or purchased for mixed use, please report the estimated proportion of the cost that is for R&D.

   c. **Equipment**: Major (capitalized) machinery and equipment acquired for use in the performance of R&D.

   d. **Capitalized software**: Computer software that is used in the performance of R&D for more than one year. Include long-term licenses and the acquisition of computer software, as well as production costs for internally produced software.

   e. **All other capital expenditures for research operations**: All other capital expenditures used in the performance of R&D. Include purchased patents, long-term licenses, or other intangible assets used in R&D that had an expected useful life of more than one year.

Total – ‘C.19 Total Capital Expenditures for Research Operations’

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 in total capital expenditures for land acquisition, please type the number 150 as your answer, as this is registered as $150,000.

C.20 Nonprofit Organizations: Burden Estimate

Question: **C.20 What was the total amount of staff time it took your organization to complete this section?**

Include:

• The time spent reading the instructions, working on the questions, and obtaining information.

• The time spent by all employees in collecting and providing this information.
Send any comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to erd.survey.comments@census.gov. Be sure to type "ERD Survey Comments 0607-1004" in the subject line of your email.
SECTION D: RESEARCH AND DEVELOPMENT FOR MICROBUSINESSES

The following section collects information on research and development activity from businesses with W-2 employment between 1 and 9.

Reporting for “domestic operations” - In this survey, “domestic operations” refers to this business’s operations located in the 50 United States and the District of Columbia. When reporting for domestic operations, include transactions with foreign subsidiaries. Include all your majority-owned subsidiaries and divisions located in the domestic United States.

Reporting instructions for “foreign-owned companies” - If this business is owned by a foreign parent, the reporting unit for this survey is your U.S.-located company. For reporting purposes, this business’s foreign parent and any other foreign affiliates this business owns should be treated the same as any business partner, customer, or supplier you do not own.

If you pay this business’s foreign parent for R&D services or if this business’s foreign parent pays or reimburses this business for R&D services, those costs should be included in the response to the questions in this section.

What is Research and Development (R&D)?
Research and development (R&D) comprises creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge. This includes:

a. Activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses (basic research);

b. Activities aimed at solving a specific problem or meeting a specific commercial objective (applied research); and

c. Systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes (development).

R&D includes both direct costs, such as salaries of researchers, as well as administrative and overhead costs clearly associated with the company’s R&D.

The term R&D does NOT include expenditures for:

- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Market research
- Efficiency surveys or management studies
- Literary, artistic, or historical projects, such as films, music, or books and other publications
- Prospecting or exploration for natural resources
Does R&D include development of software and Internet applications?
R&D 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 this business, including all subsidiaries and divisions, domestic and foreign. Include subsidiary companies where there is more than 50 percent ownership.

Reporting period. Report data for the calendar year 2021, if possible, or for this business’s fiscal year ending between April 2021 and March 2022.

Estimates are acceptable. Report all items to the best of your ability.

D.1 R&D Activities

Question: D.1 During 2021, did this business do any of the following R&D activities? Include activities that:
- This business performed
- Others paid this business to do
- This business paid others to do

Select one (Yes or No) for each row.

a. Conducted activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses
b. Conducted activities aimed at acquiring new knowledge for solving a specific problem or meeting a specific commercial objective

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

d. Developed and tested goods, services, or processes that were derived from scientific research or technical findings

e. Developed software that advanced scientific or technological knowledge

f. Produced findings that could be published in academic journals or presented at scientific conferences

g. Applied scientific or technical knowledge in a way that has never been done before

h. Created new scientific or technical solutions that can be generalized to other situations

i. Conducted work to discover previously unknown technological facts, structures, or relationships

j. Conducted work to extend the understanding of scientific facts, relationships, or principles in ways that could be useful to others

This question asks the business to indicate whether it had any of a variety of activities considered to be research and development (R&D). **Report only for the year 2021.**

If “No” is selected for items a. through j., the survey will automatically skip to the D.17 Federal Tax Credit for Research Activities question.

**D.2 R&D Costs**

**Question:** D.2 What was the total cost (both direct and indirect) in 2021 for all the R&D activities reported as “Yes” in the ‘D.1 R&D Activities’ question? **Your best estimate is acceptable. Report dollar amount in thousands. If none, report zero.**

**Include:**

- Salaries, wages, fringe benefits
- Plant, machinery, and equipment, except that which was capitalized because it had an alternative future use
- Materials, supplies, software
- Rent, utilities
- Consultants, contractors
- Depreciation expense from plant, machinery, and equipment that was capitalized because it had an alternative future use

**Exclude:**

- 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
• Capital expenditures (i.e., costs for construction or renovation of facilities). Report capital expenditures in ‘D.10 Total Capital Expenditures for Your Organization,’ ‘D.11 Total Capital Expenditures for Research Operations,’ and ‘D.12 Capital Expenditures for Research Operations by Type of Cost.’
• Payments/funds in excess of the actual cost of the research work performed (e.g., profits or fees)

Total costs for R&D activities reported in the ‘D.1 R&D ACTIVITIES’ question for 2021

Total R&D costs include both direct costs, such as salaries of researchers, as well as administrative and overhead costs clearly associated with this business’s R&D.

Include costs for R&D paid for by this business as well as costs for R&D paid for by others, such as customers or business partners. Also include payments made by this business for R&D services performed by (i) unrelated third parties, (ii) affiliates for which this business has less than a 50-percent ownership stake, and/or (iii) this business’s foreign parent if the business is foreign-owned.

Do NOT include capital expenditures, regardless of their relation to R&D, in your response to this question.

The value you enter will be multiplied by 1,000. For example, if your business spent $150,000 on total cost for R&D activities, please type 150 as your answer, as this is registered as $150,000.

If less than $50,000 is reported in response to the D.2 R&D Costs question, the survey will automatically skip to the D.17 Federal Tax Credit for Research Activities question.

D.3 Foreign R&D Costs

Question: D.3 During 2021, what amount, if any, of the <response generated from the D.2 R&D Costs question> was performed outside the United States by this business or others? Round to the nearest thousand dollars.

This question asks how much of the business’s R&D costs was performed by this or other businesses not directly located in the United States. A foreign-owned parent of the business is classified as a business outside of the U.S., and any funds directed to the parent for R&D purposes should be included in the answer to this question.

The value you enter will be multiplied by $1,000. For example, if this business spent $150,000 on total cost for foreign R&D activities, please type 150 as your answer, as this is registered as $150,000.
**D.4 Domestic R&D Costs**

Question: **D.4 We calculated this business’s domestic R&D costs by subtracting the amount entered for R&D costs outside the U.S. (question ‘D.3 Foreign R&D Costs’) from all R&D costs (question ‘D.2 R&D Costs’). This value will be used in other questions in this survey. Round to the nearest thousand dollars.**

This business’s domestic R&D cost in 2021 is <the result of subtracting D.3 Foreign R&D Costs (performed by businesses outside the U.S.) from D.2 R&D Costs (total cost for all R&D activities)>.

This number is calculated and displayed on the screen of the online report form. If the calculated value is incorrect, please revisit the D.2 R&D Costs and/or D.3 Foreign R&D Costs questions and adjust your answer(s) accordingly.

If "$0" is calculated for the D.4 Domestic R&D Costs question, the survey will automatically skip to the D.17 Federal Tax Credit for Research Activities question.

**D.5 Types of R&D Costs**

Question: **D.5 During 2021, how much of the <calculated D.4 Domestic R&D Costs> in ‘D.4 Domestic R&D Costs’ was for each of the following types of costs? Round to the nearest thousand dollars.**

- a. Salaries, wages, and fringe benefits
- b. Expensed machinery and equipment (not capitalized)
- c. Materials and supplies
- d. Payments to others for R&D, including purchased R&D services
- e. Depreciation on R&D property and equipment
- f. All other costs (e.g., consultants, contractors, travel, rent)

Total – ‘D.4 Domestic R&D Costs’

This question is asking you to provide a breakdown of the total costs for the business’s domestic R&D activities in 2021. Total R&D costs include both direct costs such as salaries of researchers as well as administrative and overhead costs clearly associated with the business’s R&D.

The total of items a. through f should equal the dollar amount from the D.4 Domestic R&D Costs question.

Include costs for R&D paid for by this business as well as costs for R&D paid for by others, such as customers or business partners. Also include payments made by this business for R&D services performed by (i) unrelated third parties, (ii) affiliates for which this business has less than a 50-percent ownership stake and/or (iii) this business’s foreign parent if this business is foreign-owned.

Do NOT include capital expenditures, regardless of their relation to R&D, in your response to this question.
Please note that this question is asking for thousands of dollars, and the value you enter is multiplied by 1,000. For example, if your business spent $100,000 on foreign R&D costs, please type the number 100 as your answer, as this is registered as $100,000.

D.6 Domestic R&D Performance Costs

Question: D.6 We have calculated this business’s domestic R&D performance by subtracting the payments for R&D services (item d. in question ‘D.5 Types of R&D Costs’) from domestic R&D costs (question ‘D.4 Domestic R&D Costs’). This value will be used in the next question.

This business's domestic R&D performance costs in 2021 is <the result of subtracting D.5 Types of R&D Costs - d. Payments to others for R&D, including purchased R&D services from D.4 Domestic R&D Costs>.

Another way to understand this value is the “R&D costs that weren’t involved in hiring other people or businesses to perform R&D.” This dollar amount is useful for understanding the difference in how this business performed its own in-house research versus out-of-house research that was contracted.

If the calculated value seems incorrect, revisit the D.4 Domestic R&D Costs and/or D.5.d Types of R&D Costs - Payments to others for R&D, including purchased R&D services questions, and adjust your answer(s) accordingly.

If "$0" is calculated for the D.6 Domestic Performance Costs question, the survey will automatically skip to the D.17 Federal Tax Credit for Research Activities question.

D.7 Funding Sources for R&D Activities

Question: D.7 During 2021, of the <value calculated for the D.6 Domestic R&D Performance Costs question> in total domestic R&D performance costs, how much was paid for by the following sources? Round to the nearest thousand dollars.

a. This U.S. business
b. Your foreign owner (if this business is foreign owned)
c. Venture capital and angel financing
d. Other businesses located within the United States
e. Other businesses located outside the United States
f. Universities or colleges located within the United States
g. Nonprofit organizations located within the United States
h. U.S. federal government (including R&D grants)

• Which agency provided the largest share? Select one from the list below
  • Department of Defense
  • National Science Foundation
  • Department of Health and Human Service, including the National Institutes of Health
• Department of Energy
• NASA
• Other agencies
  i. U.S., state or local government (not including state universities)
  j. All other organizations outside the United States

Total – ‘D.6 Domestic R&D Performance Costs’

This question asks the business to report how much of its R&D was paid for by different types of organizations. In the case of subcontracting agreements, report the original source of funding.

Example: Company Sub Inc. performs custom software development for a large defense company as a subcontractor on a U.S. Department of Defense (DOD) contract. Even though Company Sub Inc. is working directly for the defense company, it should include this cost in item g. because the DOD was the original source of funds.

If you provided an amount for item h., “U.S. federal government,” you will be asked to indicate which agency provided the largest amount. If the federal agency that provided the funding is not listed, select “Other agencies.”

The value you enter will be multiplied by 1,000. For example, if the sources listed above paid $150,000 in domestic R&D performance costs, please type the number 150 as your answer, as this is registered as $150,000.

The total of items a. through i. should equal the dollar amount from the D.6 Domestic Performance Costs question.

D.8 R&D Categories

Question: D.8 During 2021, of the <value calculated for the D.6 Domestic R&D Performance Costs question> in R&D domestic performance costs, how much was for the following categories? Round to the nearest one thousand dollars.

a. Basic research – activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses
b. Applied research – activities aimed at solving a specific problem or meeting a specific commercial objective
c. Development – systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes

Total – ‘D.6 Domestic R&D Performance Costs’

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.

The total of items a. through c. should equal the dollar amount from the D.6 Domestic Performance Costs question.

D.9 R&D Categories Funded by the U.S. Federal Government

Question: D.9 During 2021, of the <response generated by the D.7.h Domestic R&D Performance Costs Funded by the U.S. Federal Government question> in domestic R&D performance cost funded by the U.S. federal government, how much was for the following types of R&D? Round to the nearest thousand dollars.

a. Basic research – activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses
b. Applied research – activities aimed at solving a specific problem or meeting a specific commercial objective
c. Development – systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes

Total – ‘D.7.h Domestic R&D Performance Costs Funded by the U.S. Federal Government’

If the calculated value seems incorrect, revisit the D.7.h Domestic R&D Performance Costs Funded by the U.S. Federal Government question, and adjust your answer(s) accordingly.

If "$0" is reported for the D.7.h Funding Sources for R&D Activities: U.S. federal government (including R&D grants) item, the survey will automatically skip to the D.10 Total Capital Expenditures for This Business question.

D.10 Total Capital Expenditures for this Business

Question: D.10 What was the amount of this business’s capital expenditures in 2021?

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 in total capital expenditures, i.e., costs for construction or renovation of facilities, please type the number 150 as your answer, as this is registered as $150,000.

If "$0" is reported for the D.10 Total Capital Expenditures for this Business question, the survey will automatically skip to the D.13 Domestic R&D Employees question.
**D.11 Total Capital Expenditures for R&D Operations**

Question: D.11 How much of the <response generated by the D.10 Total Capital Expenditures for This Business question> in capital expenditures was for R&D operations? Round to the nearest thousand dollars.

- Businesses should allocate capital expenditures that benefit both research and other operations on a reasonable basis.
- None of the costs reported here should be included in ‘D.7. Funding Sources for R&D Activities.’

This question refers to your earlier answer to the D.10 Total Capital Expenditures for This Business question.

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 in total capital expenditures for R&D operations, i.e., costs for construction or renovation of facilities, please type the number 150 as your answer, as this is registered as $150,000.

If "$0" is reported for the D.11 Total Capital Expenditures for R&D Operations question, the survey will automatically skip to the D.13 Domestic R&D Employees question.

**D.12 Capital Expenditures for R&D Operations by Type of Cost**

Question: D.12 How much of the <response generated by the D.11 Total Capital Expenditures for R&D Operations question> in capital expenditures for R&D operations was for the following?

- a. Land acquisition
- b. Buildings and land improvement
- c. Machinery and equipment
- d. Capitalized software
- e. Other intellectual property
- f. All other capital expenditures for R&D operations

Total – ‘D.11 Total Capital Expenditures for R&D Operations’

The value you enter will be multiplied by 1,000. For example, if this organization paid $150,000 in total capital expenditures for R&D operations for land acquisition, please type the number 150 as your answer, as this is registered as $150,000.
**D.13 Domestic R&D Employees**

Question: **D.13 For the pay period including March 12, 2021, how many employees from this business’s domestic operations were R&D employees and how many were all other employees? Include owners who receive a W-2. If none, report zero.**

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.

Previously, you indicated this business had <total value calculated for A.8 Number of W-2 Paid Domestic Employees or Employees/Owners> W-2 employees and employees/owners.

The sum of b. and c. should equal the amount entered in a.

- a. How many of those employees and employees/owners were R&D employees?
- b. Of the R&D employees, how many were female?
- c. Of the R&D employees, and how many were male?

This question refers to your earlier answer to the A.8 Number of W-2 Paid Domestic Employees or Employees/Owners question. It asks the business to report its total number of R&D employees based on their sex.

**D.14 Domestic R&D Employees’ Occupations**

Question: **D.14 Of the <response from D.13 Domestic R&D Employees, line a.>, how many were:**

- a. Researchers (including R&D scientists, engineers, and their managers)
- b. R&D technicians and equivalent staff
- c. R&D support staff (clerical and other)
- d. Total R&D employees
- e. Of the researchers reported in line a, how many had PhDs?

If none, report zero.

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 (with the exception being option e). Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods, and systems and 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. As a simple 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 are employees not directly involved with the conduct of a research project, but who support the researchers and technicians. These employees might include clerical staff, report writers, regulatory experts, quality assurance, safety trainers, and other related employees.

D.15 Domestic R&D Employees Full-Time Equivalent

Question: D.15 What was the full-time equivalent of the <response from D.13 R&D Employees, line a.> domestic R&D employee(s)? For full-time domestic R&D employees, use the number of employees for the FTEs. For other full-time employees not working solely on R&D or part-time employees working on R&D, use the share of full-time work week they work on R&D. Report partial FTEs in decimals. For example, report 1/2 FTE as .5.

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.

When estimating the number of full-time equivalents, round to the nearest hundredth of a decimal. For example, if your business had one full-time R&D employee working 40 hours a week and two part-time R&D employees each working 5 hours a week, the answer to this question would be the full-time equivalent of 1.3 R&D employees [(40 + 5 + 5)/40 = 50/40 or 1.25, which rounds to 1.3]. As another example, if your business had only one part-time R&D employee working 3 hours a week, the answer to this question would be the full-time equivalent of 0.1 R&D employee [3/40 = 0.075, which rounds to 0.1].

The purpose of this question is to accurately measure the amount of effort employees are devoting to R&D in the business sector.

D.16 Domestic Researchers’ Full-Time Equivalent

Question: D.16 What was the full-time equivalent of the <response from D.14 Domestic R&D Employees’ Occupations, line a> researcher(s)? Report partial FTEs in decimals. For example, report 1/2 FTE as .5.

The headcount of researchers 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.
When estimating the number of full-time equivalents, round to the nearest tenth of a decimal. For example, if your business had one full-time R&D researcher working 40 hours a week and two part-time R&D researchers each working 5 hours a week, the answer to this question would be the full-time equivalent of 1.3 R&D researchers \([(40 + 5 + 5) \div 40 = 50 \div 40 \text{ or } 1.25\], which rounds to 1.3).

As another example, if your business had only one part-time R&D researcher working 3 hours a week, the answer to this question would be the full-time equivalent of 0.1 R&D researcher \([3 \div 40 = 0.075\], which rounds to 0.1).

The purpose of this question is to accurately measure the amount of effort researchers are devoting to R&D in the business sector.

**D.17 Federal Tax Credit for Research Activities**

**Question:** D.17 Did this business file for the federal tax credit for increasing research activities (IRS form 6765) in 2021?

**IRS Form 6765, Credit for Increasing Research Activities (R&D Tax Credit),** is used to figure and claim the credit for increasing research activities (research credit), to elect the reduced credit under section 280C, and to elect to claim a certain amount of the credit as a payroll tax credit against the employer portion of social security taxes. Qualifying research expenditures as defined for the federal tax credit are not be directly comparable to the R&D expenditure information collected elsewhere in this survey.

Select “Yes” if this business filed **IRS Form 6765** to claim this tax credit in 2021.

Select “No” if no **IRS Form 6765** was filed in 2021.

**D.18 State Tax Credit for Research Activities**

**Question:** D.18.a Did this business file for the state tax credit for increasing research activities in 2021?

b. If “Yes,” what state(s)? **Select all that apply.**

Select “Yes” if this business filed for any state tax credit or a District of Columbia tax credit for increasing research activities (R&D tax credit) as a line item on a nonfederal tax form in 2021.

**Note:** Additional questions about R&D changes due to the coronavirus pandemic are asked in **SECTION H: CORONAVIRUS PANDEMIC IMPACT ON RESEARCH AND DEVELOPMENT AND BUSINESS ACTIVITIES.**
SECTION E: GOODS, SERVICES, AND BUSINESS PROCESSES AND TECHNOLOGY

The following section collects information on the business’s introduction of new or improved goods, services, or business processes that differed significantly from the business’s previous goods, services, or processes.

The goods, services, or business processes must have characteristics or intended uses that are new or which provide a significant improvement over what was previously used or sold by the business. However, they can fail or take time to prove themselves.

The goods, services, or business processes need only be new or improved for the business. They could have been originally developed or used by other businesses or organizations.

The following section asks about a three-year time period (2019 to 2021), instead of one year (2021) as in other sections of this survey.

**E.1 New or Improved Goods**

Question: **E.1 During the three years 2019 to 2021, did this business introduce to the market any new or improved goods that differed significantly from this business’s previous goods?**

*(This includes the addition of new functions or improvements to existing functions or user utility. Functions include quality, technical specifications, reliability, durability, economic efficiency during use, affordability, convenience, usability, and user friendliness. User utility includes attributes such as affordability and financial convenience.)*

**Goods:** usually a tangible object, such as a smartphone, furniture, or packaged software, but also includes digital goods such as downloadable software, music, and film. *Exclude the simple resale of new goods or changes of a solely aesthetic nature.*

This question asks whether the business introduced any new goods (a.k.a. products) or any improved products during the time frame of 2019 to 2021. A new or improved good should differ significantly from the business’s previous goods and it should have been introduced to the market although it need not be considered commercially successful. The minimum requirement for a new good is that it must have one or more characteristics that are significantly different from those contained in goods previously offered by or used by the business. These characteristics must be relevant to the business or to external users. This includes significant improvements in technical specifications, components and materials, software in the product, user friendliness or other functional characteristics. Significant improvements to existing products can occur through changes in materials, components and other characteristics that enhance performance.
E.2 New or Improved Services

Question: E.2 During the three years 2019 to 2021, did this business introduce to the market any new or improved services that differed significantly from this business’s previous services?

(This includes the addition of new functions or improvements to existing functions or user utility. Functions include quality, technical specifications, reliability, durability, economic efficiency during use, affordability, convenience, usability, and user friendliness. User utility includes attributes such as affordability and financial convenience.)

Services: Intangible activities, such as retailing, insurance, educational courses, air travel, consulting, etc., also includes digital services. Exclude the simple resale of new services.

This question asks whether the business introduced any new services (a.k.a. functions, skills or expertise) or improved functions, skills or expertise during the time frame of 2019 to 2021. A new or improved service should differ significantly from the business’s previous services and it should have been introduced to the market although it need not be considered commercially successful. The minimum requirement for a new service is that it must have one or more characteristics that are significantly different from those contained in services previously offered by or used by the business. These characteristics must be relevant to the business or to external users. This includes significant improvements in skills, assistances, expertise, user friendliness or other functional characteristics. Significant improvements to existing services can occur through changes in functions that enhance performance.

If "No" is selected as responses to both the E.1 New or Improved Goods and the E.2 New or Improved Services questions, the survey will automatically skip to the E.5 New or Improved Business Processes question.

E.3 Novelty of New or Improved Goods or Services

Question: E.3 During the three years 2019 to 2021, did this business introduce any new or improved goods or services that differ significantly from goods or services previously offered by this business that were: Select one (Yes or No) for each row.

a. New to the market? This business introduced a new or improved good or service that was not previously offered by any of your competitors (it may have already been available in other markets).

b. New only to this business? This business introduced a new or improved product (good or service) that was identical or very similar to products already offered by your competitors.

Improved goods and services must be new to this business, but they do not need to be new to the market. These goods and services could have been originally developed by this business or by other businesses.
The emphasis of this question is on “new to the market” or “new only to the business.” This question addresses the novelty of a company’s new or improved goods and services in comparison with the state of the art in the market or industry in which the firm operates.

**E.4 New or Improved Goods or Services as a Percent of Total Sales**

Question: **E4 In 2021, what percentage of this business’s response generated from the A.11 Domestic Sales and Revenues question** in domestic sales and revenues were attributable to or originated from domestic operations in the following categories?

Details must sum to **100% of total dollar amount of response generated from the A.11 Domestic Sales and Revenues question** reported for ‘A.11 Domestic Sales and Revenues.’ **Estimates are acceptable.**

a. New or improved goods and services introduced during 2019 to 2021 that were **new to the market.**

b. New or improved goods and services introduced during 2019 to 2021 that were **new only to this business.**

c. Goods or services that were unchanged or only marginally modified during 2019 to 2021 (include the resale of new goods or services purchased from other companies)

Total sales in 2021 = **‘100%’**

This question asks what proportions of the dollar amount reported in response to the A.11 Domestic Sales and Revenues question came from a) sales of goods and services that were new to the market during 2019 to 2021; b) new only to the business, and could be available from other companies or in other industries; and c) were not new or improved.

Items a. through c. should total 100 percent.

**E.5 New or Improved Business Processes**

Question: **E.5 During the three years 2019 to 2021, did this business introduce any of the following types of new or improved business processes that differed significantly (e.g., greater efficacy, resource efficiency, reliability and resilience, affordability, convenience and usability) from your previous business processes? Select one (Yes or No) for each row.**

a. Methods for producing goods or providing services (including methods related to engineering and related technical testing, analysis and certification)

b. Logistics, delivery, or distribution methods

c. Marketing methods for promotion, packaging, pricing, product placement, or after-sales services

d. Information and communication systems (including hardware, software, and data processing)

e. Administration and management activities (including decision-making, human resource management, and methods for accounting or other administrative operations)
f. **Product and business process development activities (including activities to identify, develop or adapt products or processes, or adopting new methodologies for developing products and processes)**

g. **Develop customer-specific solutions (i.e., customized goods or services)**

This question asks about the implementation of any production or delivery methods (processes) that are new or improved and differed significantly from past processes. This includes, but is not limited to, significant changes in techniques, equipment and/or software. For example, an improved process can be intended to decrease unit costs of production or delivery, to increase quality, or to produce or deliver new or significantly improved products.

Additional explanations for each category are here:

**Production of goods or services**: Activities that transform inputs into goods or services, including engineering and related technical testing, analysis and certification activities to support production.

**Distribution and logistics**: a) transportation and service delivery, b) warehousing, and c) order processing.

**Marketing and sales**: a) marketing methods, including advertising (product promotion and placement, packaging of products), direct marketing (telemarketing), exhibitions and fairs, market research and other activities to develop new markets; b) pricing strategies and methods; and c) sales and after sales activities, including help desks, other customer support, and customer relationship activities.

**Information and communication systems**: The maintenance and provision of information and communication systems, including: a) hardware and software; b) data processing and database; c) maintenance and repair; and d) web-hosting and other computer-related information activities. These functions can be provided in a separate division or in divisions responsible for other functions.

**Administration and management**: a) strategic and general business management (cross-functional decision-making), including organizing work responsibilities; b) corporate governance (legal, planning and public relations); c) accounting, bookkeeping, auditing, payments and other financial or insurance activities; d) human resources management (training and education, staff recruitment, workplace organization, provision of temporary personnel, payroll management, health and medical support); e) procurement; and f) managing external relationships with suppliers, alliances, etc.

**Product and business process development activities to scope, identify, develop, or adapt products or a firm’s business processes**: This function can be undertaken in a systematic fashion or on an ad hoc basis, and be conducted within the firm or obtained from external sources. Responsibility for these activities can lie within a separate division or in divisions responsible for other functions, e.g., production of goods or services.
If “No” is selected for items a. through f., the survey will automatically skip to the E.7 Technology R&D question.

### E.6 R&D Activities for Businesses with 10 or More Employees

**Question:** E.6 During 2021, did this business perform or fund any R&D activities? Include activities that:

- This business performed
- Others paid this business to do
- This business paid others to do

Only businesses reporting 10 or more employees in response to the A.8 Number of W-2 Paid Domestic Employees or Employees/Owners question, are asked to respond to this question.

This question asks the business to indicate whether it conducted, financed or was compensated for any of a variety of activities considered to be research and development (R&D). For example:

- Conducted activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses
- Conducted activities aimed at acquiring new knowledge for solving a specific problem or meeting a specific commercial objective
- Conducted 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
- Developed and tested goods, services, or processes that were derived from scientific research or technical findings
- Developed software that advanced scientific or technological knowledge
- Produced findings that could be published in academic journals or presented at scientific conferences
- Applied scientific or technical knowledge in a way that has never been done before
- Created new scientific or technical solutions that can be generalized to other situations
- Conducted work to discover previously unknown technological facts, structures, or relationships
- Conducted work to extend the understanding of scientific facts, relationships, or principles in ways that could be useful to others

Report only for the year 2021.

### E.7 Technology R&D

**Question:** E.7 During 2021, did this business perform or fund R&D on the following technologies? Select one (Yes or No) for each row.
a. Advanced computing (e.g., supercomputing, edge computing, cloud computing, data storage, advanced computing architectures)
b. Advanced sensing (e.g., machine vision, voice recognition, networked sensors and sensing, millimeter-wave radar, LIDAR, RFID, biointegrated sensors, electric grid measurement)
c. Artificial intelligence (e.g., machine learning, planning, reasoning, and decision-making)
d. Autonomous systems and robotics (e.g., industrial robotics, automated guided vehicles (surface, aerospace, maritime))
e. Additive manufacturing (e.g., additive manufacturing (3-D Printing), smart manufacturing))
f. Biotechnology (e.g., genetic engineering, DNA synthesis, genetic sequencing, tissue engineering, biomanufacturing, bioinformatics)
g. Human-machine interfaces (e.g., augmented reality, virtual reality, brain-computer interfaces, human-machine teaming)
h. Communication and networking technologies (e.g., radiofrequency and mixed signal circuits, antennas and components, spectrum management technologies, communications and network security, mesh networks/infrastructure independent communication technologies)
i. Advanced financial technologies (e.g., digital technologies for distributed ledgers, blockchain)
j. Advanced semiconductors and microelectronics (e.g., beyond CMOS electronics (including next generation semiconductor materials), design and electronic design automation (EDA) tools, manufacturing technologies and tooling, advanced lithography)
k. Advanced engineering materials (e.g., materials by design, metamaterials, nanomaterials, smart materials, AM alloys, biomimetic, flexible electronics, material property characterization additive manufactured parts)
l. Renewable energy generation and storage (e.g., wind, solar, and bio-based generation; electric and hybrid engines; batteries; and grid backup/storage)
m. Advanced gas turbine engine technologies (e.g., aero, marine, industrial (power generation), enabling component technologies)
n. Advanced nuclear energy technologies (e.g., aero, marine, industrial (power generation), enabling component technologies)

This question asks the business to indicate whether it conducted or financed R&D on a variety of technologies in 2021 and provides examples of each technology.
E.8 Use of Technologies

Question: E.8 During 2021, to what extent did this business use the following technologies? 
Select one (A lot / Somewhat / A little / Not at all) for each row.

a. Advanced computing (e.g., supercomputing, edge computing, cloud computing, data storage, advanced computing architectures)
b. Advanced sensing (e.g., machine vision, voice recognition, networked sensors and sensing, millimeter-wave radar, LIDAR, RFID, biointegrated sensors, electric grid measurement)
c. Artificial intelligence (e.g., machine learning, planning, reasoning, and decision-making)
d. Autonomous systems and robotics (e.g., industrial robotics, automated guided vehicles (surface, aerospace, maritime))
e. Additive manufacturing (e.g., additive manufacturing (3-D Printing), smart manufacturing)
f. Biotechnology (e.g., genetic engineering, DNA synthesis, genetic sequencing, tissue engineering, biomanufacturing, bioinformatics)
g. Human-machine interfaces (e.g., augmented reality, virtual reality, brain-computer interfaces, human-machine teaming)
h. Communication and networking technologies (e.g., radiofrequency and mixed signal circuits, antennas and components, spectrum management technologies, communications and network security, mesh networks/infrastructure independent communication technologies)
i. Advanced financial technologies (e.g., digital technologies for distributed ledgers, blockchain)
j. Advanced semiconductors and microelectronics (e.g., beyond CMOS electronics (including next generation semiconductor materials), design and electronic design automation (EDA) tools, manufacturing technologies and tooling, advanced lithography)
k. Advanced engineering materials (e.g., materials by design, metamaterials, nanomaterials, smart materials, AM alloys, biomimetic, flexible electronics, material property characterization additive manufactured parts)
l. Renewable energy generation and storage (e.g., wind, solar, and bio-based generation; electric and hybrid engines; batteries; and grid backup/storage)
m. Advanced gas turbine engine technologies (e.g., aero, marine, industrial (power generation), enabling component technologies)
n. Advanced nuclear energy technologies (e.g., aero, marine, industrial (power generation), enabling component technologies)

This question asks to the degree for which any of a variety of electronic tools, systems, devices, and resources that generate, store and/or process data, were utilized by this business during 2021, and provides examples of each technology.

For item i, the term “digital ledgers (blockchain)” refers to a shared ledger for recording transactions, tracking assets, and building trust, which is resistant to modification of the data.
Records are immutable – No participant can change or tamper with a transaction recorded to the shared ledger. If a transaction includes an error, a new transaction must be added to reverse the error, and both transactions are then visible.

Follow-up questions (E.9.A. Impact of Artificial Intelligence Technology Use and E.9.B. Impact of Renewable Energy Generation and Storage Technology Use (renewimpact) may be asked if the business indicates that it utilized these technologies during 2021.

Otherwise, the survey will automatically skip to the E.10 Source of Technology Capabilities question.

**E.9.A Impact of Artificial Intelligence Technology Use**

Question: E.9.A. During 2021, to what extent did this business’s use of artificial intelligence technology impact your workforce for each of the following?

*Select one (Increase / Decrease / No impact / Don’t Know) for each row.*

a. Number of workers employed at this business  
b. Skill level of workers employed at this business  
c. The scientific, technological, engineering, and mathematical skills of workers employed by this business  
d. Number of production workers  
e. Number of nonproduction workers  
f. Number of supervisory workers  
g. Number of nonsupervisory workers

This question asks how much the use of artificial intelligence technology affected select workforce logistics during 2021.

The E.9.B. Impact of Renewable Energy Generation and Storage Technology Use follow-up question may be asked if the business indicates that it utilized this technology during 2021.

Otherwise, the survey will automatically skip to the E.10 Source of Technology Capabilities question.

Question: E.9.B. During 2021, to what extent did this business’s use of renewable energy generation and storage technology impact your workforce for each of the following?

Select one (Increase / Decrease / No impact / Don’t Know) for each row.

a. Number of workers employed at this business
b. Skill level of workers employed at this business
c. The scientific, technological, engineering, and mathematical skills of workers employed by this business
d. Number of production workers
e. Number of nonproduction workers
f. Number of supervisory workers
g. Number of nonsupervisory workers

This question asks how much the use of renewable energy generation and storage technology affected select workforce logistics during 2021.

E.10 Source of Technology Capabilities

Question: E.10 During the three years 2019 to 2021, did this business obtain the necessary technical expertise through any of the following means? Select one (Yes or No) for each row.

a. Acquired technology products (machinery, equipment, software) from other firms or organizations
b. Acquired intellectual property (IP) rights, including patents, copyrights, and trademarks that give ownership, exclusion rights or rights to use technical knowledge
c. Modified or adapted existing technology to the firm’s specific needs
d. Developed new technology (both hardware and software) in-house

Methods in which businesses, in general, acquire, modify, adapt, or develop specialized technological products, knowledge, and skill are listed. This question asks if any of these methods were used by this business during a three-year period (2019 to 2021), instead of one year (2021) as in other sections of this survey.

This survey will automatically go to SECTION F: DESIGN AND INTELLECTUAL PROPERTY.
SECTION F: DESIGN AND INTELLECTUAL PROPERTY

The following section collects information about the business’s perspectives on the role of design when performing design activities and how it protects its investment in design innovation.

**Reporting for only for “domestic operations”** - In this survey, “domestic operations” refers to this business’s or nonprofit organization’s operations located in the 50 United States and the District of Columbia. When reporting for domestic operations, include transactions with foreign subsidiaries. Include all your majority-owned subsidiaries and divisions located in the domestic United States.

**F.1 Design Activities**

Question: **F.1 Does this business take a structured approach to conducting design activities?**

Yes/No

*Design of goods can include the following:* the “look” of manufactured products; function; ease of manufacturing; environmental sustainability or resilience; quality; or architectural design.

*Design of services can include the following:* business processes (i.e., design thinking); customers experience; delivery of a service; or user experience (UX) that addresses interaction with goods, services, or digital content by users.

Structured approach entails organizing and managing design projects logically and effectively after specific steps have been planned.

Select “Yes” if the business has an organized, logical approach to design activities that can be defined as structured by a written statement of what the creative process is.

Otherwise, select “No,” and the survey will automatically skip to the **F.4 Future Design Activity Resources** question.

**F.2 Resources for Design Activities**

Question: **F.2 Does this business provide resources for design activities?**

Yes/No

Select “Yes” if an allocation of money, materials, staff, and other assets are supplied for organizing, managing, and implementing the design of goods, services, or processes.

Otherwise, select “No,” and the survey will automatically skip to the **F.4 Design-Related Engineering Activities** question.
F.3 Resource Budget for Design Activities

Question: F.3 Do those resources from ‘F.2 Resource for Design Activities’ have a budget? Yes/No

This question asks if the business predetermines the amount of money paid for designing goods, services, and processes as part of a formal spending plan.

F.4 Design-Related Engineering Activities

Question: F.4 Does this business conduct the following design-related engineering activities? Select one (Yes or No) for each row.

a. Prepare technical specifications including computer-aided drafting
b. Create first-time use of components or the initial tooling of equipment
c. Construct prototypes that include all the technical and performance characteristics of a new good or service

This question asks about the performance or nonperformance of select design-related engineering activities by this business’s domestic operations.

F.5 Resources for Design-Related Engineering Activities

Question: F.5 Does this business provide resources for design-related engineering activities? Yes/No

Select “Yes” if an allocation of money, materials, staff, and other assets are supplied for organizing, managing, and implementing design-related engineering activities, i.e., described in question F.4 Design-Related Engineering Activities.

Otherwise, select “No,” and the survey will automatically skip to the F.7 Design Activities Performance question.

F.6 Resource Budget for Design-Related Engineering Activities

Question: F.6 Do the resources from design-related engineering activities have a budget? Yes/No

This question asks if the business predetermines the amount of money paid for designing engineering activities, as described in question F.4 Design-Related Engineering Activities, as part of a formal spending plan.
F.7 Design Activities Performance

Question: F.7 Are any design activities performed by the following? Select one (Yes or No) for each row.

a. Employees
b. Contractors

When deciding if a worker is an employee or a contractor, an employee receives a form W-2 for full or part time work.

F.8 Types of Employees [/Contractors] and Design Activities

Question: F.8 What types of employees and/or contractors routinely perform design activities? Select all that apply.

- Designers
- Key managers (e.g., in marketing, product, or website development)
- Senior company leadership
- Engineers, craft production, programmers, researchers, or other related positions
- Other (specify)

When categorizing the types of employees and/or contractors who routinely perform design activities, assign one category per worker. Do not classify any one worker under two categories. For example, if an “Engineer” can perform design activities as a “Designer,” select the one category that describes the person’s dominant role when performing design activities.

F.9 Number of Employees and Design Activities

Question: F.9 How many employees and/or contractors routinely perform design activities in the following years? If none, report zero.

- 2021
- 2019

Please count each person only once and report the total number of employees and contractors who worked for this business respectively in 2021 (line a) and 2019 (line b) and were issued either a W-2 form for full- or part-time employment or other employee compensation; a 1099-NEC for nonemployee compensation; or a 1042-S, Foreign Person’s U.S. Source Income Subject to Withholding. Report employees and contractors from domestic operations only.

If a person served as both an employee and a contractor during the year, please count the person only once.
**F.10 Organization of Design Employees**

Question: **F.10 How are the employees and/or contractors who routinely perform design activities organized? Select all that apply.**

- As one or a few working independently
- As a small team
- As multiple teams and/or centralized design unit/department

When categorizing the organization of how employees and/or contractors who routinely perform design activities, generally assign one category per worker group. Do not classify any worker group under two categories. For example, if members of “a small team” and can also perform design activities “working independently,” select the one category that describes the dominant form of organization when routinely performing design activities.

**F.11 Approach to Design**

Question: **F.11 What is this business’s approach to design? Select all that apply.**

- Design is used to enhance the appearance and attractiveness of the final good or service
- Design is integrated into the development of new goods or services
- Design is a central directing element of the business model
- Other (specify)

This question asks for insight into how the business uses design to improve its brand strength and product and service offerings.

**F.12 Future Design Activity Resources**

Question: **F.12 How much do you expect this business’s resources for design activities to change over the next three years?**

Select one *(Increase substantially / Increase slightly / No change / Decrease slightly / Decrease substantially).*

This question asks about the extent to which the business’s allocation of money, materials, staff, and other assets supplied for design activities, is expected to change over a three-year period (2022 to 2024).
F.13 Intellectual Property Protection Methods

Question: F.13 Does this business use the following methods to protect any intellectual property? *Intellectual property includes patents, processes, and trade secrets; books and music; trademarks; recorded performances and events, such as radio and television programs and motion pictures; broadcast and recorded live performances and events and their content; general use computer software; franchise fees; and other (e.g., digital media).*

Select one (Yes or No) for each row.

a. Utility patents (patents for inventions, applied for or awarded)
b. Design patents (patents for appearance, applied for or awarded)
c. Copyright
d. Trademarks

This question asks if the business protects its brand strength and product and service offerings by acquiring the legal rights issued by a governing authority.

F.14 Additional Intellectual Property Protection Methods

Question: F.14 Does this business use the following less formal means of protecting any intellectual property? *Select one (Yes or No) for each row.*

a. Design complexity
b. Nondisclosure agreements or noncompete clauses
c. Branding and product image
d. Trade secrets

This question asks if the business protects its brand strength and product and service offerings using a specific method other than acquiring a legal right issued by a governing authority.
SECTION G: DOMESTIC AND FOREIGN TRANSACTIONS

This section collects information on selected domestic and global transactions. The section includes questions about costs and transactions involving contract manufacturing and design activities. The data will be used to assist public and private organizations to better understand, plan, and make decisions affected by the relationship between domestic and foreign activities.

When reporting for domestic operations, include all your majority-owned subsidiaries located in the domestic United States. If you are a foreign-owned company, the reporting unit is your U.S.-located company or entity.

“Located in the United States” refers to domestic U.S. operations situated in the fifty states and the District of Columbia, excluding foreign countries, and the U.S. territories and various possessions.

“Located outside the United States” refers to operations situated in foreign countries, and the U.S. territories and various possessions.

G.1 Worldwide Operating Expenses

Question: G.1 In 2021, what was this business’s total worldwide operating expenses or costs?

Include:

• Cost of goods sold
• Cost of services sold
• Selling, general, and administrative (SG&A) costs so long as they are incurred to promote the selling and delivery of this business’s products and services, i.e., advertising expense, sales commission expenses, office salaries, rent expense
• Depreciation expense
• Research and development expense

Exclude:

• Capitalized expenses
• Interest expense
• Income taxes
• Impairment reserves
• Losses on sales of assets

This question asks about this business’s worldwide operations in their entirety for the year 2021. Only operating costs and expenses should be included in your response to this question.

Operating costs are those associated with the production of goods or services.
Operating expenses are those incurred by this business when engaging in day-to-day activities indirectly associated with the production of goods or services -- the same as selling, general, and administrative expenses (SG&A).

Depreciation and research and development expenses are to be included.

Capitalized expenses, i.e., the buying, maintaining, or improving of fixed assets, such as land, buildings, vehicles, and/or equipment, should be excluded.

Impairment reserves, i.e., the impaired value of assets having less market value than when acquired, which have been reduced to their current market value on the business’s December 31, 2021, balance sheet, are to be excluded.

The value you enter will be multiplied by 1,000. For example, if this business spent $150,000 in total domestic operating expenses or costs, please type the number 150 as your answer, as this is registered as $150,000.

**G.2 Domestic Operating Expenses**

**Question:** **G.2 In 2021, what was this business’s total domestic operating expenses or costs?**

**INCLUDE:**

- Cost of goods sold
- Cost of services sold
- Selling, general, and administrative (SG&A) costs so long as they are incurred to promote the selling and delivery of the company’s products and services, e.g., advertising expense, sales commission expenses, office salaries, rent expense
- Depreciation expense
- Research and development expense

**EXCLUDE:**

- Capitalized expenses
- Interest expense
- Income taxes
- Impairment reserves
- Losses on sales of assets

This question asks about this business’s domestic operations only, including all majority-owned subsidiaries located in the United States, for the year 2021. Only operating costs and expenses should be included in your response to this question.

Operating costs are those associated with the production of goods or services.
Operating expenses are those incurred by this business when engaging in day-to-day activities indirectly associated with the production of goods or services -- the same as selling, general, and administrative expenses (SG&A).

Depreciation and research and development expenses are to be included.

Capitalized expenses, i.e., the buying, maintaining, or improving of fixed assets, such as land, buildings, vehicles, and/or equipment, should be excluded.

Impairment reserves, i.e., the impaired value of assets having less market value than when acquired, which have been reduced to their current market value on the business’s December 31, 2021, balance sheet, are to be excluded.

The value you enter will be multiplied by 1,000. For example, if this business spent $150,000 in total domestic operating expenses or costs, please type the number 150 as your answer, as this is registered as $150,000.

G.3 Activities Conducted by Domestic Unaffiliated Companies

Question: **G.3 In 2021, did any unaffiliated companies located in the United States conduct any of the following activities for this business? Unaffiliated companies include firms such as independent contractors and suppliers.**

Select one (Yes or No) for each row.

a. Core production (cost of goods and services in your primary business activities)
b. Distribution and logistics (include transportation costs)
c. Marketing, sales/after-sales services
d. Administrative or management functions
e. Research and development (R&D includes creative and systematic work undertaken to increase the stock of knowledge and to devise new applications of available knowledge)
f. Engineering and other technical services (includes testing and design other than R&D)
g. Information and Communication Technology (ICT) services
h. All other operating expenses

This question asks about the performance or nonperformance of various activities for this business’s domestic operations in 2021, by any U.S.-located, independent contractor or supplier with no links to this business.

An unaffiliated company or business is defined as an entity that is owned less than 10 percent, directly or indirectly, by your company (or by your foreign parent if you are foreign owned). Examples include independent contractors and suppliers.
G.4 Activities Conducted by Foreign Unaffiliated Companies

Question: G.4 In 2021, did any unaffiliated companies located outside the United States conduct any of the following activities for this business? Unaffiliated companies include firms such as independent contractors and suppliers.

Select one (Yes or No) for each row.

a. Core production (cost of goods and services in your primary business activities)
b. Distribution and logistics (include transportation costs)
c. Marketing, sales/after-sales services
d. Administrative or management functions
e. Research and development (R&D includes creative and systematic work undertaken to increase the stock of knowledge and to devise new applications of available knowledge)
f. Engineering and other technical services (includes testing and design other than R&D)
g. Information and Communication Technology (ICT) services
h. All other operating expenses

This question asks about the performance or nonperformance of various activities for this business’s domestic operations in 2021, by any non-U.S.-located, independent contractor or supplier with no links to this business.

An unaffiliated company or business is defined as an entity that is owned less than 10 percent, directly or indirectly, by your company (or by your foreign parent if you are foreign owned). Examples include independent contractors and suppliers.

G.5 Activities Conducted by Foreign-Affiliated Companies

Question: G.5 In 2021, did any affiliated companies located outside the United States conduct any of the following activities for your business? Affiliated companies located outside the United States may be a foreign subsidiary or a foreign parent. Select one (Yes or No) for each row.

a. Core production (cost of goods and services in your primary business activities)
b. Distribution and logistics (include transportation costs)
c. Marketing, sales/after-sales services
d. Administrative or management functions
e. Research and Development (includes creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge)

f. Engineering and other technical services (includes testing and design other than R&D)

g. Information and Communication Technology (ICT) services

h. All other operating expenses

This question asks about the performance or nonperformance of various activities for this business’s domestic operations in 2021, by a non-U.S.-located parent of this business or any non-U.S.-located affiliate with links to this business.

**G.6 Manufacturing Activities**

**Question:** G.6 In 2021, did this business manufacture any goods in the United States? *Includes processing, assembly, labeling, packing and related services on materials and physical components.*

This question asks whether this business’s domestic operations in 2021 engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products or goods. The assembling of component parts of manufactured products and the processing, assembly, labeling, packing and related services on materials and physical components are all considered to be manufacturing-related activities when answering this question.

**G.7 Contracting Out Manufacturing**

**Question:** G.7 In 2021, did this business contract out any manufacturing tasks or otherwise purchase manufacturing services (processing, assembly, labeling, packing or related services on materials and physical components) from any unaffiliated company or from affiliated companies located outside the United States?

This question asks whether this business engaged in any contract in 2021, in which a non-U.S. located company was paid to carry out this business’s manufacturing tasks or from whom manufacturing services were purchased for use of this business’s domestic U.S. operations in 2021.

If "No" is selected, the survey will automatically skip to the G.10 Contracting in Manufacturing question.

**G.8 Contracting Out Manufacturing by Company Type**
Question: **G.8 In 2021, who performed the manufacturing for this business’s U.S.-located units or establishments? Select all that apply.**

- U.S.-located, unaffiliated companies
- Foreign-affiliated companies
- Foreign-unaffiliated companies

This question asks you to identify, by location and affiliation, any company which carried out this business’s manufacturing tasks or from whom manufacturing services were purchased for use of this business’s domestic U.S. operations in 2021.

An affiliated company or business is defined as an entity that is owned 10 percent or more (based on voting interest or an equivalent interest) directly or indirectly by your company.

**G.9 Design for Contracting Out**

Question: **G.9 In 2021, did this business provide or determine the design or specifications for goods, finished or in-process, manufactured for this business by any company type identified in the previous question [G.8 Contracting Out Manufacturing by Company Type]?**

This question asks if this business actively contributed or controlled the creative processes or requirements for manufacturing goods, when the fabrication was contracted out to a company, other than this business’s U.S. domestic operations or U.S.-located affiliated companies in 2021.

**G.10 Contracting in Manufacturing**

Question: **G.10 In 2021, did this business perform any manufacturing tasks for any unaffiliated company or affiliated companies located outside the United States?**

This question asks whether any non-U.S. located company used this business to carry out the company’s manufacturing tasks or from whom manufacturing services were purchased for use of the company in 2021.

If "No" is selected, the survey will automatically skip to **SECTION H: CORONAVIRUS PANDEMIC IMPACT ON RESEARCH AND DEVELOPMENT AND BUSINESS ACTIVITIES.**

**G.11 Contracting in Manufacturing by Company Type**

Question: **G.11 In 2021, on behalf of what types of companies did this business’s U.S.-located units or establishments perform manufacturing activities? Select all that apply.**

- U.S.-located, unaffiliated companies
- Foreign-affiliated companies
- **Foreign-unaffiliated companies**

This question asks you to identify, by location and affiliation, any company which used this business to carry out the company’s manufacturing tasks or from whom manufacturing services were purchased for use of the company in 2021.

A foreign affiliate is an entity located outside the United States that is owned at least 10 percent (based on voting interest or an equivalent interest) directly or indirectly by the U.S. reporter.

**G.12 Design for Contracting In**

Question: **G.12 In 2021, did this business provide or determine the design or specifications for any of the goods, finished or in-process, that were manufactured by your business for any company type identified in question G.11 Contracting in Manufacturing by Company Type?**

This question asks if this business’s domestic operations actively contributed or controlled the creative processes or requirements for the goods it manufactured in 2021, for any company identified by location and affiliation, in response to the **G.11 Contracting in Manufacturing by Company Type** question.
SECTION H: CORONAVIRUS PANDEMIC IMPACT ON RESEARCH AND DEVELOPMENT AND BUSINESS ACTIVITIES

The coronavirus pandemic resulted in major economic changes, as businesses reacted to a general shutdown that started in the United States in mid-March 2020. When answering the following questions, please consider how the coronavirus pandemic affected this business’s research and development (R&D) activities.

H.1 R&D Changes Due to the Coronavirus Pandemic

Question: H.1 In 2021, did the following statements apply to this business’s research and development (R&D) in response to the coronavirus pandemic? Select one (Yes or No) for each row.

   a. New R&D projects were started
   b. Existing R&D projects were canceled
   c. Existing R&D projects were disrupted or delayed

Check here if this business did not have R&D (if applicable. The survey will automatically skip to the H.6 Effect of the Coronavirus Pandemic on Business Sales question)

This question measures the impact of changing business conditions during the coronavirus pandemic on the business’s R&D projects.

Select “No” for your responses to items a., b., and c. if this business had R&D activities in 2021, but none of its R&D projects were started, canceled, disrupted, or delayed as the result of the coronavirus pandemic.

H.2 Impact of the Coronavirus Pandemic on R&D Expenditures

Question: H.2 In 2021, did this business modify its in-house R&D expenditures in response to the coronavirus pandemic?

This question measures the impact of changing business conditions during the coronavirus pandemic on expenditures for R&D activities done or existing within the business or organization.

H.3 R&D Performance Due to the Coronavirus Pandemic

Question: H.3 In 2021, did this business perform in-house R&D on coronavirus pandemic-related R&D projects in response to the coronavirus pandemic? For example, R&D to create
self-sterilizing work surfaces; R&D to develop a COVID-19 diagnostic test; R&D to adapt LEDs to UV for light-weight air purification system, etc.

“In-house” refers to R&D activities done or existing within the business or organization. Include only R&D activities that are related to or resulted from the coronavirus pandemic.

H.4 Impact of the Coronavirus Pandemic on R&D Full-Time Equivalent Personnel

Question: H.4 In 2021, were there any changes to the number of full-time equivalent (FTEs) R&D personnel employed or contracted in response to the coronavirus pandemic by this business?

The headcount of full-time equivalent 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.

H.5 Changing R&D Expenditures Due to the Coronavirus Pandemic

Question: H.5 In 2021, did this business change the payments made to other organizations for R&D in response to the coronavirus pandemic?

This question measures the impact of changing business conditions during the coronavirus pandemic on expenditures paid to R&D providers that are outside of this business.

H.6 Effect of the Coronavirus Pandemic on Business Sales

Question: F.1 How would you assess the overall effect of the coronavirus pandemic on this business’s sales in 2021?

This question asks you to gauge the degree to which this business’s expected revenue for calendar year 2021 was affected by the coronavirus pandemic in 2021. If this business is owned by a foreign parent, then sales to the parent and those affiliates not owned by this business should be included in assessing the overall effect of the coronavirus pandemic on this business’s sales in 2021.

Include sales and operating revenues to foreign customers, including foreign subsidiaries, when those sales and revenue are generated from U.S.-located operations as you make your assessment.

H.7 Financial Health of the Business

Question: H.7 In 2021, how concerned were you about the financial health of this business?

This question is asking whether you had concerns or anxieties about the ability of this business to remain financially solvent in 2021.
H.8 Outstanding Debt for the Business

Question: H.8 What is the total amount of this business’s current outstanding debt? Round to the nearest one thousand dollars. If none, report zero.

This question is asking you to make an up-to-date estimate of the total amount of money that the business owes its lenders, including accrued interest.

Report this amount in thousands. For example, if the amount is $150,000, please enter 150.

H.9 Level of Operations During the Coronavirus Pandemic

Question: H.9 Will this business be able to maintain operations into the next year (2023)?

This question is asking whether this business can sustain its activities into the year 2023.
SECTION I: CONTACT INFORMATION

I.1 Contact Information

In case we have questions about your responses, the Census Bureau may need to contact you. Provide the Census Bureau with a single point of contact at each business who can answer questions about survey responses. The point of contact for this survey may differ from that provided for other Census Bureau surveys.

I.2 Additional Remarks

Please provide any additional information that would assist in understanding your reported data. This includes, but is not limited to:

• your relation to the business owner(s) or nonprofit organization for whom you are reporting,
• why a certain question was left blank,
• what you did not understand about a question, or
• if you wanted to report a different answer to a question but the option was not available.

This section is optional and should be filled out at the business’s discretion.

Need help or have additional questions?

• Visit https://www.census.gov/abshelp
• Call 1-888-824-9954, between 8:30 a.m. to 8:00 p.m. Eastern time, Monday through Friday.