



U.S. DEPARTMENT OF COMMERCE
U.S. CENSUS BUREAU

Worksheet
ABS-1 (04/04/2022)

2022 ANNUAL BUSINESS SURVEY

DUE DATE:

Need help or have questions?

- **Visit** <https://www.census.gov/abshelp>
- **Call** 1-888-824-9954, between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

¿Necesita ayuda?

Si usted habla español y necesita ayuda para completar su cuestionario, llame sin cargo alguno al 1-888-824-9954, entre las 8 a.m. y las 8 p.m., hora del Este, de lunes a viernes.

WORKSHEET

DO NOT use this worksheet to respond to the survey, it is intended to assist you with gathering and preparing your data prior to reporting online.

Please view the online report for specific instructions that may apply to your EIN or firm.

Return to <https://portal.census.gov> when you are ready to report online.

(Please correct any errors in this mailing address.)

YOUR RESPONSE IS REQUIRED BY LAW. Title 13, United States Code, Sections 8(b), 131, and 182; Title 42, United States Code, Section 1861-76 (National Science Foundation Act of 1950, as amended); and Section 505 within the America COMPETES Reauthorization Act of 2010, authorize this collection. Sections 224 and 225 of Title 13 require your response. The U.S. Census Bureau is required by Section 9 of Title 13 to keep your information confidential and use your responses only to produce statistics. The Census Bureau is not permitted to publicly release your responses in a way that could identify your business, organization, or institution. Per the Federal Cybersecurity Enhancement Act of 2015, your data are protected from cybersecurity risks through screening of the systems that transmit data.

COMPLETE THIS SURVEY ONLINE

- Go to: <https://portal.census.gov>

This survey is jointly conducted by the U.S. Census Bureau and the National Center for Science and Engineering Statistics (NCSES) within the National Science Foundation.

Report Online - Do Not Return

Report Online - Do Not Return



SECTION A: COMPANY INFORMATION

The following section collects information on the operations and structure of this business. 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.**

A.1 Ceased Operations

Has this business ceased operations?

☐

Yes

☐

No – **Skip to 'A.3 Business Ownership – Foreign-Owned Entity'**

A.2 Date Ceased Operations

Print the month and year this business ceased operations.

MM	YYYY

Reporting Instructions: If the ceased-operations date is before January 2021, **skip to SECTION I: CONTACT INFORMATION** on page 52.

If the ceased-operations date is after January 1, 2021, you are still required to complete this survey covering any business activity for 2021, even though this business is not currently operating.

A.3 Business Ownership – Foreign-Owned Entity

In 2021, was this business a majority-owned subsidiary of a foreign company?

☐

Yes

☐

No

Reporting Instructions for Foreign-Owned Companies: If this business is owned by a foreign parent, the reporting unit for the survey is the U.S.-located company, including all majority-owned subsidiaries and divisions located in the domestic United States (50 states and the District of Columbia). For reporting purposes, the foreign parent and any foreign affiliates this company does not own should be treated the same as any business partner, customer, or supplier this business does not own.

A.4 Business Ownership – U.S. Entity

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.

☐

Yes – **Skip to 'A.6 Business – 10% or More Ownership'**

☐

No

A.5 Business Ownership – Government or Tribal Entity

In 2021, was this business owned by a government or tribal entity?

☐

Yes

☐

No

A.6 Business – 10% or More Ownership

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

☐

Yes

☐

No – Select "No" **ONLY** if no person owned 10% or more of this business.



A.7 Number of Owners

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.

- ☐ 1 person
- ☐ 2 people
- ☐ 3 people
- ☐ 4 people
- ☐ 5 - 10 people
- ☐ 11 or more people
- ☐ Business is owned by a parent company, estate, trust or other entity
- ☐ Do not know

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

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.

- a. Number of owners who received a W-2 issued by this business for salary or wages
- b. Number of employees who received a W-2 issued by this business for salary or wages
- c. Total

Number of People			

A.9 Number of Domestic Workers Who Did Not Receive a W-2

Not including employees or employees/owners included in the previous question, how many other people worked for this business in 2021, 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.

- a. Individuals whose work was directed by this business who received payment in other ways (e.g., contractors, consultants, temporary workers who received a 1099 from this business or payment from another business).
- b. Unpaid individuals who worked for this business (e.g., friends, volunteers, family members)

Number of People			

A.10 Total Worldwide and Domestic Sales and Operating Revenues

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.

	\$Bil.	Mil.	Thou.	Dol.
2021 sales, revenues, and grants				

Reporting Instructions: Report amount using U.S. Generally Accepted Accounting Principles (U.S. GAAP) as recognized by the Financial Accounting Standard Board (FASB). If this business follows International Financial Reporting Standards (IFRS), we request that you estimate any adjustments that would be required to conform to U.S. GAAP.



A.11 Domestic Sales and Revenues

How much of the '**A.10 Total Worldwide and Domestic Sales and Operating Revenues**' in 2021 sales, revenues, and grants was attributable to or originated from domestic operations? *Include sales and operating revenues to foreign customers, including foreign subsidiaries.*

Round to the nearest one thousand dollars.

If none, report zero.

Domestic operating revenues

\$Bil.	Mil.	Thou.	Dol.
			0 0 0

Reporting Instructions: 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.

A.12 Sources of Domestic Sales and Revenues

Approximately what share of this business's '**A.11 Domestic Sales and Revenues**' in 2021 domestic sales and revenues, including grants, came from the following?

If none, report zero.

a. Selling goods to customers, including other businesses		0 %
b. Selling services to customers, including other businesses		0 %
c. Licensing or royalties		0 %
d. Grants		0 %
e. Other (specify) →		0 %

Total = 100%

A.13 Types of Customers

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.**

- ☐ U.S. federal government
- ☐ State and local government, including school districts, transportation authorities, etc.
- ☐ Other businesses, including distributors of your product(s)
- ☐ Other organizations (foreign governments, nonprofits, etc.)
- ☐ Individuals
- ☐ Business did not have any sales

A.14 Types of Workers

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

- ☐ Full-time paid employees (workers who received a W-2 from this business)
- ☐ Part-time paid employees (workers who received a W-2 from this business)
- ☐ Paid day laborers
- ☐ Temporary staffing obtained from a temporary help service
- ☐ Leased employees from a leasing service or a professional employer organization
- ☐ Contractors, subcontractors, independent contractors, or outside consultants (workers who received a 1099 or payment from another company)
- ☐ None of the above



A.15 Franchise Operation

In 2021, did all or part of this business operate as a franchise?

- ☐ Yes
- ☐ No

A.16 Working From Home

In 2021, did this business allow any employees to work from home?

- ☐ Yes
- ☐ No – **Skip to 'A.18 Factors Affecting Working From Home'**

A.17 Percent of Employees Working From Home

In 2021, what percent of all employees at this business worked from home at the following frequencies?

If none, report zero. Estimates are acceptable.

a. Never	. 0 %
b. Less than one day per week	. 0 %
c. One day per week	. 0 %
d. Two to four days per week	. 0 %
e. Five or more days per week	. 0 %

Total = 100%

A.18 Factors Affecting Working From Home

In 2021, did any of the following factors limit the ability of this business's employees to work from home?

Select all that apply.

- ☐ Job or parts of job cannot be performed from home
- ☐ Management of employees working from home too costly or complicated
- ☐ Security (IT or other) concerns
- ☐ Other (specify) →
- ☐ No limiting factors

A.19 Primary Business Activity

Describe this business's primary business activity during 2021.



SECTION B: OWNER CHARACTERISTICS

The following section collects information on the owners of this business. Based on the number of owners you reported, you may be asked to complete this section for up to four owners of this business. If the business had no owners, then proceed to the instructions on the bottom of page 19.

Unless otherwise indicated, the reporting period for this section is calendar year 2021.

B.1 Percent Ownership

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%.

Name of Owner		Percentage Owned (Estimates are acceptable.)		
Name 1:		Owner 1:		0 %
Name 2:		Owner 2:		0 %
Name 3:		Owner 3:		0 %
Name 4:		Owner 4:		0 %

If percent entered for Owner 1 is more than 0%, then answer questions for Owner 1 on pages 7, 8, and 9.

If percent entered for Owner 2 is more than 0%, then answer questions for Owner 2 on pages 10, 11 and 12.

If percent entered for Owner 3 is more than 0%, then answer questions for Owner 3 on pages 13, 14 and 15.

If percent entered for Owner 4 is more than 0%, then answer questions for Owner 4 on pages 16, 17 and 18.



OWNER 1

If the business had no owners, then proceed to the instructions on the bottom of page 19.

B.1.1 Sex

What is the sex of *Owner 1*?

☐

Male

☐

Female

Note: Please answer BOTH B.1.2 Ethnicity and B.1.3 Race questions.

B.1.2 Ethnicity

Is *Owner 1* of Hispanic, Latino, or Spanish origin?

☐

No, not of Hispanic, Latino, or Spanish origin

☐

Yes, Mexican, Mexican American, Chicano

☐

Yes, Puerto Rican

☐

Yes, Cuban

☐

Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.* ➤

B.1.3 Race

What is *Owner 1*'s race? **Select all that apply.** (For this survey, Hispanic origins are not races.)

☐

White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.* ➤

☐

Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.* ➤

☐

American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.* ➤

☐

Chinese

☐

Vietnamese

☐

Native Hawaiian

☐

Filipino

☐

Korean

☐

Samoan

☐

Asian Indian

☐

Japanese

☐

Chamorro

☐

Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.* ➤

☐

Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.* ➤

B.1.4 Military Service

Has *Owner 1* 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?

☐

Yes

☐

No – **Skip to 'B.1.7 Initial Acquisition Year'** on page 8

B.1.5 Military Service Disability

Is *Owner 1* disabled as the result of illness or injury incurred or aggravated during military service?

☐

Yes

☐

No



B.1.6 Other Military Service

Do any of the following characteristics describe *Owner 1's* military service? **Select all that apply.**

- ☐ Served on active duty military service, not including training for the Reserves or National Guard
- ☐ Served on active duty military service after September 11, 2001
- ☐ Served on active duty military service in 2021
- ☐ Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2021
- ☐ None of the above

B.1.7 Initial Acquisition Year

In what year did *Owner 1* initially acquire ownership of this business?

Year			

☐ Don't know

B.1.8 Primary Income Source

In 2021, did this business provide *Owner 1's* primary source of personal income?

- ☐ Yes ☐ No

B.1.9 Prior Business Ownership

Not including this business, what is the status of the previous business *Owner 1* started most recently?

- ☐ This is the owner's first business
- ☐ Business is still operating, and *Owner 1* still owns it
- ☐ Business is no longer in operation
- ☐ Business was purchased by another company
- ☐ Business was purchased by another individual
- ☐ Other (specify)

B.1.10 Education Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school *Owner 1* completed?

- ☐ Less than high school / secondary school graduate – **Skip to 'B.1.12 Age'** on page 9
- ☐ High school / secondary school graduate – Diploma or GED – **Skip to 'B.1.12 Age'** on page 9
- ☐ Technical, trade, or vocational school – **Skip to 'B.1.12 Age'** on page 9
- ☐ Some college, but no degree – **Skip to 'B.1.12 Age'** on page 9
- ☐ Associate Degree (for example, AA, AS) – **Skip to 'B.1.12 Age'** on page 9
- ☐ 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)



B.1.11 Field of Highest Degree Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the field of the highest degree completed for *Owner 1*? **Select all that apply.**

- ☐ Biological, agricultural and environmental life sciences
- ☐ Chemistry, except biochemistry
- ☐ Computer and mathematical sciences and other technology and technical fields
- ☐ Earth, atmospheric and ocean sciences
- ☐ Economics, political science, psychology, sociology, and other social sciences
- ☐ Engineering
- ☐ Health
- ☐ Physics and astronomy
- ☐ Science and mathematics teacher education
- ☐ Other science and engineering related fields, not listed above ➤
-

- ☐ Art and humanities fields
- ☐ Education, except science and math teacher education
- ☐ Management and administration fields
- ☐ Sales and marketing fields
- ☐ Social service and related fields
- ☐ Other non-science and non-engineering related fields, not listed above ➤
-

B.1.12 Age

What was the age of *Owner 1* as of December 31, 2021?

- ☐ Under 25 ☐ 45 - 54
- ☐ 25 - 34 ☐ 55 - 64
- ☐ 35 - 44 ☐ 65 or over

B.1.13 Place of Birth

Was *Owner 1* born in the United States?

- ☐ Yes ☐ No

B.1.14 U.S. Citizenship

Is *Owner 1* a citizen of the United States?

- ☐ Yes ☐ No

B.1.15 Owner Disability

Does *Owner 1* 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.

- ☐ Yes ☐ No ☐ Don't know

B.1.16 Reasons for Owning the Business

How important to *Owner 1* is each of the following reasons for owning this business?

Select one for each row.

	Very Important	Somewhat Important	Not Important
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 a role model	☐	☐	☐
Wanted to carry on the family business	☐	☐	☐
Wanted to help and/or become more involved in my community	☐	☐	☐
Other (specify) ➤	☐	☐	☐



OWNER 2

If applicable, if not **Skip to 'B.5 One Family Majority Ownership'** on page 19.

B.2.1 Sex

What is the sex of *Owner 2*?

☐

Male

☐

Female

Note: Please answer BOTH B.2.2 Ethnicity and B.2.3 Race questions.

B.2.2 Ethnicity

Is *Owner 2* of Hispanic, Latino, or Spanish origin?

☐

No, not of Hispanic, Latino, or Spanish origin

☐

Yes, Mexican, Mexican American, Chicano

☐

Yes, Puerto Rican

☐

Yes, Cuban

☐

Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.* ↘

B.2.3 Race

What is *Owner 2's* race? **Select all that apply.** (For this survey, Hispanic origins are not races.)

☐

White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.* ↘

☐

Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.* ↘

☐

American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.* ↘

☐

Chinese

☐

Vietnamese

☐

Native Hawaiian

☐

Filipino

☐

Korean

☐

Samoan

☐

Asian Indian

☐

Japanese

☐

Chamorro

☐

Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.* ↘

☐

Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.* ↘

B.2.4 Military Service

Has *Owner 2* 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?

☐

Yes

☐

No – **Skip to 'B.2.7 Initial Acquisition Year'** on page 11

B.2.5 Military Service Disability

Is *Owner 2* disabled as the result of illness or injury incurred or aggravated during military service?

☐

Yes

☐

No



B.2.6 Other Military Service

Do any of the following characteristics describe *Owner 2's* military service? **Select all that apply.**

- ☐ Served on active duty military service, not including training for the Reserves or National Guard
- ☐ Served on active duty military service after September 11, 2001
- ☐ Served on active duty military service in 2021
- ☐ Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2021
- ☐ None of the above

B.2.7 Initial Acquisition Year

In what year did *Owner 2* initially acquire ownership of this business?

Year

☐ Don't know

B.2.8 Primary Income Source

In 2021, did this business provide *Owner 2's* primary source of personal income?

- ☐ Yes ☐ No

B.2.9 Prior Business Ownership

Not including this business, what is the status of the previous business *Owner 2* started most recently?

- ☐ This is the owner's first business
- ☐ Business is still operating, and *Owner 2* still owns it
- ☐ Business is no longer in operation
- ☐ Business was purchased by another company
- ☐ Business was purchased by another individual
- ☐ Other (specify)

B.2.10 Education Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school *Owner 2* completed?

- ☐ Less than high school / secondary school graduate – **Skip to 'B.2.12 Age'** on page 12
- ☐ High school / secondary school graduate – Diploma or GED – **Skip to 'B.2.12 Age'** on page 12
- ☐ Technical, trade, or vocational school – **Skip to 'B.2.12 Age'** on page 12
- ☐ Some college, but no degree – **Skip to 'B.2.12 Age'** on page 12
- ☐ Associate Degree (for example, AA, AS) – **Skip to 'B.2.12 Age'** on page 12
- ☐ 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)



B.2.11 Field of Highest Degree Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the field of the highest degree completed for *Owner 2*? **Select all that apply.**

- ☐ Biological, agricultural and environmental life sciences
- ☐ Chemistry, except biochemistry
- ☐ Computer and mathematical sciences and other technology and technical fields
- ☐ Earth, atmospheric and ocean sciences
- ☐ Economics, political science, psychology, sociology, and other social sciences
- ☐ Engineering
- ☐ Health
- ☐ Physics and astronomy
- ☐ Science and mathematics teacher education
- ☐ Other science and engineering related fields, not listed above ➤
-

- ☐ Art and humanities fields
- ☐ Education, except science and math teacher education
- ☐ Management and administration fields
- ☐ Sales and marketing fields
- ☐ Social service and related fields
- ☐ Other non-science and non-engineering related fields, not listed above ➤
-

B.2.12 Age

What was the age of *Owner 2* as of December 31, 2021?

- ☐ Under 25 ☐ 45 - 54
- ☐ 25 - 34 ☐ 55 - 64
- ☐ 35 - 44 ☐ 65 or over

B.2.13 Place of Birth

Was *Owner 2* born in the United States?

- ☐ Yes ☐ No

B.2.14 U.S. Citizenship

Is *Owner 2* a citizen of the United States?

- ☐ Yes ☐ No

B.2.15 Owner Disability

Does *Owner 2* 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.

- ☐ Yes ☐ No ☐ Don't know

B.2.16 Reasons for Owning the Business

How important to *Owner 2* is each of the following reasons for owning this business?

Select one for each row.

	Very Important	Somewhat Important	Not Important
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 a role model	☐	☐	☐
Wanted to carry on the family business	☐	☐	☐
Wanted to help and/or become more involved in my community	☐	☐	☐
Other (specify) ➤	☐	☐	☐



OWNER 3

If applicable, if not **Skip to 'B.5 One Family Majority Ownership'** on page 19.

B.3.1 Sex

What is the sex of *Owner 3*?

☐

Male

☐

Female

Note: Please answer BOTH B.3.2 Ethnicity and B.3.3 Race questions.

B.3.2 Ethnicity

Is *Owner 3* of Hispanic, Latino, or Spanish origin?

☐

No, not of Hispanic, Latino, or Spanish origin

☐

Yes, Mexican, Mexican American, Chicano

☐

Yes, Puerto Rican

☐

Yes, Cuban

☐

Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.* ↘

B.3.3 Race

What is *Owner 3's* race? **Select all that apply.** (For this survey, Hispanic origins are not races.)

☐

White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.* ↘

☐

Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.* ↘

☐

American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.* ↘

☐

Chinese

☐

Vietnamese

☐

Native Hawaiian

☐

Filipino

☐

Korean

☐

Samoan

☐

Asian Indian

☐

Japanese

☐

Chamorro

☐

Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.* ↘

☐

Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.* ↘

B.3.4 Military Service

Has *Owner 3* 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?

☐

Yes

☐

No – **Skip to 'B.3.7 Initial Acquisition Year'** on page 14

B.3.5 Military Service Disability

Is *Owner 3* disabled as the result of illness or injury incurred or aggravated during military service?

☐

Yes

☐

No



B.3.6 Other Military Service

Do any of the following characteristics describe *Owner 3's* military service? **Select all that apply.**

- ☐ Served on active duty military service, not including training for the Reserves or National Guard
- ☐ Served on active duty military service after September 11, 2001
- ☐ Served on active duty military service in 2021
- ☐ Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2021
- ☐ None of the above

B.3.7 Initial Acquisition Year

In what year did *Owner 3* initially acquire ownership of this business?

Year			

☐ Don't know

B.3.8 Primary Income Source

In 2021, did this business provide *Owner 3's* primary source of personal income?

- ☐ Yes ☐ No

B.3.9 Prior Business Ownership

Not including this business, what is the status of the previous business *Owner 3* started most recently?

- ☐ This is the owner's first business
- ☐ Business is still operating, and *Owner 3* still owns it
- ☐ Business is no longer in operation
- ☐ Business was purchased by another company
- ☐ Business was purchased by another individual
- ☐ Other (specify)

B.3.10 Education Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school *Owner 3* completed?

- ☐ Less than high school / secondary school graduate – **Skip to 'B.3.12 Age'** on page 15
- ☐ High school / secondary school graduate – Diploma or GED – **'B.3.12 Age'** on page 15
- ☐ Technical, trade, or vocational school – **Skip to 'B.3.12 Age'** on page 15
- ☐ Some college, but no degree – **Skip to 'B.3.12 Age'** on page 15
- ☐ Associate Degree (for example, AA, AS) – **Skip to 'B.3.12 Age'** on page 15
- ☐ 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)



B.3.11 Field of Highest Degree Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the field of the highest degree completed for *Owner 3*? **Select all that apply.**

- ☐ Biological, agricultural and environmental life sciences
- ☐ Chemistry, except biochemistry
- ☐ Computer and mathematical sciences and other technology and technical fields
- ☐ Earth, atmospheric and ocean sciences
- ☐ Economics, political science, psychology, sociology, and other social sciences
- ☐ Engineering
- ☐ Health
- ☐ Physics and astronomy
- ☐ Science and mathematics teacher education
- ☐ Other science and engineering related fields, not listed above ➤
-

- ☐ Art and humanities fields
- ☐ Education, except science and math teacher education
- ☐ Management and administration fields
- ☐ Sales and marketing fields
- ☐ Social service and related fields
- ☐ Other non-science and non-engineering related fields, not listed above ➤
-

B.3.12 Age

What was the age of *Owner 3* as of December 31, 2021?

- ☐ Under 25 ☐ 45 - 54
- ☐ 25 - 34 ☐ 55 - 64
- ☐ 35 - 44 ☐ 65 or over

B.3.13 Place of Birth

Was *Owner 3* born in the United States?

- ☐ Yes ☐ No

B.3.14 U.S. Citizenship

Is *Owner 3* a citizen of the United States?

- ☐ Yes ☐ No

B.3.15 Owner Disability

Does *Owner 3* 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.

- ☐ Yes ☐ No ☐ Don't know

B.3.16 Reasons for Owning the Business

How important to *Owner 3* is each of the following reasons for owning this business?

Select one for each row.

	Very Important	Somewhat Important	Not Important
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 a role model	☐	☐	☐
Wanted to carry on the family business	☐	☐	☐
Wanted to help and/or become more involved in my community	☐	☐	☐
Other (specify) ➤	☐	☐	☐



OWNER 4

If applicable, if not **Skip to 'B.5 One Family Majority Ownership'** on page 19.

B.4.1 Sex

What is the sex of *Owner 4*?

☐

Male

☐

Female

Note: Please answer BOTH B.4.2 Ethnicity and B.4.3 Race questions.

B.4.2 Ethnicity

Is *Owner 4* of Hispanic, Latino, or Spanish origin?

☐

No, not of Hispanic, Latino, or Spanish origin

☐

Yes, Mexican, Mexican American, Chicano

☐

Yes, Puerto Rican

☐

Yes, Cuban

☐

Yes, another Hispanic, Latino, or Spanish origin – *Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard, Ecuadorian, etc.* ↗

B.4.3 Race

What is *Owner 4's* race? **Select all that apply.** *(For this survey, Hispanic origins are not races.)*

☐

White – *Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.* ↗

☐

Black or African Am. – *Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.* ↗

☐

American Indian or Alaska Native – *Print name of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc.* ↗

☐

Chinese

☐

Vietnamese

☐

Native Hawaiian

☐

Filipino

☐

Korean

☐

Samoan

☐

Asian Indian

☐

Japanese

☐

Chamorro

☐

Other Asian – *Print, for example, Pakistani, Cambodian, Hmong, etc.* ↗

☐

Other Pacific Islander – *Print, for example, Tongan, Fijian, Marshallese, etc.* ↗

B.4.4 Military Service

Has *Owner 4* 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?

☐

Yes

☐

No – **Skip to 'B.4.7 Initial Acquisition Year'** on page 17

B.4.5 Military Service Disability

Is *Owner 4* disabled as the result of illness or injury incurred or aggravated during military service?

☐

Yes

☐

No



B.4.6 Other Military Service

Do any of the following characteristics describe *Owner 4's* military service? **Select all that apply.**

- ☐ Served on active duty military service, not including training for the Reserves or National Guard
- ☐ Served on active duty military service after September 11, 2001
- ☐ Served on active duty military service in 2021
- ☐ Served in the National Guard or as a reservist of any branch of the U.S. Armed Forces in 2021
- ☐ None of the above

B.4.7 Initial Acquisition Year

In what year did *Owner 4* initially acquire ownership of this business?

Year

☐ Don't know

B.4.8 Primary Income Source

In 2021, did this business provide *Owner 4's* primary source of personal income?

- ☐ Yes ☐ No

B.4.9 Prior Business Ownership

Not including this business, what is the status of the previous business *Owner 4* started most recently?

- ☐ This is the owner's first business
- ☐ Business is still operating, and *Owner 4* still owns it
- ☐ Business is no longer in operation
- ☐ Business was purchased by another company
- ☐ Business was purchased by another individual
- ☐ Other (specify)

B.4.10 Education Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school *Owner 4* completed?

- ☐ Less than high school / secondary school graduate – **Skip to 'B.4.12 Age'** on page 18
- ☐ High school / secondary school graduate – Diploma or GED – **Skip to 'B.4.12 Age'** on page 18
- ☐ Technical, trade, or vocational school – **Skip to 'B.4.12 Age'** on page 18
- ☐ Some college, but no degree – **Skip to 'B.4.12 Age'** on page 18
- ☐ Associate Degree (for example, AA, AS) – **Skip to 'B.4.12 Age'** on page 18
- ☐ 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)



B.4.11 Field of Highest Degree Prior to Owning the Business

Prior to establishing, purchasing, or acquiring this business, what was the field of the highest degree completed for *Owner 4*? **Select all that apply.**

- ☐ Biological, agricultural and environmental life sciences
- ☐ Chemistry, except biochemistry
- ☐ Computer and mathematical sciences and other technology and technical fields
- ☐ Earth, atmospheric and ocean sciences
- ☐ Economics, political science, psychology, sociology and other social sciences
- ☐ Engineering
- ☐ Health
- ☐ Physics and astronomy
- ☐ Science and mathematics teacher education
- ☐ Other science and engineering related fields, not listed above ➤
-

- ☐ Art and humanities fields
- ☐ Education, except science and math teacher education
- ☐ Management and administration fields
- ☐ Sales and marketing fields
- ☐ Social service and related fields
- ☐ Other non-science and non-engineering related fields, not listed above ➤
-

B.4.12 Age

What was the age of *Owner 4* as of December 31, 2021?

- ☐ Under 25 ☐ 45 - 54
- ☐ 25 - 34 ☐ 55 - 64
- ☐ 35 - 44 ☐ 65 or over

B.4.13 Place of Birth

Was *Owner 4* born in the United States?

- ☐ Yes ☐ No

B.4.14 U.S. Citizenship

Is *Owner 4* a citizen of the United States?

- ☐ Yes ☐ No

B.4.15 Owner Disability

Does *Owner 4* 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.

- ☐ Yes ☐ No ☐ Don't know

B.4.16 Reasons for Owning the Business

How important to *Owner 4* is each of the following reasons for owning this business?

Select one for each row.

	Very Important	Somewhat Important	Not Important
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 a role model	☐	☐	☐
Wanted to carry on the family business	☐	☐	☐
Wanted to help and/or become more involved in my community	☐	☐	☐
Other (specify) ➤	☐	☐	☐



B.5 One-Family-Majority Ownership

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.*)

☐ Yes☐ No**B.6 Joint Ownership**

In 2021, did spouses / unmarried partners jointly own this business?

☐ Yes☐ No – **See instructions at the bottom of this page****B.7 Equal Operation**

In 2021, was this business operated equally by both spouses / unmarried partners?

☐ Yes, equally operated by spouses / unmarried partners☐ No, primarily operated by **Owner 1**☐ No, primarily operated by **Owner 2**

If you reported "No" to '**A.4 Business Ownership – U.S. Entity**' AND you reported between 1-9 total employment to '**A.8 Number of W-2 Paid Domestic Employees or Employees/Owners,**' then **skip to SECTION D: RESEARCH AND DEVELOPMENT FOR MICROBUSINESSES** on page 20.

All others **skip to SECTION E: GOODS, SERVICES, AND BUSINESS PROCESSES AND TECHNOLOGY** on page 27.



SECTION C: RESEARCH ACTIVITIES AT NONPROFIT ORGANIZATIONS

The following section collects information on your organization and asks about research performed and/or funded by your organization. For the purposes of this survey, your organization is defined as all units included in your Internal Revenue Service (IRS) Form 990 or IRS Form 990-PF filings. Only organizations headquartered in the United States are eligible for this section. The reporting period for this section is your organization's fiscal year ending in 2021. *Estimates are acceptable. Report all items to the best of your ability.*

C.1 Organization Affiliation

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.

☐ Yes

If "Yes," specify 

☐ No

C.2 Total Expenses

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.

\$Bil.	Mil.	Thou.	Dol.

C.3 Number of Employees

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.

Number

C.4 Fiscal Year End

In what month did your organization's Fiscal Year (FY) 2021 end?

MM	YYYY



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

C.5 Research Performed by Your Organization

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 on page 22.)

☐

Yes

☐

No

If you would like to add additional detail or clarification to your response, please comment in the space provided below.



C.6 Research Performed by Others

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.)

☐ Yes

☐ No

If you would like to add additional detail or clarification to your response, please comment in the space provided below.

If you reported "No" for '**C.5 Research Performed by Your Organization**' AND "No" for '**C.6 Research Performed by Others**,' skip to '**C.20 Burden Estimate**' on page 29.

If you reported "No" for '**C.5 Research Performed by Your Organization**' AND "Yes" for '**C.6 Research Performed by Others**,' skip to '**C.16 Funding for Research Performed by Other Organizations**' on page 28.

All others continue to '**C.7 Funding for Research Performed by This Organization**.'

C.7 Funding for Research Performed by This Organization

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 '**C.17 -C.19**' on pages 28-29.
- 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

Total

\$Bil.	Mil.	Thou.	Dol.

If you would like to add additional detail or clarification to your response, please comment in the space provided below.

If '**C.7 Funding for Research Performed by This Organization**' are less than \$50,000, then skip to '**C.20 Burden Estimate**' on page 29.



C.8 Research Funding Sources

How much of the 'C.7 Funding for Research Performed by This Organization' 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.

	\$Bil.	Mil.	Thou.	Dol.
a. Internal funds: Your organization's own funds from your endowment, general donations, or other unrestricted sources				
b. 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.9 Research Performance by Field

How much of the 'C.7 Funding for Research Performed by This Organization' 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.

	\$Bil.	Mil.	Thou.	Dol.
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				0 0 0
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				0 0 0
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.				0 0 0
d. Geosciences, Atmospheric Sciences, and Ocean Sciences: e.g., Atmospheric sciences and meteorology, Geological and earth sciences, or Ocean and marine sciences				0 0 0
e. Mathematics, Statistics, and Computer and Information Sciences: e.g., Computer sciences, Information sciences, Information technology, Mathematics, or Statistics				0 0 0
f. Physical Sciences: e.g., Astronomy and astrophysics, Chemistry, Materials science, or Physics				0 0 0
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				0 0 0
h. Humanities: e.g., English language and literature, letters; Foreign languages and literature; History; or Philosophy and religious studies.				0 0 0
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				0 0 0
Total				0 0 0



C.10 Research Performance by Type of Research

How much of the '**C.7 Funding for Research Performed by This Organization**' 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.

(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.

\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.
			0 0 0				0 0 0				0 0 0

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

\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.
			0 0 0				0 0 0				0 0 0

- 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.

\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.
			0 0 0				0 0 0				0 0 0

Total: Total for column (1) should equal the amount entered for '**C.8.a. Research Funding Sources – Federal Government.**' Total for column (3) should equal the amount entered for '**C.7 Funding for Research Performed by This Organization.**'

\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.	\$Bil.	Mil.	Thou.	Dol.
			0 0 0				0 0 0				0 0 0

If you would like to add additional detail or clarification to your response, please comment in the space provided below.

Examples

Basic research	Applied research	Experimental development
A researcher is studying the properties of human blood to determine what affects coagulation.	A researcher is conducting research on how a new chicken pox vaccine affects blood coagulation.	A researcher is conducting clinical trials to test a newly developed chicken pox vaccine for young children.
A researcher is studying the properties of molecules under various heat and cold conditions.	A researcher is investigating the properties of particular substances under various heat and cold conditions with the objective of finding longer lasting components for highway pavement.	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.
A researcher is investigating the effect of different types of manipulatives on the way first graders learn mathematical strategy by changing manipulatives and then measuring what students have learned through standardized instruments.	A researcher is studying the implementation of a specific math curriculum to determine what teachers need to know to implement the curriculum successfully.	A researcher is developing and testing software and support tools, based on fieldwork, to improve mathematics cognition for student special education.



C.11 Research Performance by Type of Cost

How much of the '**C.7 Funding for Research Performed by This Organization**' spent on research performed within your organization was for each of the following types of costs?

	\$Bil.	Mil.	Thou.	Dol.
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.12 Research Employees for Nonprofit Organizations

Of the '**C.3 Number of Employees**' 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**.')

	Number
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

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.

	Number of FTEs
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.14 Research Contract Employees for Nonprofit Organizations

- 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.

☐ Yes

☐ No

- b. If "Yes," how many contract employees worked on your **research activities** during FY 2021?

Employees

C.15 Research Volunteers for Nonprofit Organizations

- 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.

☐ Yes

☐ No

- b. If "Yes," how many volunteers worked on your **research activities** during FY 2021? . . .

Number

If you reported "No" for 'C.6 Research Performed by Others,' skip to 'C.20 Burden Estimate' on page 29.



C.16 Funding for Research Performed by Other Organizations

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 recipients in FY 2021.

Exclude:

- Research performed by contract employees.

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

\$Bil.	Mil.	Thou.	Dol.
			0 0 0

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

			0 0 0
----------------------	----------------------	----------------------	-------

Total

			0 0 0
----------------------	----------------------	----------------------	-------

If you would like to add additional detail or clarification to your response, please comment in the space provided below.

C.17 Total Capital Expenditures for Your Organization

What was the amount of your organization's capital expenditures in FY 2021?

Total

\$Bil.	Mil.	Thou.	Dol.
			0 0 0

C.18 Total Capital Expenditures for Research Operations

How much of the 'C.17 Total Capital Expenditures for Your Organization' 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 This Organization.'

Total

\$Bil.	Mil.	Thou.	Dol.
			0 0 0



C.19 Capital Expenditures for Research Operations by Type of Cost

How much of the 'C.18 Total Capital Expenditures for Research Operations' in capital expenditures for research operations was for the following?

	\$Bil.	Mil.	Thou.	Dol.
a. Land acquisition.				0 0 0
b. Buildings and land improvement.				0 0 0
c. Equipment.				0 0 0
d. Capitalized software.				0 0 0
e. All other capital expenditures for research operations.				0 0 0
Total.				0 0 0

C.20 Burden Estimate

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.

Hours

Minutes

:



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.

What is Research and Development (R&D)?

Research and development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge.

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

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. 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 2021.

Estimates are acceptable.

Report all items to the best of your ability.



D.1 R&D Activities

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 for each row.

	Yes	No
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.	☐	☐

If "No" is selected for a. – j., skip to 'D.17 Federal Tax Credit for Research Activities' on page 35.

D.2 R&D Costs

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, and fringe benefits
- Plant, machinery, and equipment, except that which was capitalized because it had an alternative future use
- Materials, supplies, software
- Rent and utilities
- Consultants and 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' on page 34.
- 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

\$Mil.	Thou.	Dol.

If 'D.2 R&D Costs' are less than \$50,000, skip to 'D.17 Federal Tax Credit for Research Activities' on page 35.



D.3 Foreign R&D Costs

During 2021, what amount, if any, of the **'D.2 R&D Costs'** was performed outside the United States by this business or others?

Round to the nearest thousand dollars.

\$Mil.	Thou.	Dol.

D.4 Domestic R&D Costs

Calculate this business's domestic R&D costs by subtracting the amount entered for R&D costs outside the United States (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.

\$Mil.	Thou.	Dol.

If **'D.4 Domestic R&D Costs'** equals \$0, **skip to 'D.17 Federal Tax Credit for Research Activities'** on page 35.

D.5 Types of R&D Costs

During 2021, how much of the **'D.4 Domestic R&D Costs'** in 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

\$Mil.	Thou.	Dol.

b. Expensed machinery and equipment (not capitalized).

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c. Materials and supplies

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d. Payments to others for R&D, including purchased R&D services

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e. Depreciation on R&D property and equipment

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f. All other costs (e.g., consultants, contractors, travel, rent).

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Total = **'D.4 Domestic R&D Costs'**

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D.6 Domestic R&D Performance Costs

Calculate this business's domestic R&D performance costs 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'**). Use this value in the next question. **Round to the nearest thousand dollars.**

This business's domestic R&D performance costs in 2021.

\$Mil.	Thou.	Dol.

If **'D.6 Domestic R&D Performance Costs'** equals \$0, **skip to 'D.17 Federal Tax Credit for Research Activities'** on page 35.



D.7 Funding Sources for R&D Activities

During 2021, of the **'D.6 Domestic R&D Performance Costs'** in total domestic R&D performance cost, how much was paid for by the following sources? **Round to the nearest thousand dollars.**

	\$Mil.	Thou.	Dol.
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 Services, 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'			

D.8 R&D Categories

During 2021, of the **'D.6 Domestic R&D Performance Costs'** in domestic R&D performance cost, how much was for the following types of R&D? **Round to the nearest thousand dollars.**

	\$Mil.	Thou.	Dol.
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'			



If **'D.7.h. Domestic R&D Performance Costs Funded by the U.S. Federal Government'** equals \$0 (or missing), **skip to 'D.10 Total Capital Expenditures for This Business.'**

All others continue to **'D.9 R&D Categories Funded by the U.S. Federal Government.'**

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

During 2021, of the **'D.7.h. Domestic R&D Performance Costs Funded by the U.S. Federal Government'** 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.**

	\$Mil.	Thou.	Dol.
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'			

D.10 Total Capital Expenditures for this Business

What was the amount of this business's capital expenditures in 2021?

	\$Mil.	Thou.	Dol.
Total			

If **'D.10 Total Capital Expenditures for this Business'** equals \$0, **skip to 'D.13 Domestic R&D Employees'** on page 35.

D.11 Total Capital Expenditures for R&D Operations

How much of the **'D.10 Total Capital Expenditures for this Business'** in capital expenditures was for R&D operations?

- Businesses should allocate capital expenditures that benefit both R&D 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.'**

	\$Mil.	Thou.	Dol.
Total			

If **'D.11 Total Capital Expenditures for R&D Operations'** equals \$0, **skip to 'D.13 Domestic R&D Employees'** on page 35.

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

How much of the **'D.11 Total Capital Expenditures for R&D Operations'** in capital expenditures for R&D operations was for the following?

	\$Mil.	Thou.	Dol.
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.13 Domestic R&D Employees

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 received 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 reported this business's total number of employees in **'A.8 Number of W-2**

Paid Employees or Employees/Owners' on page 3. Responses below should not exceed the number of employees reported in A.8.

Employees

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, how many were male?

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

If you reported "0" for **item a.** in question **'D.13 Domestic R&D Employees,'** skip to **'D.17 Federal Tax Credit for Research Activities.'**

D.14 Domestic R&D Employees' Occupations

Of the **'D.13.a. R&D Employees,'** how many were? **If none, report zero.**

Employees

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 (Total from **'D.13.a. Domestic R&D Employees'**)

e. Of the researchers reported in line **D.14.a.,** how many had PhDs?

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

What was the full-time equivalent of the **'D.13.a. Domestic R&D Employees,'** R&D employees? *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 workweek they work on R&D. Report partial FTEs in decimals.*

Number of FTEs

For example, report 1/2 FTE as .5.

Total FTEs

D.16 Domestic Researchers Full-Time Equivalent

What was the full-time equivalent of the **'D.14.a. Domestic R&D Employee Occupations'** researchers? **Report partial FTEs in decimals. For example, report 1/2 FTE as .5.**

Number of FTEs

Total FTEs

D.17 Federal Tax Credit for Research Activities

Did this business file for the federal tax credit for increasing research activities (IRS Form 6765) in 2021?

☐ Yes

☐ No



D.18 State Tax Credit for Research Activities

a. Did this business file for the state tax credit for increasing research activities in 2021?

☐ Yes

☐ No

b. If yes, what state(s)? **Select all that apply.**

☐ Alabama

☐ Alaska

☐ Arizona

☐ Arkansas

☐ California

☐ Colorado

☐ Connecticut

☐ Delaware

☐ District of Columbia

☐ Florida

☐ Georgia

☐ Hawaii

☐ Idaho

☐ Illinois

☐ Indiana

☐ Iowa

☐ Kansas

☐ Kentucky

☐ Louisiana

☐ Maine

☐ Maryland

☐ Massachusetts

☐ Michigan

☐ Minnesota

☐ Mississippi

☐ Missouri

☐ Montana

☐ Nebraska

☐ Nevada

☐ New Hampshire

☐ New Jersey

☐ New Mexico

☐ New York

☐ North Carolina

☐ North Dakota

☐ Ohio

☐ Oklahoma

☐ Oregon

☐ Pennsylvania

☐ Rhode Island

☐ South Carolina

☐ South Dakota

☐ Tennessee

☐ Texas

☐ Utah

☐ Vermont

☐ Virginia

☐ Washington

☐ West Virginia

☐ Wisconsin

☐ Wyoming

Note: Additional questions about R&D changes due to the coronavirus pandemic will be 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 this business's introduction of new or improved goods, services, or business processes that differed significantly from this 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 this business. However, they can fail or take time to prove themselves.

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

The following section asks about the 2019 to 2021 time period, instead of one year as in other sections of this survey.

E.1 New or Improved Goods

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.*

☐ Yes

☐ No

E.2 New or Improved Services

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.*

☐ Yes

☐ No

If you reported "No" to 'E.1 New or Improved Goods' and 'E.2 New or Improved Services,' skip to 'E.5 New or Improved Business Processes' on page 38.

E.3 Novelty of New or Improved Goods or Services

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 for each row.

- | | Yes | No |
|---|--------------------------|--------------------------|
| 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 good or service that was identical or very similar to products already offered by your competitors | ☐ | ☐ |



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

In 2021, what percentage of this business's '**A.11 Domestic Sales and Revenues**' 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 reported for '**A.11 Domestic Sales and Revenues.**' Estimates are acceptable.*

	Percent
a. New or improved goods or services introduced during 2019 to 2021 that were new to the market	%
b. New or improved goods or 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%

E.5 New and Improved Business Processes

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 for each row.

	Yes	No
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).	☐	☐

If you reported less than 10 employees for '**A.8 Number of W-2 Paid Domestic Employees or Employees/Owners,**' skip to '**E.7 Technology R&D**' on page 39.

All others continue to '**E.6 R&D Activities for Businesses with 10 or More Employees.**'

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

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

☐ Yes

☐ No



E.7 Technology R&D

During 2021, did this business perform or fund R&D on the following technologies?

Select one for each row.

	Yes	No
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, braincomputer 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)	☐	☐



E.8 Use of Technologies

During 2021, to what extent did this business use the following technologies?

Select one for each row.

	A lot	Somewhat	A little	Not at all
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).	☐	☐	☐	☐



If response to **'E.8. Use of Technologies - item c. Artificial intelligence'** is "a lot" or "somewhat," continue to **'E.9.A Impact of Artificial Intelligence Technology Use.'**

Else if response to 'E.8. Use of Technologies - item I. Renewable energy generation and storage' is "a lot" or "somewhat," skip to 'E.9.B Impact of Renewable Energy Generation and Storage Technology Use.'

All others skip to 'E.10 Source of Technology Capabilities' on page 32.

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

During 2021, to what extent did this business's use of artificial intelligence technology impact your workforce for each of the following?

Select one for each row.

	Increase	Decrease	No impact	Don't know
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.	☐	☐	☐	☐

If response to **'E.8. Use of Technologies - item I. Renewable energy generation and storage'** is "a lot" or "somewhat," **skip to 'E.9.B Impact of Renewable Energy Generation and Storage Technology Use.'**

All others skip to 'E.10 Source of Technology Capabilities' on page 42.

E.9.B. Impact of Renewable Energy Generation and Storage Technology Use

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 for each row.

	Increase	Decrease	No impact	Don't know
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.	☐	☐	☐	☐



E.10 Source of Technology Capabilities

During the three years 2019 to 2021, did this business obtain the necessary technical expertise through any of the following means?

Select one for each row.

	Yes	No
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	☐	☐



SECTION F: DESIGN AND INTELLECTUAL PROPERTY

The following set of questions asks about the role that design plays in your business. Design defined broadly is everywhere—decisions in the making of any good or service contribute to design. We are interested in collecting information on clear design activities defined as part of structured creative processes.

F.1 Design Activities

Does this business take a structured approach to conducting design activities?

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.

- ☐ Yes
- ☐ No – Skip to ‘F.12 Future Design Activity Resources’ on page 35.

F.2 Resources for Design Activities

Does this business provide resources for design activities?

- ☐ Yes
- ☐ No – Skip to ‘F.4 Design-Related Engineering Activities.’

F.3 Resource Budget for Design Activities

Do those resources from ‘F.2 Resources for Design Activities’ have a budget?

- ☐ Yes
- ☐ No

F.4 Design-Related Engineering Activities

Does this business conduct the following design-related engineering activities?

Select one for each row.

	Yes	No
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.	☐	☐

F.5 Resources for Design-Related Engineering Activities

Does this business provide resources for design-related engineering activities?

- ☐ Yes
- ☐ No – Skip to ‘F.7 Design Activities Performance’ on page 44.

F.6 Resource Budget for Design-Related Engineering Activities

Do the resources from design-related engineering activities have a budget?

- ☐ Yes
- ☐ No



F.7 Design Activities Performance

Are any design activities performed by the following?

Select one for each row.

	Yes	No
a. Employees	☐	☐
b. Contractors.	☐	☐

F.8 Types of Employees and Design Activities

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) ➤

F.9 Number of Employees and Design Activities

How many employees and/or contractors routinely performed design activities in the following years?

If none, report zero.

	Number of Employees
2021	
2019	

F.10 Organization of Design Employees

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

F.11 Approach to Design

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) ➤



F.12 Future Design Activity Resources

How much do you expect this business's resources for design activities to change over the next three years?

- ☐ Increase substantially
- ☐ Increase slightly
- ☐ No change
- ☐ Decrease slightly
- ☐ Decrease substantially

F.13 Intellectual Property Protection Methods

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 for each row.

	Yes	No
a. Utility patents (patents for inventions, applied for or awarded)	☐	☐
b. Design patents (patents for appearance, applied for or awarded).	☐	☐
c. Copyright.	☐	☐
d. Trademarks	☐	☐

F.14 Additional Intellectual Property Protection Methods

Does this business use the following less formal means of protecting any intellectual property?

Select one for each row.

	Yes	No
a. Design complexity	☐	☐
b. Nondisclosure agreements or non-compete clauses.	☐	☐
c. Branding and product image	☐	☐
d. Trade secrets	☐	☐



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 better understand, plan, and make decisions affected by the relationship between domestic and foreign activities.

For questions requiring dollar amounts, estimates are acceptable.

G.1 Worldwide Operating Expenses

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

Total worldwide operating expenses or costs.

\$Bil.	Mil.	Thou.	Dol.

G.2 Domestic Operating Expenses

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 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

Total domestic operating expenses or costs.

\$Bil.	Mil.	Thou.	Dol.



G.3 Activities Conducted by Domestic Unaffiliated Companies

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 for each row.

	Yes	No
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 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	☐	☐

G.4 Activities Conducted by Foreign Unaffiliated Companies

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 for each row.

	Yes	No
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 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	☐	☐



G.5 Activities Conducted by Foreign-Affiliated Companies

In 2021, did any affiliated companies located outside the United States conduct any of the following activities for this business? (*Affiliated companies located outside the United States may be a foreign subsidiary or a foreign parent*).

Select one for each row.

	Yes	No
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 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	☐	☐

G.6 Manufacturing Activities

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.

- ☐ Yes
- ☐ No

G.7 Contracting Out Manufacturing

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?

- ☐ Yes
- ☐ No – **Skip to ‘G.10 Contracting In Manufacturing’** on page 49.

G.8 Contracting Out Manufacturing by Company Type

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

G.9 Design for Contracting Out

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?

- ☐ Yes
- ☐ No



G.10 Contracting In Manufacturing

In 2021, did this business perform any manufacturing tasks for any unaffiliated company or affiliated companies located outside the United States?

☐

Yes

☐

No – skip to 'Section H: Coronavirus Pandemic Impact on Research and Development and Business Activities' on page 50.

G.11 Contracting In Manufacturing by Company Type

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

G.12 Design for Contracting In

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 the previous question?

☐

Yes

☐

No



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

In 2021, did the following statements apply to this business's research and development (R&D) in response to the coronavirus pandemic? **Select one for each row.**

Yes No

- | | | |
|---|--------------------------|--------------------------|
| 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 and skip to 'H.6 Effect of Coronavirus Pandemic on Business Sales' on page 51.

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

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

- ☐ Yes, increased in-house R&D expenditures
- ☐ Yes, decreased in-house R&D expenditures
- ☐ No change in in-house R&D expenditures due to the coronavirus pandemic
- ☐ Don't know

H.3 R&D Performance Due to Coronavirus Pandemic

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.*

- ☐ Yes
- ☐ No

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

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?

- ☐ Yes, an increase in FTEs
- ☐ Yes, a decrease in FTEs
- ☐ No change in R&D personnel due to the coronavirus pandemic
- ☐ Don't know



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

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

- ☐ Yes, increased payments made to other organizations for R&D due to the coronavirus pandemic
- ☐ Yes, decreased payments made to other organizations for R&D due to the coronavirus pandemic
- ☐ No change in payments made to other organizations for R&D due to the coronavirus pandemic
- ☐ Don't know

When answering the following questions, please factor in the coronavirus pandemic and how it affected this business.

H.6 Effect of Coronavirus Pandemic on Business Sales

How would you assess the overall effect of the coronavirus pandemic on this business's sales in 2021?

- ☐ Increased significantly
- ☐ Increased somewhat
- ☐ Had little to no change
- ☐ Decreased somewhat
- ☐ Decreased significantly

H.7 Financial Health of the Business

In 2021, how concerned were you about the financial health of this business?

- ☐ Not that concerned
- ☐ Somewhat concerned
- ☐ Very concerned

H.8 Outstanding Debt for the Business

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

\$Bil.	Mil.	Thou.	Dol.

- ☐ Don't know

H.9 Level of Operations During the Coronavirus Pandemic

Will this business be able to maintain operations into the next year (2023)?

- ☐ Yes, at or above the current level of operations
- ☐ Yes, at or below the current level of operations
- ☐ No
- ☐ Don't know



SECTION I: CONTACT INFORMATION

Enter the first and last name of the person who is filling out this survey. We request a telephone number so we can contact you if there is a question.

Contact Name

Title

Area code

Phone number

-

Ext.

Email address

Additional Remarks: Please use this space for any explanations that may be essential in understanding your reported data.

Thank you for completing the 2022 Annual Business Survey form.



Definitions

Domestic (or U.S.-located):

Refers to a location in any of the U.S. 50 states and the District of Columbia.

Foreign parent (of a U.S.-located business):

The first entity outside the United States in an affiliate's ownership chain that has a direct or indirect investment interest of more than 50 percent of the affiliate's voting securities.

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).

Research and Development (R&D):

Research and development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge and to devise new applications of available knowledge.

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

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
 - 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



Report Online - Do Not Return

Report Online - Do Not Return

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