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 <a href="https://portal.census.gov">https://portal.census.gov</a> 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.



# **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.** 

_				
<b>A.1</b>	Ceased Operations			
Has	this business ceased operations?			
	Yes			
	No - Skip to 'A.3 Business Ownership - Foreign-Owned Entity'			
<b>A.2</b>	Date Ceased Operations			
Print	the month and year this business ceased operations.			
MI	M YYYY  D D D D			
	<b>Reporting Instructions:</b> If the ceased-operations date is before January 2021, <b>skip to SECTION I: CONTACT INFORMATION</b> 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			
	221, was this business a majority-owned subsidiary of a foreign company?			
	Yes			
	No			
	<b>Reporting Instructions for Foreign-Owned Companies:</b> If this business is owned by a foreign parent, the reporting unit for the survey is the U.Slocated 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.			
<b>A.4</b>	Business Ownership – U.S. Entity			
Exar	121, did another U.S. company or other entity own more than 50 percent of this business?  Imples of other entities include estates, trusts, employee stock ownership plans (ESOPs), associations, inhership clubs, and cooperatives.			
	Yes – Skip to 'A.6 Business – 10% or More Ownership'			
	No			
A.5	Business Ownership – Government or Tribal Entity			
	21, was this business owned by a government or tribal entity?			
	Yes			
	No			
<b>A.6</b>	Business – 10% or More Ownership			
	21, did at least one person own 10% or more of this business? <b>Do not count parent companies</b> , stes, 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?					
	o not combine two or more owners to create one owner.				
	ount spouses and partners as separate owners. ount 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	У			
	Do not know				
A.8	Number of W-2 Paid Domestic Employees or Employees/Owne	rs			
	the pay period including March 12, 2021, how many people worked for		isiness in	cluding the	se naid
thro	bugh grants? Include both full-time and part-time employees as well as ted States.				
Co	unt each person only once. If none, report zero.		N	lumber of Pe	ople
	a. Number of owners who received a W-2 issued by this business salary or wages				
	·				
	b. Number of employees who received a W-2 issued by this busine salary or wages				
	c. Total				
		_			
	Number of Domestic Workers Who Did Not Receive a W-2				
for	including employees or employees/owners included in the previous of this business in 2021, including those paid through grants? <i>Include both</i>				
	I as yourself, if applicable. Include only persons in the United States.  unt each person only once. If none, report zero.				
				Number	of People
	a. Individuals whose work was directed by this business who recein other ways (e.g., contractors, consultants, temporary workers a 1099 from this business or payment from another business).	who rece	eived		
	b. Unpaid individuals who worked for this business (e.g., friends, volunteers,				
family members)					
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?					
Ro	und to the nearest one thousand dollars. If none, report zero.				
		\$Bil.	Mil.	Thou.	Dol.
202	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 t Financial Reporting Standards (IFRS), we request that you estimate an to conform to U.S. GAAP.	his busin	ess follow	s İnternatio	nal



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? <i>Include sales and operating</i>			
reve	nues to foreign customers, including foreign subsidiaries.		
	and to the nearest one thousand dollars.  Separate one, report zero.  \$Bil. Mil. Thou. Dol.		
Dom	nestic operating revenues		
	<b>Reporting Instructions:</b> 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	2 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		
	b. Selling services to customers, including other businesses		
	c. Licensing or royalties.		
	d. Grants		
	e. Other (specify) →		
Λ 11	Total = 100%		
In 20	Types of Customers  O21, which of the following types of customers accounted for 10% or more of this business's total sales of ds and/or services? <b>Select all that apply.</b>		
	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	4 Types of Workers		
In 20	221, 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'
- No okup to Alio Luctoro Aliosting Horking From Hollio
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? <i>If none, report zero. Estimates are acceptable.</i>
O Nover
a. Never
b. Less than one day per week
b. Loss than one day per week
c. One day per week
d. Two to four days per week
O Five or more days per week
e. Five or more days per week
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? <b>Select all that apply.</b>
☐ 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	B.1.3 Race
If the business had no owners, then proceed to the instructions on the bottom of page 19.	What is Owner 1's race? <b>Select all that apply.</b> (For this survey, Hispanic origins are not races.)
B.1.1 Sex	White – Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.
What is the sex of <i>Owner 1</i> ?	English, Italian, Lebanese, Egyptian, etc.
☐ Male ☐ Female	
	Black or African Am. – Print, for example,
Note: Please answer BOTH B.1.2 Ethnicity and B.1.3 Race questions.	☐ African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc. ⊋
B.1.2 Ethnicity	
Is Owner 1 of Hispanic, Latino, or Spanish origin?	— American Indian or Alaska Native – <i>Print name</i>
No, not of Hispanic, Latino, or Spanish origin	of enrolled or principal tribe(s), for example,
Yes, Mexican, Mexican American, Chicano	Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community, etc. ⊋
Yes, Puerto Rican	
Yes, Cuban	
Yes, another Hispanic, Latino, or Spanish origin – <i>Print, for example, Salvadoran, Dominican,</i>	Chinese U Vietnamese Hawaiian
Colombian, Guatemalan, Spaniard, Ecuadorian, etc. <sub>✓</sub>	☐ Filipino ☐ Korean ☐ Samoan
Zedadorian, etc.	☐ Asian Indian ☐ Japanese ☐ Chamorro
	Other Asian – Print, for example, Pakistani, Cambodian, Hmong, etc. 🗸
	Other Pacific Islander – <i>Print, for example,</i>
	☐ 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	B.1.10 Education Prior to Owning the Business
Do any of the following characteristics describe Owner 1's military service? <b>Select all that apply.</b>	Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school <i>Owner 1</i> completed?
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	Less than high school / secondary school graduate – <b>Skip to 'B.1.12 Age'</b> on page 9  High school / secondary school graduate – Diploma or GED – <b>Skip to 'B.1.12 Age'</b>
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	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
B.1.7 Initial Acquisition Year In what year did Owner 1 initially acquire ownership of this business?  Year  Don't know	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.1.8 Primary Income Source In 2021, did this business provide <i>Owner 1's</i> 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 <i>Owner 1</i> started most recently?  This is the owner's first business Business is still operating, and <i>Owner 1</i> still owns it Business is no longer in operation Business was purchased by another company	
□ Business was purchased by another individual □ Other (specify)    □	

	11 Field of Highest Degree Prior to Owning Business	B.1.13 Place of Birth		
Prio busi	r to establishing, purchasing, or acquiring this ness, what was the field of the highest degree pleted for <i>Owner 1?</i> <b>Select all that apply.</b>	Was Owner 1 born in the United States?   Yes  No		
	Biological, agricultural and environmental life sciences	B.1.14 U.S. Citizenship		
	Chemistry, except biochemistry	Is Owner 1 a citizen of the United States?		
	Computer and mathematical sciences and other technology and technical fields	☐ Yes ☐ No		
	Earth, atmospheric and ocean sciences	B.1.15 Owner Disability		
	Economics, political science, psychology, sociology, and other social sciences	Does <i>Owner 1</i> have a physical or mental impairment that substantially limits one or more of his/her major life activities? For this survey, major life activities		
	Engineering	can include both those in everyday and professional life.		
	Health	☐ Yes ☐ No ☐ Don't know		
	Physics and astronomy	B.1.16 Reasons for Owning the Business		
	Science and mathematics teacher education	How important to <i>Owner 1</i> is each of the following		
	Other science and engineering related fields,	reasons for owning this business?  Select one for each row.		
	not listed above 🗸	Very Somewhat Not Important Important Important		
		Wanted to be my own boss		
	Art and humanities fields	Flexible hours		
	Education, except science and math teacher education	Balance work and family		
	Management and administration fields	Opportunity for greater		
	Sales and marketing fields	Best avenue for my ideas / goods / services		
	Social service and related fields	Unable to find employment		
	Other non-science and non-engineering related fields, not listed above $\vec{k}$	Working for someone else		
		Always wanted to start my own business		
	<b>12 Age</b> t was the age of <i>Owner 1</i> as of December 31,	An entrepreneurial friend or family member was a role model		
2021	?	Wanted to carry on the		
Ш	Under 25 45 - 54	family business  Wanted to help and/or		
	25 - 34 55 - 64	become more involved in my community		
	35 - 44	Other (specify)		

OWNER 2	B.2.3 Race		
If applicable, if not Skip to 'B.5 One Family Majority	What is Owner 2's race? <b>Select all that apply.</b> (For this survey, Hispanic origins are not races.)		
Ownership' on page 19.  B.2.1 Sex	White – Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc. ⊋		
What is the sex of Owner 2?	English, Italian, Essanoso, Egyptian, etc.		
☐ Male ☐ Female			
Note: Please answer BOTH B.2.2 Ethnicity and B.2.3 Race questions.	Black or African Am. – Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.		
B.2.2 Ethnicity			
Is Owner 2 of Hispanic, Latino, or Spanish origin?	American Indian or Alaska Native – Print name		
No, not of Hispanic, Latino, or Spanish origin	of enrolled or principal tribe(s), for example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional		
Yes, Mexican, Mexican American, Chicano	Government, Nome Eskimo Community, etc.		
Yes, Puerto Rican			
Yes, Cuban  Yes, another Hispanic, Latino, or Spanish origin –	☐ Chinese ☐ Vietnamese ☐ Native		
Print, for example, Salvadoran, Dominican, Colombian, Guatemalan, Spaniard,	☐ Filipino ☐ Korean ☐ Samoan		
Ecuadorian, etc. 📈	☐ 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	B.2.10 Education Prior to Owning the Business
Do any of the following characteristics describe Owner 2's military service? <b>Select all that apply.</b>	Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school <i>Owner 2</i> completed?
Served on active duty military service, not including training for the Reserves or National Guard	Less than high school / secondary school graduate – <b>Skip to 'B.2.12 Age'</b> on page 12
Served on active duty military service after September 11, 2001	High school / secondary school graduate – Diploma or GED – <b>Skip to 'B.2.12 Age'</b>
Served on active duty military service in 2021  Served in the National Guard or as a reservist	on page 12  Technical, trade, or vocational school –  Skip to 'B.2.12 Age' on page 12
of any branch of the U.S. Armed Forces in 2021  None of the above	Some college, but no degree – Skip to 'B.2.12 Age' on page 12
B.2.7 Initial Acquisition Year	Associate Degree (for example, AA, AS) – <b>Skip</b> to 'B.2.12 Age' on page 12
In what year did <i>Owner 2</i> initially acquire ownership of this business?	Bachelor's Degree (for example, BA, BS)
Year	Master's Degree (for example, MA, MEng, MEd, MSW, MBA)
☐ Don't know	Doctorate Degree (for example, PhD, EdD)
	Professional Degree, beyond a Bachelor's Degree (for example, MD, DDS, DVM, LLB, JD)
B.2.8 Primary Income Source	
In 2021, did this business provide <i>Owner 2's</i> 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 <i>Owner 2</i> started most recently?	
☐ This is the owner's first business	
Business is still operating, and <i>Owner 2</i> still owns it	
☐ Business is no longer in operation	
Business was purchased by another company	
Business was purchased by another individual	
☐ Other (specify) $ vec{}_{ec{V}}$	

	11 Field of Highest Degree Prior to Owning Business	B.2.13 Place of Birth		
Prior to establishing, purchasing, or acquiring this		Was Owner 2 born in the United States?		
busii	ness, what was the field of the highest degree oleted for Owner 2? <b>Select all that apply.</b>	□ Yes □ No		
	Biological, agricultural and environmental life sciences	B.2.14 U.S. Citizenship		
	Chemistry, except biochemistry	Is Owner 2 a citizen of the United States?		
	Computer and mathematical sciences and other technology and technical fields	☐ Yes ☐ No		
	Earth, atmospheric and ocean sciences	B.2.15 Owner Disability		
	Economics, political science, psychology, sociology, and other social sciences	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		
	Engineering	can include both those in everyday and professional life.		
	Health	☐ Yes ☐ No ☐ Don't know		
	Physics and astronomy	B.2.16 Reasons for Owning the Business		
	Science and mathematics teacher education	How important to <i>Owner 2</i> is each of the following		
	Other science and engineering related fields, not listed above $\mathbf{z}$	reasons for owning this business?  Select one for each row.  Very Somewhat Not Important Important Important		
	Art and humanities fields	Wanted to be my own boss		
	Education, except science and math teacher	Flexible hours		
H	education	Balance work and family		
	Management and administration fields	Opportunity for greater  income		
	Sales and marketing fields	Best avenue for my ideas /		
	Social service and related fields	Unable to find employment		
	Other non-science and non-engineering related fields, not listed above $\slash$	Working for someone else		
		Always wanted to start my own business		
Wha	12 Age t was the age of <i>Owner 2</i> as of December 31,	An entrepreneurial friend  or family member was a  role model		
2021	Under 25 45 - 54	Wanted to carry on the family business		
	25 - 34 55 - 64	Wanted to help and/or become more involved in my community		
	35 - 44	Other (specify)		

OWNER 3	B.3.3 Race		
If applicable, if not Skip to 'B.5 One Family Majority	What is Owner 3's race? <b>Select all that apply.</b> (For this survey, Hispanic origins are not races.)		
Ownership' on page 19.  B.3.1 Sex	White – Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.   ✓		
What is the sex of <i>Owner 3</i> ?	English, Italian, Lebanese, Egyptian, etc.		
☐ Male ☐ Female			
Note: Please answer BOTH B.3.2 Ethnicity and B.3.3 Race questions.	Black or African Am. – Print, for example, African American, Jamaican, Haitian, Nigerian, Ethiopian, Somali, etc.		

B.3.6 Other Military Service	B.3.10 Education Prior to Owning the Business
Do any of the following characteristics describe Owner 3's military service? <b>Select all that apply.</b>	Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school <i>Owner 3</i> completed?
Served on active duty military service, not including training for the Reserves or National Guard  Served on active duty military service after	Less than high school / secondary school graduate – <b>Skip to 'B.3.12 Age'</b> on page 15  High school / secondary school graduate –
September 11, 2001  Served on active duty military service in 2021  Served in the National Guard or as a reservist	Diploma or GED – 'B.3.12 Age' on page 15  Technical, trade, or vocational school – Skip to 'B.3.12 Age' on page 15
of any branch of the U.S. Armed Forces in 2021  None of the above	Some college, but no degree – Skip to 'B.3.12 Age' on page 15
B.3.7 Initial Acquisition Year	Associate Degree (for example, AA, AS) – <b>Skip</b> to 'B.3.12 Age' on page 15
In what year did <i>Owner 3</i> initially acquire ownership of this business?  Year	Bachelor's Degree (for example, BA, BS)  Master's Degree (for example, MA, MEng, MEd, MSW, MBA)  Doctorate Degree (for example, PhD, EdD)
B.3.8 Primary Income Source In 2021, did this business provide <i>Owner 3's</i> primary source of personal income?  Yes  No	Professional Degree, beyond a Bachelor's Degree (for example, MD, DDS, DVM, LLB, JD)
B.3.9 Prior Business Ownership	
Not including this business, what is the status of the previous business <i>Owner 3</i> started most recently?	
This is the owner's first business	
Business is still operating, and <i>Owner 3</i> still owns it	
Business is no longer in operation	
Business was purchased by another company	
Business was purchased by another individual	
Other (specify) 📈	



	11 Field of Highest Degree Prior to Owning Business	B.3.13 Place of Birth			
Prior busi	to establishing, purchasing, or acquiring this ness, what was the field of the highest degree	Was <i>Owner 3</i> born in the United States?  ☐ Yes ☐ No			
	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	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			
	Other science and engineering related fields, not listed above $\mathbf{k}$	reasons for owning this business?  Select one for each row.  Very Somewhat Not			
	not listed above p	Important Important Important			
	Art and humanities fields	Wanted to be my own boss			
	Education, except science and math teacher education	Flexible hours			
		Balance work and family			
	Management and administration fields	Opportunity for greater income			
	Sales and marketing fields	Best avenue for my ideas / goods / services			
Ш	Social service and related fields  Other non-science and non-engineering related	Unable to find employment $\Box$			
	fields, not listed above	Working for someone else didn't appeal to me			
		Always wanted to start my own business			
Wha	12 Age t was the age of <i>Owner 3</i> as of December 31,	An entrepreneurial friend or family member was a role model			
2021	Under 25 45 - 54	Wanted to carry on the family business			
	25 - 34	Wanted to help and/or become more involved			
	35 - 44	in my community Other (specify)   □ □ □ □ □			



OWNER 4	B.4.3 Race
If applicable, if not Skip to 'B.5 One Family Majority	What is Owner 4's race? <b>Select all that apply.</b> (For this survey, Hispanic origins are not races.)
Ownership' on page 19.  B.4.1 Sex	White – Print, for example, German, Irish, English, Italian, Lebanese, Egyptian, etc.    ∠
What is the sex of <i>Owner 4</i> ?	
☐ Male ☐ Female	
Note: Please answer BOTH B.4.2 Ethnicity and B.4.3 Race questions.	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

B.4.6 Other Military Service	B.4.10 Education Prior to Owning the Business
Do any of the following characteristics describe Owner 4's military service? <b>Select all that apply.</b>	Prior to establishing, purchasing, or acquiring this business, what was the highest degree or level of school <i>Owner 4</i> completed?
Served on active duty military service, not including training for the Reserves or National Guard	Less than high school / secondary school graduate – <b>Skip to 'B.4.12 Age'</b> on page 18
Served on active duty military service after September 11, 2001	High school / secondary school graduate – Diploma or GED – <b>Skip to 'B.4.12 Age'</b> on page 18
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	Technical, trade, or vocational school – Skip to 'B.4.12 Age' on page 18
None of the above	Some college, but no degree – <b>Skip to</b> 'B.4.12 Age' on page 18
B.4.7 Initial Acquisition Year	Associate Degree (for example, AA, AS) – <b>Skip</b> to 'B.4.12 Age' on page 18
In what year did Owner 4 initially acquire ownership	Bachelor's Degree (for example, BA, BS)
of this business?  Year	Master's Degree (for example, MA, MEng, MEd, MSW, MBA)
□ Don't know	Doctorate Degree (for example, PhD, EdD)
DOIT KNOW	Professional Degree, beyond a Bachelor's Degree (for example, MD, DDS, DVM, LLB, JD)
B.4.8 Primary Income Source	
In 2021, did this business provide <i>Owner 4's</i> 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 <i>Owner 4</i> started most recently?	
This is the owner's first business	
Business is still operating, and <i>Owner 4</i> still owns it	
Business is no longer in operation	
Business was purchased by another company	
Business was purchased by another individual	
Other (specify) 📈	

	11 Field of Highest Degree Prior to Owning	B.4.13 Place of Birth
	Business	Was Owner 4 born in the United States?
busi	to establishing, purchasing, or acquiring this ness, what was the field of the highest degree pleted for <i>Owner 4</i> ? <b>Select all that apply.</b>	□ Yes □ No
	Biological, agricultural and environmental life sciences	B.4.14 U.S. Citizenship
	Chemistry, except biochemistry	Is Owner 4 a citizen of the United States?
H	Computer and mathematical sciences and other	☐ Yes ☐ No
	technology and technical fields	B.4.15 Owner Disability
	Earth, atmospheric and ocean sciences	Does <i>Owner 4</i> have a physical or mental impairment
	Economics, political science, psychology, sociology and other social sciences	that substantially limits one or more of his/her major life activities? For this survey, major life activities
	Engineering	can include both those in everyday and professional life.
	Health	☐ Yes ☐ No ☐ Don't know
	Physics and astronomy	B.4.16 Reasons for Owning the Business
	Science and mathematics teacher education	How important to <i>Owner 4</i> is each of the following
	Other science and engineering related fields, not listed above   ✓	reasons for owning this business?  Select one for each row.  Very Somewhat Not
		Important Important Important
		Wanted to be my own boss
	Art and humanities fields	Flexible hours
	Education, except science and math teacher education	Balance work and family
	Management and administration fields	Opportunity for greater
	Sales and marketing fields	income  Best avenue for my ideas /
	Social service and related fields	goods / services
	Other non-science and non-engineering related	Onable to find employment
	fields, not listed above $ ot \!$	Working for someone else didn't appeal to me
		Always wanted to start my own business
Wha	<b>12 Age</b> t was the age of <i>Owner 4</i> as of December 31,	An entrepreneurial friend or family member was a role model
2021	? Under 25	Wanted to carry on the family business
	25 - 34	Wanted to help and/or become more involved
	35 - 44	in my community
	35 - 44	Other (specify)



32012197
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 0	rasni	zation	\ Affil	istion
<b>L</b> .	ıv	жени	zatioi	I AIIII	Iation

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

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.		
			0	0	0

## **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?

	MN	ı
П		

YYYY						
2	0	2	1			

## 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.)

<ul> <li>Research performed outside your organization by subcontractors or subawardees.</li> <li>(Report in C.6 Research Performed by Others on page 22.)</li> </ul>	
□ Yes	
□ No	
If you would like to add additional detail or clarification to your response, please comment in space provided below.	the



C.6 Research Performed by Others			
Did your organization fund research performed by others outside your organization	anization in FY 202	21?	
<ul><li>Include:</li><li>All grants, contracts, subcontracts, and subawards awarded by your org</li></ul>			ents to
perform research  Exclude:			
<ul> <li>Research performed by your organization's employees</li> <li>Research performed by contract employees (Contract employees are in projects otherwise fully performed by your organization's staff.)</li> </ul>	ndividuals contrac	ted to worl	con
Yes			
□ No			
If you would like to add additional detail or clarification to your respected provided below.	ponse, please co	omment in	n the
If you reported "No" for 'C.5 Research Performed by Your Organizatio Performed by Others,' skip to 'C.20 Burden Estimate' on page 29.	on' AND "No" for	'C.6 Rese	arch
If you reported "No" for 'C.5 Research Performed by Your Organization Performed by Others,' skip to 'C.16 Funding for Research Performed			
All others continue to 'C.7 Funding for Research Performed by This Or	rganization.'		
C.7 Funding for Research Performed by This Organization			
In FY 2021, how much was spent on research performed within your organi Round to the nearest one thousand dollars. If none, report zero.	iization?		
Include:			
<ul> <li>Direct costs, such as salaries and wages, travel, equipment, supplies, co</li> </ul>	consulting, and otl	ner expend	itures
directly supporting your organization's research projects <ul> <li>Indirect costs associated with research expenditures, such as general a</li> </ul>			nd
wages, fringe benefits, facility costs, depreciation, etc. These should be organization's applicable fringe, overhead, and General and Administra Administrative (F&A) rates			
Exclude:	. ,		
<ul> <li>Capital expenditures (i.e., costs for construction or renovation of faciliti Report Capital expenditures in 'C.17 -C.19' on pages 28-29.</li> <li>Payments/funds in excess of the actual cost of the research work performance.</li> <li>Payments made by your organization to subcontractors or subawardee.</li> </ul>	ormed (e.g., fees)	earch outsi	de vour
organization	, , , , , , , , , , , , , , , , , , ,		
<u>                                   </u>	\$Bil. Mil.	Thou.	Dol.
Total			0 0 0
If you would like to add additional detail or clarification to your responded below.	ponse, please co	omment i	the

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 Sourc	Source	ndina	Fu	irch	esea	3 R	C.S
----------------------------	--------	-------	----	------	------	-----	-----

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.	<b>Internal funds:</b> Your organization's own funds from your endowment, general donations, or other unrestricted sources				0 0 0
b.	Individual donors: Gifts designated by the donors for research				0 0 0
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				0 0 0
	,				
d.	State and local government: Any state, county, municipality, or other local government entity in the United States				000
۵	Businesses: Domestic or foreign for-profit organizations.				
0.	Report funds from a company's nonprofit foundation in Row f				0 0 0
f.	Foundations: Domestic or foreign nonprofit grant-making organizations				0 0 0
g.	Universities: Domestic or foreign degree-granting institutions				0 0 0
h.	<b>All other nonprofits:</b> Domestic or foreign public charities and other nonprofit organizations not reported in <b>Row f or g</b>				0 0 0
i.	Other, (specify) $_{\overrightarrow{k}}$ All other sources not reported above				0 0 0
	Total				0 0 0

# **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.

Э.	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

\$Bil.	Mil.	Thou.	Dol.		
			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

	١	Λ.	Λ
	U	U	U

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
	Ů	_	

 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

	0	0 0	

					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 . . . . . . . .

	000
--	-----

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

	_	
	U	0 0

	0 0 0

Total.																				



#### 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.
			0 0 0

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

\$Bil.	Mil.	Thou.	Dol.
			000

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	
			0	0	0

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

\$Bil.	Mil.	Thou.	Dol.
			000

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.	
			0	0	0

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

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

mathematical strategy by changing

manipulatives and then measuring

standardized instruments.

what students have learned through

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

\$Bil.	Mil.	Thou.	ı	Dol	
			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	A researcher is studying the implementation of a specific math curriculum to determine what teachers	A researcher is developing and testing software and support tools, based on fieldwork, to improve mathematics		



cognition for student special education.

need to know to implement the

curriculum successfully.

CITE	esearch Performance by Type of Cost				
How m	uch of the 'C.7 Funding for Research Performed by This Org	anizatio	<b>n'</b> spent or	n research	performed
within y	your organization was for each of the following types of costs?	\$Bil.	Mil.	Thou.	Dol.
2	Salaries, wages, and fringe benefits				0 0 0
a.	<ul> <li>Include costs for all compensation and benefits of employees that are included in the total reported on C.7.</li> </ul>				
	<ul> <li>Include payroll taxes, such as Social Security and medicare.</li> </ul>				
b.	Depreciation and amortization on property, plant, equipment, and intangible assets				0 0 0
	<ul> <li>Include depreciation on tangible research assets, such as buildings or equipment, as well as the amortization of intangible assets such as patents.</li> </ul>				
c.	All other costs				0 0 0
	<ul> <li>Include administrative and overhead costs clearly associated with your organization's research.</li> </ul>				
	Total				0 0 0
• Coi	e: ntract employees. ( <b>Report in ′C.14 Research Contract Emplo</b> y	vees for	Nonprofit	Organiza	tione ()
	itract employees. (neport iii C. 14 nesearch Contract Employ	,000 101		_	imber
a.	Researchers (including scientists, engineers, and their material professionals engaged in the conception or creation of new knowledges.	anagers)	):	Nu	
	Researchers (including scientists, engineers, and their ma	anagers) owledge.	): 	Nu	
b.	Researchers (including scientists, engineers, and their ma Professionals engaged in the conception or creation of new known Research technicians: Staff who work under the supervision	anagers) bwledge. of byide dire	<b>):</b> 	Nu	
b.	Researchers (including scientists, engineers, and their mathematical Professionals engaged in the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and the conception of the conception of new known and the conception of the	anagers owledge. of ovide dire	<b>):</b>  ect	Nu	
b.	Researchers (including scientists, engineers, and their mathematical professionals engaged in the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation	anagers owledge. of ovide dire	<b>):</b>  ect	Nu	
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b.	Researchers (including scientists, engineers, and their mathematical professionals engaged in the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation	anagers owledge. of ovide dire	<b>):</b>  ect	Nu	
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b.	Researchers (including scientists, engineers, and their mathematical professionals engaged in the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation	anagers owledge. of ovide dire	<b>):</b>  ect	Nu	
b.	Researchers (including scientists, engineers, and their mathematical professionals engaged in the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and the conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation of new known and their mathematical conception or creation	anagers owledge. of ovide dire	<b>):</b>  ect	Nu	

Form ABS-1

	32022097
C.13 Research Full-time Equivalents for Nonprofit Organizations	
How many full-time equivalents (FTEs) worked on <b>research activities</b> in FY 2021? FTE research personnel are calculated as the total working (paid) hours spent working on res specific reference period (usually a calendar year) divided by the number of hours represent schedule within the same period. Include only your organization's paid employees. For example, three people working 20, 30, and 40 hours in a week on research activities and a full-time schours a week at your organization, your research FTE calculation is $(20 + 30 + 40)/40 = 2.25$ F	ing a full-time aple, if you have hedule is 40
Researchers (including scientists, engineers, and their managers):     Professionals engaged in the conception or creation of new knowledge	00.00
b. <b>Research technicians:</b> Staff who work under the supervision of researchers to conduct research activities	00.00
c. Other support personnel (clerical and other): Staff who provide direct support services for the research project	00.00
Total	00.00
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 porganization staff.	performed by your
Yes	
□ No	Employees
b. If "Yes," how many contract employees worked on your research activities during FY 2021?	000000
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 res your organization. Their research skills should be comparable to those of your emp funded by other sources to conduct research at your organization should not be con	loyees. Individuals
Yes	
□ No	Number
b. If "Yes," how many volunteers worked on your research activities during FY 2021	?
If you reported "No" for 'C.6 Research Performed by Others,' skip to 'C.20 Burden Est	t <b>imate'</b> on page 29.



C.16 Funding	for Research	Performed by	y Other Or	ganizations
--------------	--------------	--------------	------------	-------------

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.
			000

		000
000	000	0 0 0

Total.....

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

C 1	7 Total	Canital	Expenditures	for Vour	Organization

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

\$Bil.	Mil.	Thou.	Dol.

#### **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		0 0 0
lotal		

\$Bil. Mil.

Thou.

Dol.

C.19 Capital Expenditures for Research Operations by Type of Cos	st			
How much of the <b>'C.18 Total Capital Expenditures for Research Ope</b> for research operations was for the following?	erations	' in capital	expenditur	res
	\$Bil.	Mil.	Thou.	Dol.
a. Land acquisition				0 0 0
b. Buildings and land improvement				0 0 0
c. Equipment				000
d. Capitalized software				0 0 0
e. All other capital expenditures for research operations				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
00	:	

# **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.



	520	12210	
D.1 R&	D Activities		
• This	2021, did this business do any of the following R&D activities? Include activities that: s business performed ers paid this business to do s 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		
lf <b>"No"</b>	is selected for a. – j., skip to 'D.17 Federal Tax Credit for Research Activities' on p	age 35.	
D.2 R&	D Costs		
	as the total cost (both direct and indirect) in 2021 for all the R&D activities reported as <b>"\</b> ctivities' question? <i>Your best estimate is acceptable.</i> dollar amount in thousands. If none, report zero.	es" in th	e <b>'D.1</b>
Include Sala Plar futu Mat Ren Con Dep			
par • Mar	e: ts for routine product testing, quality control, and technical services unless they are an ir t of an R&D project ket research ciency surveys or management studies	ntegral	

- 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.
		000

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'	\$Mil.	Thou.	Dol.
was performed outside the United States by this business or others?  Round to the nearest thousand dollars			0 0 0
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	\$Mil.	Thou.	Dol.
other questions in this survey. Round to the nearest thousand dollars.			0 0 0
This business's domestic R&D cost in 2021			
If 'D.4 Domestic R&D Costs' equals \$0, skip to 'D.17 Federal Tax Credit for on page 35.	r Researcl	n Activitie	s'
D.5 Types of R&D Costs			
During 2021, how much of the 'D.4 Domestic R&D Costs' in domestic R&D cost following types of costs? <i>Round to the nearest thousand dollars.</i>	sts was for	each of the	Э
	\$Mil.	Thou.	Dol.
a. Salaries, wages, and fringe benefits			0 0 0
b. Expensed machinery and equipment (not capitalized)			0 0 0
5. Expensed maximilary and equipment (not capitalized)			000
c. Materials and supplies			0 0 0
d. Payments to others for R&D, including purchased R&D services			0 0 0
e. Depreciation on R&D property and equipment			0 0 0
e. Depreciation on hope property and equipment			
f. All other costs (e.g., consultants, contractors, travel, rent)			0 0 0
Total = 'D.4 Domestic R&D Costs'			0 0 0
<ul><li>D.6 Domestic R&amp;D Performance Costs</li><li>Calculate this business's domestic R&amp;D performance costs by subtracting the pay</li></ul>	ments for	R&D sarvic	<b>0</b> 0
(item d. in question 'D.5 Types of R&D Costs') from domestic R&D costs (que Costs'). Use this value in the next question. Round to the nearest thousand a	stion 'D.4		
	\$Mil.	Thou.	Dol.
This business's domestic R&D performance costs in 2021			0 0 0
		1	
If 'D.6 Domestic R&D Performance Costs' equals \$0, skip to 'D.17 Federal Activities' on page 35.	Tax Credi	t for Rese	arch

D 7 Euro	ding Sources for PSD Activities			
	ding Sources for R&D Activities 021, of the 'D.6 Domestic R&D Performance Costs' in total domestic	R&D perfo	ormance co	st,
	ch was paid for by the following sources? Round to the nearest thous	and dollar	s.	
		\$Mil.	Thou.	Dol.
a.	This U.S. business			0 0 0
b.	Your foreign owner (if this business is foreign-owned)			000
c.	Venture capital and angel financing			000
d.	Other businesses located within the United States		000	000
e.	Other businesses located outside the United States		000	000
f.	Universities or colleges located within the United States			0 0 0
g.	Nonprofit organizations located within the United States			000
h.	U.S. federal government (including R&D grants)			0 0 0
	Which agency provided the largest share? Select one from the list be	elow.		
	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
i.	U.S., state, or local government (not including state universities)			0 0 0
j.	All other organizations outside the United States			000
	Total = 'D.6 Domestic R&D Performance Costs'			0 0 0
D.8 R&I	O Categories			
During 2	021, of the <b>'D.6 Domestic R&amp;D Performance Costs'</b> in domestic R&D he following types of R&D? <b>Round to the nearest thousand dollars.</b>	) performar	nce cost, ho	w much
a.	Basic research – activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses	\$Mil.	Thou.	Dol. 0 0
b.	Applied research – activities aimed at solving a specific problem or meeting a specific commercial objective			0 0 0
C.	Development – systematic work, drawing on research			

c.	<b>Development</b> – 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 = <b>'</b> [	D.6 D	omestic	R&D	Performa	ance	Costs'	
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	000
000	000

			0
If 'D.7.h. Domestic R&D Performance Costs Funded by the U.S. Federal G (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 Gov		<b>t'</b> equals \$	O
D.9 R&D Categories Funded by the U.S. Federal Government	eriillelit.		
	all C Fad	laval Cava	
During 2021, of the <b>'D.7.h. Domestic R&amp;D Performance Costs Funded by th</b> in domestic R&D performance cost <b>funded by the U.S. federal government</b> , by types of R&D? <b>Round to the nearest thousand dollars.</b>			
a. Basic research – activities aimed at acquiring new knowledge	\$Mil.	Thou.	Dol.
or understanding without specific immediate commercial applications or uses			0 0 0
<ul> <li>Applied research – activities aimed at solving a specific problem or meeting a specific commercial objective.</li> </ul>			0 0 0
c. <b>Development</b> – 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			0 0 0
Total = 'D.7.h. Domestic R&D Performance Costs funded by the U.S. Federal Government'			000
D.10 Total Capital Expenditures for this Business			
What was the amount of this business's capital expenditures in 2021?	\$Mil.	Thou.	Dol.
Total			0 0 0
If 'D.10 Total Capital Expenditures for this Business' equals \$0, skip to 'D. on page 35.	13 Domes	tic R&D E	mployees'
If 'D.10 Total Capital Expenditures for this Business' equals \$0, skip to 'D. on page 35.  D.11 Total Capital Expenditures for R&D Operations	13 Domes	tic R&D E	mployees'
on page 35.			
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.	ital expendi d other ope	itures was f	for
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 capiral R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and	ital expendi d other ope	itures was f	for
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.	ital expendi d other ope	itures was f	for
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.	ital expendi d other ope	itures was ferations	for
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.  • None of the costs reported here should be included in 'D.7 Funding Social Capital Expenditures for R&D Operations' equals \$0, skip to 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'	ital expendid other operations of the control of th	itures was ferations  R&D Activit  Thou.  nestic R&I	Tor  ities.'  Dol.  0 0 0
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.  • None of the costs reported here should be included in 'D.7 Funding Social Capital Capital Expenditures for R&D Operations' equals \$0, skip to Employees' on page 35.  D.12 Capital Expenditures for R&D Operations by Type of Cost	ital expendid other operations of the other operations of the other sections of the other operations of the other other other of the other	itures was ferations  R&D Activity  Thou.	ities.'
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.  • None of the costs reported here should be included in 'D.7 Funding Social Capital Expenditures for R&D Operations' equals \$0, skip to 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'	ital expendid other operations of the control of th	itures was ferations  R&D Activit  Thou.  nestic R&I	Tor  ities.'  Dol.  0 0 0
<ul> <li>on page 35.</li> <li>D.11 Total Capital Expenditures for R&amp;D Operations</li> <li>How much of the 'D.10 Total Capital Expenditures for this Business' in cap R&amp;D operations? <ul> <li>Businesses should allocate capital expenditures that benefit both R&amp;D and on a reasonable basis.</li> <li>None of the costs reported here should be included in 'D.7 Funding Social Expenditures for R&amp;D Operations' equals \$0, skip to Employees' on page 35.</li> </ul> </li> <li>D.12 Capital Expenditures for R&amp;D Operations by Type of Cost How much of the 'D.11 Total Capital Expenditures for R&amp;D Operations' in capital expenditures for R&amp;D operations was for the following?</li> </ul>	ital expendid other operations of the control of th	itures was ferations  R&D Activit  Thou.  nestic R&I	Dol.  Dol.
<ul> <li>on page 35.</li> <li>D.11 Total Capital Expenditures for R&amp;D Operations</li> <li>How much of the 'D.10 Total Capital Expenditures for this Business' in cap R&amp;D operations?</li> <li>Businesses should allocate capital expenditures that benefit both R&amp;D an on a reasonable basis.</li> <li>None of the costs reported here should be included in 'D.7 Funding South Total</li> <li>If 'D.11 Total Capital Expenditures for R&amp;D Operations' equals \$0, skip to Employees' on page 35.</li> <li>D.12 Capital Expenditures for R&amp;D Operations by Type of Cost</li> <li>How much of the 'D.11 Total Capital Expenditures for R&amp;D Operations' in capital expenditures for R&amp;D operations was for the following?</li> <li>a. Land acquisition.</li> </ul>	ital expendid other operations of the control of th	itures was ferations  R&D Activit  Thou.  nestic R&I	Dol.  Dol.  0 0 0  Dol.  0 0 0
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.  • None of the costs reported here should be included in 'D.7 Funding Social Socia	ital expendid other operations of the control of th	itures was ferations  R&D Activit  Thou.  nestic R&I	Dol.  Dol.  0 0 0  0 0 0
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.  • None of the costs reported here should be included in 'D.7 Funding Social Expenditures for R&D Operations' equals \$0, skip to 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?  a. Land acquisition.  b. Buildings and land improvement.  c. Machinery and equipment.	ital expendid other operations of the control of th	itures was ferations  R&D Activit  Thou.  nestic R&I	Dol.  Dol.  0 0 0  0 0 0  0 0 0
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 cap R&D operations?  • Businesses should allocate capital expenditures that benefit both R&D and on a reasonable basis.  • None of the costs reported here should be included in 'D.7 Funding Social Capital Expenditures for R&D Operations' equals \$0, skip to 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?  a. Land acquisition.  b. Buildings and land improvement.  c. Machinery and equipment.	ital expendid other operations of the control of th	itures was ferations  R&D Activit  Thou.  nestic R&I	Dol. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

D.13 Domestic R&D Employees	
For the pay period including March 12, 2021, how many employees from this business's domestic op were <b>R&amp;D</b> employees and how many were <b>all other employees</b> ? Include owners who received a <b>If none, report zero.</b>	
<b>R&amp;D employees include</b> all employees who work on R&D or who provide direct support to R&D, s researchers, R&D managers, technicians, clerical staff, and others assigned to R&D groups. <b>Exclude</b> who provide only indirect support to R&D, such as corporate personnel, security guards, and cafetering	employees
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>b.</b> and <b>c.</b> should equal the amount entered in <b>a.</b>	
If you reported "0" for item a. in question 'D.13 Domestic R&D Employees,' skip to 'D.17 Feder for Research Activities.'	ral Tax Credit
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	UU
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 <b>D.14.a.</b> , how many had PhDs?	
D.15 Domestic R&D Employees Full-Time Equivalent	
What was the full-time equivalent of the <b>'D.13.a. Domestic R&amp;D Employees,'</b> 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	0.00
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	00.0
D.17 Federal Tax Credit for Research Activities	
Did this business file for the <u>federal</u> tax credit for increasing research activities (IRS Form 6765) in 20	21?
□ Yes	
□ No	

	Yes				
	No				
o. If	yes, what state(s)? <b>Select all that apply.</b>				
	Alabama		Montana		
	Alaska		Nebraska		
	Arizona		Nevada		
	Arkansas		New Hampshire		
	California		New Jersey		
	Colorado		New Mexico		
	Connecticut		New York		
	Delaware		North Carolina		
	District of Columbia		North Dakota		
	Florida		Ohio		
	Georgia		Oklahoma		
	Hawaii		Oregon		
	Idaho		Pennsylvania		
	Illinois		Rhode Island		
	Indiana		South Carolina		
	lowa		South Dakota		
	Kansas		Tennessee		
	Kentucky		Texas		
	Louisiana		Utah		
	Maine		Vermont		
	Maryland		Virginia		
	Massachusetts		Washington		
	Michigan		West Virginia		
	Minnesota		Wisconsin		
	Mississippi		Wyoming		
	Missouri				

## 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.

digital god	isually a tangible object, such as a smartphone, furniture, or packaged software, but also i ods, such as downloadable software, music and film. <i>Exclude the simple resale of new go</i> of a solely aesthetic nature.	ncludes oods or	
Yes			
□ No			
During the that differ improvem durability,	or Improved Services  e three years 2019 to 2021, did this business introduce to the market any new or improve red significantly from this business's previous services? This includes the addition of new ments to existing functions or user utility. Functions include quality, technical specifications, acconomic efficiency during use, affordability, convenience, usability, and user friendliness.	functions s, reliabilit	у,
Services:	attributes such as affordability and financial convenience.  : intangible activities, such as retailing, insurance, educational courses, air travel, consultidigital services. Exclude the simple resale of new services.	ng, etc.; al	so
Yes			
□ No			
	oorted "No" to 'E.1 New or Improved Goods' and 'E.2 New or Improved Services,' s	kip to	
E.3 Nove	elty of New or Improved Goods or Services		
During the that differ	e three years 2019 to 2021, did this business introduce any new or improved goods or ser r significantly from goods or services previously offered by this business that were:	vices	
Select or	ne for each row.		
5	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)	Yes	No
(	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 Nev	v or Improved Goods or Services as a Percent of Total Sales		
	what percentage of this business's 'A.11 Domestic Sales and Revenues' in domestic s were attributable to or originated from domestic operations in the following categories?	ales and	
	must sum to 100% of total dollar amount reported for 'A.11 Domestic Sales and Reventes are acceptable.	ues.'	
ESUIIIa	ев аге ассертаме.	Per	cent
a.	New or improved goods or services introduced during 2019 to 2021 that were <b>new to the market</b>		%
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)		%
E.5 Nev	Total sales v and Improved Business Processes	in 2021	= 100%
During t improve and resi	he three years 2019 to 2021, did this business introduce any of the following types of new d business processes that differed significantly (e.g., greater efficacy, resource efficiency, r lience, affordability, convenience, and usability) from your previous business processes?		
	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)		
	ported less than 10 employees for 'A.8 Number of W-2 Paid Domestic Employees or ees/Owners,' skip to 'E.7 Technology R&D' on page 39.		
All other	rs continue to 'E.6 R&D Activities for Businesses with 10 or More Employees.'		
During 2	D Activities for Businesses with 10 or more Employees 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		
	J No		

	Advanced computing (e.g., supercomputing, edge computing, cloud computing,	
b.	data storage, advanced computing architectures)	
	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)	
	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)	

ect (	one for each row.				
a.	Advanced computing (e.g., supercomputing, edge computing, cloud computing, data storage, advanced computing architectures)	A lot	Somewhat	A little	Not at
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)				
I.	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 ito 'E.9.A Impact of Artificial Intelligence Technology Use.		' is "a lot" or	"somewhat,"	' continue
Else if response to 'E.8. Use of Technologies - item I. Rene	wable ene	rgy generation	on and stora	<b>ge'</b> is "a
or "somewhat," skip to 'E.9.B Impact of Renewable Energy	Generation	n and Storag	e Technolog	y Use.'
All others skip to 'E.10 Source of Technology Capabilities	on page 3	2.		
E.9.A. Impact of Artifical Intelligence Technology Use				
During 2021, to what extent did this business's use of artificial in each of the following?	itelligence to	echnology imp	oact your wor	ktorce for
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 "somewhat," skip to 'E.9.B Impact of Renewable Energy Get All others skip to 'E.10 Source of Technology Capabilities'  E.9.B. Impact of Renewable Energy Generation and Storage During 2021, to what extent did this business's use of renewable impact your workforce for each of the following?	eneration a on page 42.	nd Storage T	echnology (	Jse.′
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	🗆			

Acquired technology products (machinery, equipment, software) from other firms or organizations	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.	a. Acquired technology products (machinery, equipment, software) from other firms or organizations	follo	he three years 2019 to 2021, did this business obtain the necessary technical expertise throwing means?	ough an	y of
a. Acquired technology products (machinery, equipment, software) from other firms or organizations	a. Acquired technology products (machinery, equipment, software) from other firms or organizations	a. Acquired technology products (machinery, equipment, software) from other firms or organizations			Voc	NI.
trademarks that give ownership, exclusion rights or rights to use technical knowledge	trademarks that give ownership, exclusion rights or rights to use technical knowledge	trademarks that give ownership, exclusion rights or rights to use technical knowledge	a.	Acquired technology products (machinery, equipment, software) from other firms or organizations		
			b.	trademarks that give ownership, exclusion rights or rights to use technical		
d. Developed new technology (both hardware and software) in-house	d. Developed new technology (both hardware and software) in-house	d. Developed new technology (both hardware and software) in-house	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.

exp	<b>lign of services can include the following:</b> business processes (i.e., design thinking); custo erience; delivery of a service; or user experience (UX) that addresses interaction with goods, so tal content by users.		
	Yes		
	No - Skip to 'F.12 Future Design Activity Resources' on page 35.		
F.2	Resources for Design Activities		
Doe	s 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 1	chose resources from 'F.2 Resources for Design Activities' have a budget?		
	Yes		
	No		
F.4	Design-Related Engineering Activities		
	s this business conduct the following design-related engineering activities?		
Sel	ect 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		
Doe	s 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.
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)
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 yea	rs?
☐ 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 patents, processes, and trade secrets; books and music; trademarks; recorded performances are radio and television programs and motion pictures; broadcast and recorded live performances at their content; general use computer software; franchise fees; and other (e.g., digital media).	d events, s	uch as
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.		
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

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

Total worldwide operating expenses or costs. . . . . . . . .

#### **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

\$Bil.	Mil.	Thou.	Dol.	

Total <u>domestic</u> operating expenses or costs.....



	civities Conducted by Domestic Unaffiliated Companies  did any unaffiliated companies located in the United States conduct any of the following a	activities	
for this	ousiness? Unaffiliated companies include firms such as independent contractors and supplied	liers.	
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 Act	ivities Conducted by Foreign Unaffiliated Companies		
	did any <u>unaffiliated companies</u> located <u>outside the United States</u> conduct any of the follow ousiness? <i>Unaffiliated companies include firms such as independent contractors and supp</i>		ties
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		
ties	021, did any <u>affiliated companies</u> located <u>outside the United States</u> conduct any of the following for this business? (Affiliated companies located outside the United States may be a foreign sureign parent).	ıg act bsidia	ivi- ary or
Sele	ect 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		
0.0	h. All other operating expenses		
In 20	Manufacturing Activities  21, did this business manufacture any goods in the United States? Includes processing, assening and related services on materials and physical components.	nbly,	labeling,
	Yes		
	No		
G.7	Contracting Out Manufacturing		
In 20 (pro	D21, did this business contract out any manufacturing tasks or otherwise purchase manufactur cessing, assembly, labeling, packing or related services on materials and physical components filiated 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 20	21, who performed the manufacturing for this business's U.Slocated units or establishments	?	
Sele	ect all that apply.		
	U.Slocated unaffiliated companies		
	Foreign-affiliated companies		
	Foreign-unaffiliated companies		
<b>G</b> .9	Design for Contracting Out		
	21, did this business provide or determine the design or specifications for goods, finished or ufactured for this business by any company type identified in the previous question?	in-pro	cess,
	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.Slocated units or establishments perform manufacturing activities?
Select all that apply.
U.Slocated 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.

cord	onavirus pandemic affected this business's research and development (R&D) activities.		
H.1	R&D Changes Due to the Coronavirus Pandemic		
	021, did the following statements apply to this business's research and development D) in response to the coronavirus pandemic? <i>Select one for each row</i> .	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 Pand Business Sales' on page 51.	lemic o	n
H.2	Impact of Coronavirus Pandemic on R&D Expenditures		
ln 2	021, did this business modify its in-house R&D expenditures in response to the coronavirus pa	ndemic?	
	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		
Н.3	R&D Performance Due to Coronavirus Pandemic		
the	021, did this business perform in-house R&D on coronavirus pandemic related R&D projects in coronavirus pandemic? For example, R&D to create self-sterilizing work surfaces; R&D to deve I/ID-19 diagnostic test; R&D to adapt LEDs to UV for light-weight air purification system, etc.		se to
	Yes		
	No		
H.4	Impact of Coronavirus Pandemic on R&D Full-Time Equivalent Personnel		
In 2 con	021, were there any changes to the number of full-time equivalent (FTEs) R&D personnel empl tracted in response to the coronavirus pandemic by this business?	oyed or	
	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.  0 0 0
□ 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

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#### **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



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