

SECTION D: RESEARCH AND DEVELOPMENT FOR MICROBUSINESSES

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

What is Research and Development (R&D)?

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

The term R&D does NOT include expenditures for:

- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Market research
- Efficiency surveys or management studies
- Literary, artistic, or historical projects, such as films, music, or books and other publications
- Prospecting or exploration for natural resources

R&D activity in software INCLUDES:

- Software development or improvement activities that expand scientific or technological knowledge
- Construction of new theories and algorithms in the field of computer science

R&D activity in software EXCLUDES:

- Software development that does not depend on a scientific or technological advance, such as
 - supporting or adapting existing systems
 - adding functionality to existing application programs, and
 - routine debugging of existing systems and software
- Creation of new software based on known methods and applications
- Conversion or translation of existing software and software languages
- Adaptation of a product to a specific client, unless knowledge that significantly improved the base program was added in that process

Reporting unit

The reporting unit is this business, including all subsidiaries and divisions. Include subsidiary companies where there is more than 50 percent ownership.

Reporting period

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

Estimates are acceptable.

Report all items to the best of your ability.

D.1 R&D Activities

During 2021, did this business do any of the following R&D activities? Include activities that:

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

Select one for each row.

	Yes	No
a. Conducted activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses	☐	☐
b. Conducted activities aimed at acquiring new knowledge for solving a specific problem or meeting a specific commercial objective	☐	☐
c. Conducted systematic work, drawing on research and practical experience and resulting in additional knowledge, which is directed to producing new products or processes or to improving existing products or processes	☐	☐
d. Developed and tested goods, services, or processes that were derived from scientific research or technical findings	☐	☐
e. Developed software that advanced scientific or technological knowledge	☐	☐
f. Produced findings that could be published in academic journals or presented at scientific conferences	☐	☐
g. Applied scientific or technical knowledge in a way that has never been done before	☐	☐
h. Created new scientific or technical solutions that can be generalized to other situations..	☐	☐
i. Conducted work to discover previously unknown technological facts, structures, or relationships	☐	☐
j. Conducted work to extend the understanding of scientific facts, relationships, or principles in ways that could be useful to others.	☐	☐

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

D.5 Types of R&D Costs

During 2021, how much of the 'D.4 Domestic R&D Costs' in domestic R&D costs was for each of the following types of costs? **Round to the nearest thousand dollars.**

	\$Mil.	Thou.	Dol.
a. Salaries, wages, and fringe benefits			
b. Expensed machinery and equipment (not capitalized).			
c. Materials and supplies			
d. Payments to others for R&D, including purchased R&D services			
e. Depreciation on R&D property and equipment			
f. All other costs (e.g., consultants, contractors, travel, rent).			
Total = 'D.4 Domestic R&D Costs'			

D.7 Funding Sources for R&D Activities

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

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

Which agency provided the largest share? **Select one from the list below.**

- ☐ Department of Defense
- ☐ National Science Foundation
- ☐ Department of Health and Human Services, including the National Institutes of Health
- ☐ Department of Energy
- ☐ NASA
- ☐ Other agencies

i. U.S., state, or local government (not including state universities)			
j. All other organizations outside the United States.			
Total = 'D.6 Domestic R&D Performance Costs'			

D.8 R&D Categories

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

	\$Mil.	Thou.	Dol.
a. Basic research – activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses			0 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 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.6 Domestic R&D Performance Costs'			0 0 0