

Areas of application for domestic R&D paid for and performed by your company

NOTE: You may report the same R&D in multiple areas for Questions 5-5 to 5-9.

5-5 What percentage of the amount reported in Question 5-2 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)?

Example: Company B is a semiconductor manufacturer. Its products are not designed specifically for energy applications. In 2017, 10% of the domestic R&D performed by the company was focused on improving the energy efficiency of its products. Based on this, Company B reports "10%" for this question.

 %

5-6 What percentage of the amount reported in Question 5-2 had environmental protection applications, including pollution abatement?

 %

5-7 What percentage of the amount reported in Question 5-2 had defense applications, including military applications and homeland security-related R&D?

 %

5-8 What percentage of the amount reported in Question 5-2 had health or medical applications?

 %

5-9 What percentage of the amount reported in Question 5-2 had agricultural applications?

 %

Technology focus of domestic R&D paid for and performed by your company

NOTE: You may report the same R&D in multiple areas for Questions 5-10 to 5-13.

5-10 What percentage of the amount reported in Question 5-2 was for software products or software embedded in other projects or products?

 %

5-11 What percentage of the amount reported in Question 5-2 was for biotechnology? For list-based definition see Question by Question Guidance at <https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-11>

Biotechnology – The application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services.

 %

5-12 What percentage of the amount reported in Question 5-2 was for nanotechnology? For list-based definition see Question by Question Guidance at <https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-12>

Nanotechnology – The application of science and technology to organisms, organic and inorganic materials as well as parts, products, and models thereof, at the nanometer-scale (but not exclusively below 1000 nanometers).

 %

5-13 What percentage of the amount reported in Question 5-2 was for artificial intelligence (AI)? For a detailed definition see Question by Question Guidance at <https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-13>

Artificial Intelligence (AI) - A branch of computer science and engineering dealing with the simulation of intelligent behavior in computers.

 %


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

5-14 Copy the amount from Question 2-10, column 2. This is the foreign R&D paid for and performed by your company.

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>

5-15 How much of the foreign R&D paid for and performed by your company reported in Question 5-14 was for the following categories?

- a. Research—planned, systematic pursuit of new knowledge or understanding.
- b. 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.
- c. **Total** (equals Question 5-14).

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

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

TIP If the amount reported in Question 3-1, line j was less than \$1 Million, skip to Section 6 on page 40.

5-16 Copy the amount from Question 3-5, column 1. This is the domestic R&D performed by your company that was paid for by others.

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>

5-17 How much of the amount reported in Question 5-16 was for the following categories?

- a. Research—planned, systematic pursuit of new knowledge or understanding.
- b. 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.
- c. **Total** (equals Question 5-16).

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

5-18 If you reported any research in Question 5-17, line a, how much of that research was for the following categories?

- a. Applied research—activities aimed at solving a specific problem or meeting a specific commercial objective.
- b. Basic research—activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses
- c. **Total** (equals Question 5-17, line a).

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

SECTION 5



NOTE: You may report the same R&D in multiple areas for Questions 5-19 to 5-23.

5-19 What percentage of the amount reported in Question 5-16 had energy applications, including energy production, distribution, storage, and efficiency (excluding exploration and prospecting)? %

5-20 What percentage of the amount reported in Question 5-16 had environmental protection applications, including pollution abatement? %

5-21 What percentage of the amount reported in Question 5-16 had defense applications, including military applications and homeland security-related R&D? %

5-22 What percentage of the amount reported in Question 5-16 had health or medical applications? %

5-23 What percentage of the amount reported in Question 5-16 had agricultural applications? %

Technology focus of domestic R&D performed by your company that was paid for by others

NOTE: You may report the same R&D in multiple areas for Questions 5-24 to 5-27.

5-24 What percentage of the amount reported in Question 5-16 was for software products or software embedded in other projects or products? %

5-25 What percentage of the amount reported in Question 5-16 was for biotechnology? For list-based definition see Question by Question Guidance at <https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-25>

Biotechnology – The application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services.

%

5-26 What percentage of the amount reported in Question 5-16 was for nanotechnology? For list-based definition see Question by Question Guidance at <https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-26>

Nanotechnology – The application of science and technology to organisms, organic and inorganic materials as well as parts, products, and models thereof, at the nanometer-scale (but not exclusively below 1000 nanometers).

%

5-27 What percentage of the amount reported in Question 5-16 was for artificial intelligence (AI)? For a detailed definition see Question by Question Guidance at <https://www.census.gov/programs-surveys/brds/information/brdshelp.html#q5-27>

Artificial Intelligence (AI) - A branch of computer science and engineering dealing with the simulation of intelligent behavior in computers.

%



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

5-28 Copy the amount from Question 3-8, line d. This is the domestic R&D performed by your company that was paid for by the U.S. federal government.

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>

5-29 How much of the amount reported in Question 5-28 was for the following categories?

	\$Bil.	Mil.	Thou.
a. <u>Research</u> —planned, systematic pursuit of new knowledge or understanding	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. <u>Development</u> —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	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. Total (equals Question 5-28)	<input type="text"/>	<input type="text"/>	<input type="text"/>

5-30 If you reported any research in Question 5-29, line a, how much was for the following categories?

	\$Bil.	Mil.	Thou.
a. <u>Applied research</u> —activities aimed at solving a specific problem or meeting a specific commercial objective	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. <u>Basic research</u> —activities aimed at acquiring new knowledge or understanding without specific immediate commercial applications or uses	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. Total (equals Question 5-29, line a)	<input type="text"/>	<input type="text"/>	<input type="text"/>

5-31 What percentage of the amount reported in Question 5-28 was for software products or software embedded in other projects or products? %

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

5-32 Copy the amount from Question 3-5, column 2. This is the foreign R&D performed by your company and paid for by others.

\$Bil.	Mil.	Thou.
<input type="text"/>	<input type="text"/>	<input type="text"/>

5-33 How much of the amount reported in Question 5-32 was for the following categories?

	\$Bil.	Mil.	Thou.
a. <u>Research</u> —planned, systematic pursuit of new knowledge or understanding	<input type="text"/>	<input type="text"/>	<input type="text"/>
b. <u>Development</u> —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	<input type="text"/>	<input type="text"/>	<input type="text"/>
c. Total (equals Question 5-32)	<input type="text"/>	<input type="text"/>	<input type="text"/>

SECTION 5

