



FY 2016 Survey of State Government R&D



Reference Copy Only

Submit your survey responses at:
<https://bhs.econ.census.gov/bhs/sgrd>

Survey Questions [\(Click here\)](#)

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The purpose of this survey is to measure your state’s contributions toward scientific and technological advances. The results of this survey will be used to estimate national totals for R&D in conjunction with other data collected by the National Science Foundation from private industry, academic institutions, and the federal government.

The U.S. Census Bureau conducts the survey and requests your voluntary assistance under the authority of Title 13 United States Code, Section 8(b) and Title 42 United States Code, Sections 1861-76 (National Science Foundation Act of 1950, as amended).

If you have any questions, please contact:

Vicki Mills
U.S. Census Bureau
1-888-340-7525
erd.sgrd@census.gov

Burden Statement

OMB: 0607-0933
Exp: 05/31/2016

This collection has been approved by the Office of Management and Budget (OMB). The eight-digit OMB approval number is 0607-0933 and appears in the upper right corner of the login screen. Without this approval, we could not conduct this survey.

The time required to complete these responses is estimated to be approximately 1 hour for the state coordinator and 2 hours for agency respondents.

The burden on state coordinators includes the initial identification of department and agency contacts, and final review and verification of state data.

The burden on agency respondents includes the initial collection of data and the entry of data into the Web application.

Send comments about this burden estimate or any other aspect of this collection of information, including suggestions for reducing burden to:

ECON Survey Comments 0607-0933
U.S. Census Bureau
4600 Silver Hill Road, Room EMD-6K064
Washington, DC 20233

You may e-mail comments to ECON.Survey.Comments@census.gov. Be sure to use "ECON Survey Comments 0607-0933" as the subject.

Question 1

Contact Information

Please **complete** the contact information below and update if needed. (*required fields)

Primary Respondent

Your Name:*

Title:*

Agency:

Address:

City:*

State:*

Zip: -

Telephone:* () - Extension:

Email:*

Additional Respondent (if applicable)

Your Name:

Title:

Agency:

Address:

City:

State:

Zip: -

Telephone: () - Extension:

Email:

Question 2

Reporting Period

2a. When did your state agency's Fiscal Year 2015-16 end?

Note: For the rest of this survey, we will refer to this Fiscal Year as FY 2016.

2016

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Please read through the following definitions of R&D and answer the Screener Question below.

What is Research and Development (R&D)?

Research and development (R&D) is creative work conducted systematically to extend scientific knowledge, or devise new applications, which may include materials, products, devices, processes, systems, methods, or services.

What is R&D?

- R&D is aimed at new findings
 - It has not been done before
 - It may produce findings that could be published in academic journals
 - It includes ideas that could be patented
- R&D increases our knowledge of the subject
 - Helps create new products or applications
- R&D creates solutions that others may find useful
 - Findings can be generalized to other situations and locations
- R&D outcomes are uncertain (because it's never been done before)
 - Solutions are not always obvious or expected

What is NOT R&D?

- Construction and acquisition of land and facilities used primarily for R&D (this is reported separately in Question 11)
- Fixed equipment used primarily for R&D (this is reported separately in Question 11)
- Program planning and evaluation
- Business development services for new companies
- Commercialization (includes promoting/producing the products/services from R&D projects)
- Economic/policy/feasibility studies
- General patient services
- Information systems
- Management studies
- Marketing of products/services
- Market research or analysis
- Routine data collection/dissemination
- Routine monitoring/testing
- Strategic planning
- Technology transfer

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Examples of R&D

What makes it R&D?	When it is R&D	When it is NOT R&D
<p>R&D is novel.</p> <ul style="list-style-type: none"> • It increases our knowledge of the subject. • It hasn't been done before. 	<p>You are testing blood samples as part of a research project to find out the side effects of a new cancer treatment.</p>	<p>You are collecting information from samples of patients to estimate the incidence of chicken pox in the state's population. (You are using a standard approach to estimate the spread of chicken pox.)</p>
<p>R&D creates solutions useful to others.</p> <ul style="list-style-type: none"> • Others might benefit from the findings. • The findings can be generalized to other situations and locations. 	<p>You are testing a pavement on your highways that is currently used only at airports. Other states will want the results.</p>	<p>You are testing pavement on your state's highways to estimate how much you need to budget for pavement replacement over the next five years. (Other states will not benefit from your specific state information.)</p>
<p>The outcome of R&D is uncertain.</p> <ul style="list-style-type: none"> • The solution isn't obvious to an expert in that field. 	<p>Your research involves monitoring streams to determine whether a new program is increasing the population of a particular type of fish.</p>	<p>You are monitoring streams as part of plan to implement long-term monitoring for a particular type of fish. (The monitoring plan has already been tested and you are certain of the quality of the plan.)</p>

Reporting unit

The reporting unit is your department, agency, commission, public authority (herein referred to as agency) including all divisions and offices regardless of location that either perform or fund R&D.

Estimates are acceptable

Please report all items to the best of your ability.

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Examples of classifying R&D from four activities

Activity	It IS R&D	It is NOT R&D
Technical assistance	You hire a technical consultant to test the disease resistance for the new fish species you are developing. (The assistance addresses the uncertainty of the science/technology aspects of the product or service.)	You hire a technical consultant to help you design the graphic design for the package to ship your new fish species when you begin offering it for sale to other states. (The assistance addresses the uncertainty of the marketing/production aspects of the product or service.)
Help for new businesses	You provide funding to new businesses to help them with the costs of building prototypes of products they are developing.	You provide funding for new technology companies to help them acquire basic skills to market their new products.
Consulting	You use a consultant to plan testing of a highway pavement material that your transportation research center is trying to develop.	You use a consultant to help you secure health and safety approval for your new pavement material.
Developing a product from your research	You hire a university research center to test a new type of grass you developed to test whether it will survive actual conditions along the coastline.	You hire a law firm to help you with the process for patenting the new grass that you developed.

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Question 3 **R&D Activity in FY 2016**

3. Did your agency do any of the following during FY 2016?

3a. Had a division, branch, or office devoted to research and development?

Yes
No

3b. Performed research and development activities using agency staff?

Yes
No

3c. Funded research and development at another state or local government?

Yes
No

3d. Funded universities or other nonprofit organizations to perform research and development activities?

Yes
No

3e. Funded companies or individuals to perform research and development activities?

Yes
No

3f. Performed or fund other research and development activities not specified above?

Yes
NO

Please specify:

[Back to What is Research and Development \(R&D\)?](#)

Expenditures for R&D Performed Internally (Internal R&D)

4. During FY 2016, what were the total expenditures for internal R&D performance from federal funds, state funds, or other funds? If none, please report \$0.

Include

Types of Activities

- R&D performed by your agency's employees
- Services performed by others in support of an agency R&D project (e.g. lab testing)
- Administration and management of R&D performed external to your agency (e.g., administration or R&D-related contracts or grant recipients)

Types of Costs

- Salaries
- Benefits
- Supplies and movable equipment for R&D
- Travel
- Indirect costs
- Purchased services

Exclude

- R&D performed by higher education institutions
- R&D performed by businesses and individuals
- R&D performed by non-profit organizations
- R&D performed by other governments
- Construction and acquisition of land or facilities used primarily for R&D (report in Question 11)
- Fixed equipment used primarily for R&D (report in Question 11)

FY 2016

a. Federal Funds used for internal R&D..... \$

For example:

- Grants
- Awards
- Contracts
- Appropriations from the United States Government

b. State Funds used for internal R&D..... \$

For example:

- Appropriations from the state legislature
- Bond Funds
- General funds
- Restricted funds
- Revenue funds
- State grants
- Tobacco settlement funds
- Lottery proceeds
- Funds from other agencies within your state

c. Other Sources used for internal R&D..... \$

For example:

- Funding from other state governments
- Funding from state/regional partnership agreements
- Funding from local or tribal governments
- Funding from nonprofit organizations
- Funding from business

Please Specify

d. These are your total expenditures for internal R&D:(sum of 4a through 4c) \$

Question 5

Expenditures for R&D Performed by External Entities (External R&D)

5. During FY 2016, what were the total expenditures for external R&D performance from federal funds, state funds, and other funds? If none, please report \$0. Include

- R&D funded by your agency and performed by:
 - higher-education institutions
 - agricultural experiment stations
 - businesses and individuals
 - non-profit organizations
 - other state or local governments

Exclude

- pass-through funding for which you have no administrative oversight or control

FY 2016

a. Federal Funds used for external R&D..... \$

For example:

- Grants
- Awards
- Contracts
- Appropriations from the United States Government

b. State Funds used for external R&D..... \$

For example:

- Appropriations from the state legislature
- Bond Funds
- General funds
- Restricted funds
- Revenue funds
- State grants
- Tobacco settlement funds
- Lottery proceeds
- Funds from other agencies within your state

c. Other Sources used for external R&D..... \$

For example:

- Funding from other state governments
- Funding from state/regional partnership agreements
- Funding from local or tribal governments
- Funding from nonprofit organizations
- Funding from business

Please specify:

d. These are your total expenditures for external R&D: (sum of 5a through 5c) \$

Total R&D Expenditures

6. The following matrix shows the answers reported in Question 4 and Question 5. To revise them, please return to the appropriate question and enter new data.

FY 2016

	Internal	External	Total by Source
Federal	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
State	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Other	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
TOTAL	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
	<input type="text"/>		

Total R&D Expenditures by Function

7. Of the \$

for FY 2016 reported expenditures, how much was for:

FY 2016

a. **Agriculture**.....

\$

For example:

- Animal husbandry
- Aquaculture
- Crop management
- Food and commodities

b. **Energy**.....

\$

For example:

- Alternative fuels (e.g., ethanol, biofuels)
- Energy conservation/efficiency
- Oil and gas
- Other fossil fuels (e.g., coal, clean-coal, lignite)
- Renewable energy (e.g., wind, solar)

c. **Environment and Natural Resources**.....

\$

For example:

- Air and water quality
- Fish, game, and wildlife
- Forestry
- Geological studies
- Marine and aquatic environments
- Parks and preserves
- Soil and water conservation

d. **Health**.....

\$

For example:

- Biomedical research
- Mental health and addiction
- Pharmaceutical
- Public health

e. **Transportation**.....

\$

For example:

- Aviation
- Highways, roads, and bridges
- Ports and waterways
- Public transportation
- Rail and freight

f. **Other functions**

\$

For example:

- Corrections and criminal justice
- Education
- Labor
- Public safety
- Social services

Please specify:

g. **Total** (sum of 7a through 7f) \$

\$

Question 8

Funds Received from Federal Agencies for R&D

8. Of the \$ _____ for FY 2016 reported expenditures from federal funds, what amount came from the following agencies? Please add any agencies not already listed. If none, please report \$0.

Federal Agency	FY 2016
Department of Agriculture	\$
Department of Commerce	\$
Department of Defense	\$
Department of Education	\$
Department of Energy	\$
Department of Health and Human Services	\$
Department of Homeland Security	\$
Department of Housing and Urban Development	\$
Department of the Interior	\$
Department of Justice	\$
Department of Labor	\$
Department of State	\$
Department of Transportation	\$
Department of the Treasury	\$
Department of Veterans Affairs	\$
Environmental Protection Agency	\$
National Aeronautics and Space Administration	\$
National Science Foundation	\$
Other, please specify:	\$
	\$
Total (sum of all above)	\$

Question 9

FY 2016 Expenditures for R&D Performed Internally by Type of Work

9. What amount of your _____ reported FY 2016 federal internal R&D expenditures and \$ _____ reported FY 2016 non-federal internal R&D expenditures in Question 4 were for **basic research, applied research, and experimental development from federal and non-federal funds?** (Please use your best estimate)

FY 2016

a. **Basic Research**.....

Research undertaken primarily to acquire new knowledge without any particular application or use in mind.

(see [Examples](#) of Basic Research below)

	Federal	Non-Federal
\$	<input type="text"/>	<input type="text"/>

b. **Applied Research**.....

Research conducted to gain the knowledge or understanding to meet a specific, recognized need. (see [Examples](#) of Applied Research below)

\$	<input type="text"/>	<input type="text"/>
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c. **Experimental Development**....\$

The systematic use of the knowledge or understanding gained from research directed towards the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes.

(see [Examples](#) of Experimental Development below)

\$	<input type="text"/>	<input type="text"/>
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d. **Total** (sum of 9a through 9c)...\$

\$	<input type="text"/>	<input type="text"/>
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Examples

Basic Research	Applied Research	Experimental Development
You are studying the properties of blood to determine what affects coagulation.	You are conducting research on how a new chicken pox vaccine affects blood coagulation.	You are testing a newly developed chicken pox vaccine with various ages of school children before implementing it statewide.
You are studying the properties of molecules under various heat and cold conditions.	You are conducting research on the properties of particular substances under various heat and cold conditions with the objective of finding longer lasting components for pavement.	You are testing a newly developed pavement under various types of heat and cold conditions prior to using it on your state's highways.
You are studying the heart chambers of various fish species.	You are examining various levels of a toxic substance to determine the maximum safe level for fish in a stream.	You are designing a new system for monitoring a stream that will try out the results of your recent research in a real world situation.
You are studying the effects of various strategies for teaching math in order to understand which is the most effective.	You are studying the implementation of a specific math curriculum to determine what factors lead to successful implementation by teachers.	You are using research in the field to develop education software and support tools for math curriculum.

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Question 10

Expenditures for R&D Performed Externally by type of Entity

10. Of the reported external R&D performance of \$ _____ for FY 2016 in Question 5, how much was to

FY 2016

a. Higher education institutions?.....	\$	<input type="text"/>
b. Businesses or individuals?	\$	<input type="text"/>
c. Other entities?	\$	<input type="text"/>
For example:		
<ul style="list-style-type: none"> • Other state governments • Local governments • Non-profit organizations 		
Please specify:		
d. Total (sum of 10a through 10c)	\$	<input type="text"/>

Question 11

R&D Expenditures for Land and Facilities

11. During FY 2016, what were your agency’s R&D expenditures for construction and acquisition of land and facilities (including fixed equipment) used primarily for R&D?

This question asks about R&D land and facilities (including fixed equipment, such as reactors, wind tunnels, and particle accelerators) used primarily for R&D. It includes the acquisition of, construction of, and major repairs or alterations to structures, works, equipment, facilities, or land for use in R&D activities.

Construction and acquisition of land and facilities used primarily for R&D includes major costs for construction and purchase of buildings to be primarily used as R&D facilities.

Include:

- Only expenditures related to the R&D activities of your agency.

Exclude:

- Expendable or movable equipment (e.g., spectrometers, microscopes).
- Office furniture and equipment.
- Costs of pre-design studies (e.g., those undertaken before commitment to a specific facility).

NOTE: The expenditures reported on this question are separate from the R&D expenditures asked throughout the rest of the survey, and should not be included in the expenditures on any other question in the survey.

FY 2016

\$