

2024 ABS Technology Transfer Module
DRAFT (07/2023)

Research and Development

[Note: Skip Questions 1 and 2 for 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 2022, if possible, or for this business's fiscal year ending between April 2022 and March 2023.

Estimates are acceptable.

Report all items to the best of your ability.

1. R&D ACTIVITIES

During 2022, 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	<input type="checkbox"/>	<input type="checkbox"/>
b. Conducted activities aimed at acquiring new knowledge for solving a specific problem or meeting a specific commercial objective	<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>
d. Developed and tested goods, services, or processes that were derived from scientific research or technical findings	<input type="checkbox"/>	<input type="checkbox"/>
e. Developed software that advanced scientific or technological knowledge	<input type="checkbox"/>	<input type="checkbox"/>
f. Produced findings that could be published in academic journals or presented at scientific conferences	<input type="checkbox"/>	<input type="checkbox"/>
g. Applied scientific or technical knowledge in a way that has never been done before	<input type="checkbox"/>	<input type="checkbox"/>
h. Created new scientific or technical solutions that can be generalized to other situations.	<input type="checkbox"/>	<input type="checkbox"/>
i. Conducted work to discover previously unknown technological facts, structures, or relationships	<input type="checkbox"/>	<input type="checkbox"/>
j. Conducted work to extend the understanding of scientific facts, relationships, or principles in ways that could be useful to others	<input type="checkbox"/>	<input type="checkbox"/>

If “No” is selected for a. – j., **skip to ‘3’** on page XX.

2. R&D COSTS

What was the total cost (both direct and indirect) in 2021 for all the R&D activities reported as “Yes” in the ‘**1. R&D Activities**’ question? *Your best estimate is acceptable. Report dollar amount in thousands. If none, report zero.*

Include:

- Salaries, wages, fringe benefits
- Plant, machinery, and equipment, except that which was capitalized because it had an alternative future use
- Materials, supplies, software
- Rent, utilities
- Consultants, contractors
- Depreciation expense from plant, machinery, and equipment that was capitalized because it had an alternative future use

Exclude:

- Costs for routine product testing, quality control, and technical services unless they are an integral part of an R&D project
- Market research
- Efficiency surveys or management studies
- Literary, artistic, or historical projects, such as films, music, or books and other publications
- Prospecting or exploration for natural resources
- Capital expenditures (i.e., costs for construction or renovation of facilities)
- Payments/funds in excess of the actual cost of the research work performed (e.g., profits or fees)

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Total costs for ‘**R&D Activities**’ reported in the ‘**1 R&D Activities**’ question for 2021

\$ _____

3. Formal Intellectual Property Protection

Does this business use the following methods to protect intellectual property?

- | | 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 | | |

4. Informal Intellectual Property Protection

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

Yes No

- a. Design complexity
- b. Nondisclosure agreements or non-compete clauses
- c. Branding and product image
- d. Trade secrets

5. Patents Pending

How many U.S. patent applications, if any, did this business have pending as of the end of 2022? If none, report zero.

6. Patents Owned

How many U.S. patents did this business own as of the end of 2022? If none, enter zero.

7. Intellectual Property Activities

During the three years 2020 to 2022, did your company exchange intellectual property (IP) rights, including patents, copyrights, and trademarks that give ownership, exclusion rights or rights to use technical knowledge using any of the following mechanisms. Select one for each row.

Yes No

- a. Licensed or purchased IP from companies that are not affiliated
- b. Licensed or sold intellectual property (IP) to companies that are not affiliated
- c. Transferred intellectual property (IP) to companies that are not affiliated through participation in technical assistance or "know how" agreements
- d. Received IP from companies that are not affiliated through participation in technical assistance or "know how" agreements
- e. Participated in cross-licensing agreements with companies that are not affiliated
- f. Acquired or merged with companies that are not affiliated to acquire their IP
- g. Transferred IP to a spin-off or spin-out of your company
- h. Received IP from a parent company as part of a spin-off or spin-out
- i. Allowed free use of patents or other IP owned by this company (for example, allowing free use of software patents by the open-source community)
- j. Made use of open-source patents or other freely available IP not owned by this company

8. Collaboration with Universities

During the three years 2020 to 2022, did this business engage in any of the following collaborative activities with universities? Select one for each row.

- | | Yes | No |
|--|-----|----|
| a. Performed collaborative research between company and university researchers | | |
| b. Funded university research | | |
| c. Funded PhD students and postdoctoral researchers at universities | | |
| d. Licensed or purchased IP from a university | | |
| e. Signed non-disclosure agreements, material transfer agreements, or other agreements with universities governing usage of IP | | |
| f. Hired science and engineering graduates | | |
| g. Engaged in formal or informal personnel exchanges with universities | | |

9. Collaboration with Government Laboratories

During the three years 2020 to 2022, did this business engage in any of the following collaborative activities with federal laboratories including Federally Funded Research and Development Centers? Select one for each row.

- | | Yes | No |
|--|-----|----|
| a. Conducted collaborative research using agreements such as Cooperative Research and Development Agreements, Space Act Agreements, Material Transfer Agreements, Confidential Disclosure Agreements, or other transaction authorities | | |
| b. Conducted research at government user facilities | | |
| c. Funded research at government laboratory | | |
| d. Licensed IP from government laboratory | | |
| e. Engaged in formal or informal personnel exchanges with government laboratories | | |
| f. Attended workshops or seminars located at or sponsored by government laboratories | | |

10. Collaboration with Government Laboratories

During the three years 2020 to 2022, did this business engage collaborative activities with federal laboratories in the following departments? Select one for each row.

1. Department of Agriculture
2. Department of Commerce
3. Department of Defense
4. Department of Energy
5. Department of Health and Human Services
6. Department of Homeland Security
7. Department of Transportation
8. Department of Veteran Affairs
9. National Aeronautics and Space Administration
10. Other federal department

11. Collaboration with Nonprofits

During the three years 2020 to 2022, did this business engage in any of the following collaborative activities with nonprofit organizations? Select one for each row.

- | | Yes | No |
|---|-----|----|
| a. Performed collaborative research between company and nonprofit researchers | | |
| b. Funded research at nonprofit organizations | | |
| c. Licensed or purchased IP from a nonprofit organization | | |
| d. Signed non-disclosure agreements, material transfer agreements, or other agreements with nonprofit organizations governing usage of IP | | |
| e. Engaged in formal or informal personnel exchanges with nonprofit research organizations | | |