

An Alternative Approach to Screening for R&D Activities

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1996 Screening Questionnaire

Provides complex definition up front.

Asks respondents to use that definition when
answering the remainder of the questionnaire.

General Instructions

About this survey

1. Definition of research and development

Research is systematic study directed toward fuller knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the investigator.

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

Research and development includes the development and use of scientific knowledge through fundamental research in the laboratory, in the field, or through experiments; clinical investigations; clinical trials; epidemiological, engineering, and demographic studies; and controlled pilot projects. Included in this definition is the preparation for publication of books and papers describing the results of the specific research and development, if carried out as an integral part of that research and development. Also included is the administration of research and development. Traineeships, if they are mainly directed to R&D, are also included.

2. Science and Engineering

For this survey, science and engineering (S&E) includes:

- *Medical or Health-Related Sciences* including Biochemistry, Genetics, Physiology, Cell Biology/Molecular Biology, Pharmacology/Toxicology, Epidemiology, Health Care Sciences and Services, Reproduction, Growth and Development, Oncology/Pathology/Hematology, Immunology, Microbiology/Virology, Biomedical Engineering and Instrumentation, Neuroscience, Clinical Medicine, and other medical or health sciences.
- *Natural and Social Sciences* including Agricultural Sciences, Biological Sciences (non-medical), Computer Sciences, Environmental Sciences, Mathematical Sciences, Physical Sciences, Psychology, and Social Sciences.
- *Engineering* including Aeronautical and Astronautical, Chemical, Civil, Electrical, Mechanical, Metallurgical and Materials, and other engineering fields.

Science and engineering *do not* include law, business administration/management science, humanities, history (except research in history and philosophy of science and technology), the arts, or education (except educational psychology).

1996 Initial Screener Questions

1. Your Organization

Is your organization a nonprofit organization? (By nonprofit, we mean an organization classified as 501(c) by the Internal Revenue Service, filing a 990 or a 990-PF tax return form.)

___ Yes ___ No

2. Research Performance

In 1996, did your organization **conduct** any research or development in the science, engineering, or technology fields? Science, engineering and technology fields include:

Social Sciences	Psychology	Medical and Health Sciences
Biological Sciences	Engineering	Physical Sciences
Environmental Sciences	Mathematical Sciences	Computer Sciences
Agricultural Sciences.		

___ Yes (*Continue with 2a*) ___ No (*Skip to Q.# 3*)

2a. Approximately how much research or development in the science, engineering or technology fields did your organization **conduct** in fiscal year 1996? (*Consider total costs, including both direct and indirect costs in both internally and externally funded research or development.*)

___ Less than \$50,000	___ \$50,000 - \$249,999	___ \$250,000 - \$999,999
___ \$1,000,000 - \$4,999,999	___ \$5,000,000 - \$24,999,999	___ \$25 million or more

How many of the nonprofit organizations here would screen out on those questions?

Perhaps an alternative approach to screening would more accurately identify R & D performers.

Extraction from Exploratory Interview Protocol

I'd like to spend a few minutes talking about your organization.

What sort of work does < NPO name> do? What were the major activities over the last year?

[Probe as needed:] Has the staff at <NPO name> done any of the following?

- Conducted work that might lead to a patent? [If yes] can you tell me more about this work?
- Produced findings that are published in academic journals or presented at conferences? [If yes] can you tell me more about this work?
- Applied scholarly or creative activity in a way that has never been done before? [If yes] can you tell me more about this work?
- Created new solutions that can be generalized to other situations? [If yes] can you tell me more about this work?
- Conducted work to discover previously unknown facts, structures, or relationships. [If yes] can you tell me more about this work?
- Conducted work to extend the understanding of facts, relationships or principles in ways that could be useful to others? [If yes] can you tell me more about this work?

Alternative Screening Approach

Follow the basic format used in the exploratory interview question sequence to identify whether the organization has performed activities that encompass the R&D definitions.

We provide illustrative but untested examples.

Alternative Screening Approach

2. Has the staff at <NPO name> done any of the following?
 - Conducted work that might lead to a patent?
 - Produced findings that are published in academic journals or presented at conferences?
 - Developed new approaches to social service delivery and formally evaluated the results?
 - Created new solutions that can be generalized to other situations?
 - Conducted work to discover previously unknown facts, structures, or relationships?
 - Conducted work to extend the understanding of facts, relationships or principles in ways that could be useful to others?

Alternative Screening Approach

- Continued

- Conducted research and development in the area of medical or health-related sciences, such as biochemistry, genetics, reproduction, and clinical medicine?
- Conducted research and development in the area of natural science, such as agricultural science, environmental science, and physical sciences?
- Conducted research and development in the area of social science, such as psychology and social science?
- Conducted research and development in the area of engineering, such as chemical, civil, metallurgical and other engineering fields

Using a web-based instrument, the key terms (research, development, medical or health-related sciences, natural sciences, social science, engineering) can be hot-linked to a definition.

Alternative Screening Approach

Screen In: Answering YES to one or more of the screening questions

Include a statement following the screening:

In the remainder of this questionnaire, we would like you to think about the activities that you identified in Question 2 that are performed by your organization. For shorthand, we will refer to these as R&D activities.

Alternative Screening Approach

This is an untested new approach.
Further development and testing is needed.