Attachment B

Task Order 20: Validation of Examples of Basic Research, Applied Research, and Experimental Development Primarily for Social Science and the Humanities Fields

For Social, Physical, Natural Sciences, and Humanities Experts

Recruitment email

Dear <>

I would like to invite you to participate in a study sponsored by the National Science Foundation's (NSF) National Center for Science and Engineering Statistics (NCSES) to improve our understanding of the nature of research and development (R&D) activities across multiple fields of research, including the social sciences, arts, and humanities. The goal of this study is to validate representative examples of research activities that can be used to help in the classification of R&D expenditures in official U.S. statistics.

We will ask you to review a series of examples of research related to your field of expertise through a brief on-line survey and assess whether or not they are representative of basic research, applied research, or experimental development based on your expertise in that field.

NCSES is one of thirteen federal statistical agencies in the United States and, is legislatively mandated with collecting and publishing data on R&D. Through surveys, NCSES commonly asks respondents to classify different research activities as basic research, applied research, or experimental development, using definitions that have been agreed upon by more than 30 nations.

We have gathered field-specific examples of R&D, because we believe that supplying survey respondents with such examples of R&D will enable respondents to interpret and apply these definitions more accurately and consistently. Now we are attempting to validate these examples by asking other experts in the field. Although your participation is voluntary we hope that you will help us in this important project by categorizing examples we have collected into the three categories of R&D. We are hosting this validation electronically at:

Please click on this link <insert active hyperlink here> to help us.

Thank you for your time in this important project.

Christopher Pece
Senior Analyst
National Center for Science and Engineering Statistics
National Science Foundation
(703) 292-7788

Follow-up phone call

Call people who did not respond to the email or have logged onto the survey within 5 business days.

Hello, my name is <name> and I work for SRI International. We are working with the National Center for Science and Engineering Statistics at the National Science Foundation to validate examples of research and development. I am calling to follow up on an email that I sent you last week to ask if you would participate in a brief voluntary survey about research and development in your field.

Did you receive my email?

If yes
Would you be willing to participate?

If yes
Thank you. I will send you the hyper-link to the on-line survey. Can you please confirm your e-mail address for me?

If no
I understand. May I ask if you could recommend someone else in your field that you think would be a willing to help to?

For Social Services Organization Experts

Recruitment email

Dear <>

I would like to invite you to participate in a study sponsored by the National Science Foundation's (NSF) National Center for Science and Engineering Statistics (NCSES) to better understand the nature of research and development (R&D) activities across multiple fields of research, including the social sciences, arts, and humanities. The goal of this study is to validate representative examples of research activities that can be used to help in the classification of R&D expenditures in official U.S. statistics.

We have gathered examples of R&D from a variety of nonprofit organizations, because we believe that supplying survey respondents with such examples of R&D will enable respondents to interpret and apply these definitions more accurately and consistently. Now we are attempting to validate these examples by asking other experts. We hope that you will help us in this important project by categorizing examples we have collected into the three categories of R&D. We are hosting this validation electronically at:

Please click on this link <insert active hyperlink here> to help us.

Thank you for your time in this important project.

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Senior Analyst
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Follow-up phone call

Call to people who did not respond to the email or logged onto the survey within 5 business days.

Hello, my name is <name> and I work for SRI International. We are working with the National Center for Science and Engineering Statistics at the National Science Foundation to validate examples of research and development. I am calling to follow up on an email that I sent you last week to ask if you would participate in a brief voluntary survey about research and development in social service and similar non-profit organizations.

Did you receive my email?

If yes
Would you be willing to participate?

If yes
Thank you. I will send you the hyper-link to the on-line survey. Can you please confirm your e-mail address for me?

If no
I understand. May I ask if you could recommend someone else in a similar organization as yours that you think would be a willing to help us?

Validation of R&D Examples

Thank you for agreeing to assist in validating the results of our study. As we mentioned in the original study invitation, we have gathered field-specific examples of research and development (R&D). We believe that supplying field-specific examples of R&D in National Science for Science and Engineering Statistics (NCSES) surveys will enable respondents to interpret these definitions more accurately and consistently.

We are now attempting to validate these examples by asking experts in your field to review and comment on them. We ask you to help us in this important project by categorizing the examples below into the different categories of R&D – basic research, applied research, and experimental development. The definitions will be provided throughout the survey.

This survey is voluntary. Your name will not be published or released to the public. It will only be provided in reports to the NCSES. By continuing with this survey you are giving your consent. If you have any questions about the exercise please contact me at christina.freyman@sri.com or 703-247-8778. If you have any questions about our use of human subjects please contact Judy Sheenan at human-subjects@sri.com.

OMB control number and statement.

This survey is currently not active. You will not be able to save your responses.

Validation of R&D Examples

Which of the following fields would you identify yourself most closely as a member of?

Please select only one.

Natural and Physical Sciences and Engineering

- [ ] Agricultural Sciences
- [ ] Astrophysics
- [ ] Basic Medicine
- [ ] Chemical Sciences
- [ ] Computer And Information Sciences
- [ ] Forestry Sciences
- [ ] Materials Engineering
- [ ] Medical Engineering
- [ ] Nanotechnology
- [ ] Biological Sciences, not elsewhere classified

Humanities

- [ ] Archaeology
- [ ] Ethics
- [ ] History
- [ ] History of Art
- [ ] Language
- [ ] Literature
- [ ] Music
- [ ] Performing Arts
- [ ] Philosophy
- [ ] Religion

Social Sciences

- [ ] Economics and Business
- [ ] Educational Sciences
- [ ] Law
- [ ] Media and Communications
- [ ] Political Science
- [ ] Psychology
- [ ] Social and Economic Geography
- [ ] Sociology

Is there a field not listed above you would have rather picked if it was available?

- (•) Yes
- ( ) No

Please enter your preferred field here.

Why did you choose this field?

This survey is currently not active. You will not be able to save your responses.

Validation of R&D Examples

The National Center for Science and Engineering Statistics uses the following definition for basic research.

Basic research ***is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view.***

Based on this definition, do you think experts in Agricultural Sciences ever perform basic research?

Choose one of the following answers

- ○ Yes
- ○ No

Please enter your comment here:

The National Center for Science and Engineering Statistics uses the following definition for applied research.

Applied research ***is original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.***

Based on this definition, do you think experts in Agricultural Sciences ever perform applied research?

Choose one of the following answers

- ○ Yes
- ○ No

Please enter your comment here:

The National Center for Science and Engineering Statistics uses the following definition for experimental development.

Experimental development ***is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed.***

Based on this definition, do you think experts in Agricultural Sciences ever perform experimental development?

Choose one of the following answers

- ○ Yes
- ○ No

Please enter your comment here:

This survey is currently not active. You will not be able to save your responses.

Validation of R&D Examples

Other experts in the field of Agricultural Sciences were asked for examples of basic research, applied research, and experimental development. Using the following definitions, please classify the following example.

Basic research *is experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view.*

Applied research *is original investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective.*

Experimental development *is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed.*

Example:

Researchers investigate the connection between the genome, phenome, and environment in maize by producing identical seeds and sending them to researchers across the country to plant and observe.

Which of the following best describes this example?

Choose one of the following answers

- ○ Basic Research
- ○ Applied Research
- ○ Experimental Development
- ○ Example is unclear (please comment below)
- ○ Not applicable (please comment below)

	Not at all confident	Not very confident	Neutral	Confident	Very confident
How confident are you in your	○	○	○	○	○

	Not at all confident	Not very confident	Neutral	Confident	Very confident
answer?					

Please tell us why you chose to classify the example in this way:

Could this example be improved?

(•) Yes ( ) No

How?

This survey is currently not active. You will not be able to save your responses.

Validation of R&D Examples

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Experimental development *is systematic work, drawing on existing knowledge gained from research and/or practical experience, which is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed.*

Example:

Researchers investigate wild potato genomes to locate the genes responsible for resistance to potato blight in an effort to improve the disease resistance in domestic/crop potatoes.

Which of the following best describes this example?

Choose one of the following answers

- ○ Basic Research
- ○ Applied Research
- ○ Experimental Development
- ○ Example is unclear (please comment below)
- ○ Not applicable (please comment below)

	Not at all confident	Not very confident	Neutral	Confident	Very confident
How confident are you in your	○	○	○	○	○

	Not at all confident	Not very confident	Neutral	Confident	Very confident
answer?					

Please tell us why you chose to classify the example in this way:

Could this example be improved?

(•) Yes ( ) No

How?

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Validation of R&D Examples

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Example:

Researchers investigate genome changes and mutagenic factors in plants to understand their effects on the phenome.

Which of the following best describes this example?

Choose one of the following answers

- ○ Basic Research
- ○ Applied Research
- ○ Experimental Development
- ○ Example is unclear (please comment below)
- ○ Not applicable (please comment below)

	Not at all confident	Not very confident	Neutral	Confident	Very confident
How confident are you in your answer?	○	○	○	○	○

Please tell us why you chose to classify the example in this way:

Could this example be improved?

(•) Yes ( ) No

How?

This survey is currently not active. You will not be able to save your responses.

Validation of R&D Examples

Thank you for your time and participation in this important project.
Did not save

Your survey responses have not been recorded. This survey is not yet active.