

Enclosure 1  
Protocol for Early Stage Scoping Interviews  
Business R&D and Innovation Survey  
Life of R&D

**POPULATION FOR EARLY SCOPING INTERVIEWS**

Companies with R&D agreements  
R&D for others  
R&D for self  
Pay others to do R&D  
Companies with mix of research and development  
Various sizes  
Various Industries: IT, Service,  
Companies reporting new or significantly improved things (See Question 1-10)

**BEFORE THE INTERVIEW**

Try to set up interview with BRDIS and someone representing marketing of R&D generated products/services/processes.

Look at R's data on:

- Foreign v domestic R&D
- Innovation Questions (Page 7)
- Patents/licensing activity
- Business codes: are there multiple business codes for R&D? (2009=Q2-7)

Note from Francisco to team: I think the key questions are:

- 1- Think of ANY typical new product – can you describe how long does its revenue stream last?
- 2- Is the above more difficult for products that resulted from your own R&D? from R&D you paid others to do? from products that resulted from patents you licensed or patents you bought?
- 3- For products that resulted from R&D your company conducted, how long from start of R&D to market introduction? How do you know or measure this? Who does this measurement? Who decides when to bring R&D-based product into the market?

I would also keep in mind the 3 key time and value milestones we are looking for:



And as noted above, this timeline (and how companies go about identifying and implementing these milestones) vary by to a large extent type of industry & size/age of company.

## INTRODUCTION

Thanks for meeting with us today. We've been asked to add a few new questions to the survey to assess the effects of R&D on the U.S. economy. We wanted to talk with you about these issues before we design the wording of the questions. We'll start off with some questions about how R&D works at your company, and then we ask questions about how your company thinks about the products and processes that are the result of your company's R&D.

## BACKGROUND QUESTIONS

*Note to interviewer: Use these questions to see which types of R&D company does:*

- 1) *R&D for this company's products/processes*
- 2) *Pays others to conduct R&D*
  - a. *For this company's products/processes*
  - b. *For contracts*
- 3) *Performs R&D for others*

### 1. **[Overview of types of company activity, if needed; get info from business register before interview]**

[For companies with more than one business code for R&D, probe to get a sense of the type of industry]

- What is your industry or type of business? [Pharmaceuticals, IT, furniture-making, etc.]
- How many employees work in your company/location? [approximate number is fine, only need order of magnitude]
- How long has this company been in business? [1-2 years, about 5? More than 5?]

### 2. **[Overview of R&D]** Could you tell me how [NAME OF COMPANY] is organized for R&D and what your general responsibilities are? [Use probes below only as needed; first, trying asking respondent, "Could you tell me more about that?"]

#### **[Probes as needed: R&D for self]**

Is that R&D conducted for your own products?

Is that R&D conducted to improve your company's processes?

Do any of your company's employees conduct the R&D?

#### **[Probes as needed: Pay others for R&D]**

Does your company ever pay others to conduct R&D?

[If yes:]

- Is that R&D conducted for your own company to use?
- Is any of that work a subcontract for a contract you have for R&D work?

Do you provide R&D funding to any universities for R&D?

#### **[Probes as needed: Perform R&D for others]**

Do you ever perform R&D for others?

Does your company conduct any R&D for other companies that are not subsidiaries?

Do you have any contracts with the federal government for R&D?

Do you perform R&D as a part of a collaboration with other companies?

## FOREIGN R&D ISSUES

*Note to interviewer: Use these questions to bring up topic of foreign R&D relationships so respondent will include those relationships in the answers to subsequent questions.*

3. Is there any R&D at your company that has a foreign component?

[As needed:]

- Do you perform R&D for any foreign companies, foreign organizations, or foreign governments?
- Do you have domestic subsidiaries that perform R&D for foreign subsidiaries?
- Do you have foreign subsidiaries that perform R&D for your company?
- Do any foreign companies or other foreign organizations perform R&D for you?

## R&D: START TO IMPLEMENTATION

*Notes to interviewer:*

- 1) *Use these questions to probe the time between the start of the R&D and the sale of the first product. Try to find out what milestones company tracks or could track.*
- 2) *Listen (probe, if needed) to see how the respondent distinguishes between a “new product” and a “significantly improved product.”*

4. Now we'd like to ask some questions about the R&D process from the start of the R&D project to the implementation of the R&D. Could you tell me about that process at your company going from the start of an R&D project to using products or services that resulted from that R&D?

[As needed:]

### BEGINNING OF R&D: PRODUCTS/SERVICES

- How would you define the start of an R&D project for R&D that your company conducted?
- How would you define the start of an R&D project for R&D that your company paid others to do for you?

### COMPLETION OF R&D: PRODUCTS/SERVICES

- Who decides when a **product or service** resulting from R&D is ready for the marketplace?
- How would your company define the point of the R&D being implemented for a **new product**?

(IF NOT MENTIONED:)

- Would you know the date of the first sale of the new product?
- Would that be an appropriate date to use for the implementation of the R&D?
- How would you know that the R&D is actually implemented for an **existing** product?

#### COMPLETION OF R&D: PROCESSES

- Who decides when an R&D **process** is ready to be used for production?
- How would you define the point of the R&D being implemented for a **new process**?
- How would you know that the R&D is actually implemented for an **existing** process?

#### **MOST RECENT NEW PRODUCT/PROCESS**

5. If we asked you to answer questions about your most recent product that resulted from R&D, how would you go about selecting which product that would be?
  - Would any of that R&D be conducted by others outside your company?
  - Would you have any recent product that resulted from R&D conducted by others outside your company?
  - How do you know who conducted the R&D for the product?
6. If we asked you to answer questions about your most recent **process** that resulted from R&D, how would you go about selecting which product that would be?
  - Would any of that R&D be conducted by others outside your company?
  - Would you have any recent change in a process that resulted from R&D conducted by others outside your company?
  - How do you know who conducted the R&D for the process?

#### **MOST LIKELY RESPONDENT**

7. Who in this company would be responsible for tracking the progress of the R&D?

#### **WRAP-UP ON PHASE I**

8. Is there anything else you can tell me about how you track your R&D from start to implementation?

## **R&D: POST-IMPLEMENTATION: PRODUCTS**

*Notes to interviewer:*

- 1) *Use these questions to probe the time between the **implementation of the R&D to the last sale of the product**. Try to find out what milestones company tracks or could track.*
- 2) *Listen (probe, if needed) to see how the respondent distinguishes between a “new product” and a “significantly improved product.”*

9. This next set of questions asks about the length of time the R&D is useful once it is implemented. How would you know how long R&D “lasts” once it is implemented? How do you think of that at this company?

-- How would your company know when the results from an R&D project are no longer being used?

10. How would you know how long your company is getting revenue for a new product that you put on the market?

Who would know the start of that revenue?

Who would know the end of that revenue?

Who is involved in the decision to take a product out of the marketplace?

11. What is your reaction to using that amount of time as a way to measure the life a product resulting from R&D?

Would that amount of time be easier or more difficult to find out for the R&D that you conducted for your own products?

Would that amount of time be easier or more difficult to find out for the R&D that others conducted for you?

## **R&D: POST-IMPLEMENTATION: PROCESSES**

*Notes to interviewer:*

- 1) *Use these questions to probe the time between the **implementation of the R&D to the last sale of the product that using that process**. Try to find out what milestones company tracks or could track.*
- 2) *Listen (probe, if needed) to see how the respondent distinguishes between a “new product” and a “significantly improved product.”*

12. How would you know how long R&D “lasts” once it is implemented for a **new process**? How do you think of that at this company?

-- How would your company know when the results from an R&D project are no longer being used?

13. How would you know how long your company is getting revenue for products using this **new process**?

Who would know the start of that revenue?

Who would know the end of that revenue?

Who is involved in the decision to take the process out of production?

14. What is your reaction to using that amount of time as a way to measure the life a process resulting from R&D?

Would that amount of time be easier or more difficult to find out for the R&D that you conducted?

Would that amount of time be easier or more difficult to find out for the R&D that others conducted for you?

#### COMPANY RECORDS

15. What kinds of company information would be useful to look at the **life of a new product** from the beginning to the end of the product?

What kinds of information would your company have on that?

Who would have that information?

What time periods would you include in this calculation

16. Who in this company is responsible for tracking the results of the R&D after it is implemented?

17. Considering the issues we've talked about today, how would you **measure the life of an R&D project** from the start of the R&D to the end of the revenue? In months, in years, some other way?

What records would you use to measure this amount of time.. from the start of the R&D until the end of the revenue for the new product produced by the R&D?

18. Who would be the **best person or persons** in your company to ask about the life of the R&D project?

-- Where are you are located in the organization compared to [that employee/those employees]?

-- How difficult would it be to find information on that?

-- How long would it take you to collect this information?

## **LIST OF TERMS**

19. We have a list of terms that we'd like to ask you about. The first one is "service life." Do you use that term here when you talk about R&D? How do you use it? What does that term mean to you?

[Probe for the terms: (How would you interpret that term? What is included?)]

Service life

Life cycle

R&D investment

Innovation

Line extension

Product

Process

Significantly improved product

Significantly improved process

## **COMPANIES WITH FOREIGN OFFICES**

20. Does your company have offices outside the United States?

[IF "YES":]

-- How would that affect the issues we've talked about today?

## **WRAP-UP**

21. (IF TIME ALLOWS) Where do you think these questions would best fit on the current questionnaire?

Would a new section work for you?

22. (IF TIME ALLOWS) Would it be possible to break out the period of time for the R&D for your newest product into basic research, applied research, and development?

Which of these three stages of R&D is most likely to be done by your company?

- Who would perform the other stages of R&D?

23. Are there any other issues we should know about?

Is there any other information that you think would be useful for us to collect about business R&D?

24. Are there any other comments you'd like to make?