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:

R&D market end of revenue

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*
	1. *For this company’s products/processes*
	2. *For contracts*
3. *Performs R&D for others*
4. **[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?]
1. **[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.*

1. 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.”*
3. 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**

1. 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?

1. 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**

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

**Wrap-up on Phase I**

1. 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.”*
3. 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?

1. 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?
2. 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.”*
3. 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?

1. 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?
2. 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**

1. 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
2. Who in this company is responsible for tracking the results of the R&D after it is implemented?
3. 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?
4. 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**

1. 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**

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

 [IF “YES”:]

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

**Wrap-up**

1. (IF TIME ALLOWS) Where do you think these questions would best fit on the current questionnaire?
	* Would a new section work for you?
2. (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?
3. 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?
4. Are there any other comments you’d like to make?