

NSF PARTNERSHIPS — INTERVIEW PROTOCOL PROJECT PIs AND OTHER RESEARCHERS (TREATMENT PROJECTS)

INTRODUCTION

Thank you for agreeing to meet with us regarding the {SPECIFY RESEARCH PROJECT}. As we indicated in our earlier note, we are doing an evaluation of some of NSF's programs that are jointly funded by NSF and private industry. Our study involves comparing projects conducted under such partnership programs with projects, addressing similar research topics, funded by NSF. We've asked to speak with you as part of our effort to get a better understanding of your project and how the {SPECIFY NAME OF PROGRAM} supported your project.

1. To get started we'd like to know more about how you were involved in the project.

- When did your involvement with the project start?
- What was your role and how long did your participation last?

2. Can you tell me a little bit about the {NAME OF RESEARCH PROJECT}, specifically the goals of the research project and what was hoped to be achieved through it?

[Probe] Was the proposed scope and structure of the research project influenced by the fact the {NAME OF INDUSTRY PARTNER} was a co-funder of the work? If, yes ask In what way(s)?

3. What type of activities were implemented to reach the project goals?

[Probe] Did you encounter any challenges implementing any of these activities? If yes, why did these challenges occur and what steps did you take to address them?

4. Are there any activities that you were able to conduct primarily because of {NAME OF INDUSTRY PARTNER}?

[Probe] How was the implementation of the activities associated with your project informed or enhanced by your access to {NAME OF INDUSTRY PARTNER}?

5. How successful was your project in achieving the goals you just outlined?

[Probe] Ask for each area mentioned earlier in Q1, then follow up in other areas

- Building broader research communities/networks of researchers
- Allowing for interdisciplinary approaches/multiple perspectives/transformational approaches/different methodologies
- Accelerating discovery and innovation
- Providing new opportunities for career development
- Enhancing the diversity of the STEM workforce

6. Has the project resulted in any of the following outputs? (If yes, ask for details)

- Publications
- Patents
- Commercial products
- Other

[Probe] For *each* output that the research project produced, ask: How did the involvement of {NAME OF INDUSTRY PARTNER} influence the process by which the {NAME OF OUTPUT} was developed? How did their involvement enhance the scope or quality of the {NAME OF OUTPUT}?

WORKING WITH THE INDUSTRY FUNDER

Now I'd like to ask you a few questions about {NAME OF INDUSTRY PARTNER} and their role on this research project.

7. Prior to this project, had you ever worked with a private industry partner?

[Probe] If yes, which private industry partners did you work with prior to this project? In what ways did you work with these partners?

8. Prior to this project, had you ever worked with anyone from {NAME OF INDUSTRY PARTNER}?

[Probe] If yes, in what ways?

9. Thinking of {SPECIFY RESEARCH PROJECT}, what were the areas/activities on which you and/or members of your team collaborated with {NAME OF INDUSTRY PARTNER}? Why were these activities selected and how were they agreed upon?

[Probe] Ask about potential areas of interaction and collaboration

- Advising or collaborating with researchers [**PROCEED TO Q11**]
- Informing decisions on the design or implementation of research projects [**PROCEED TO Q11**]
- Offering supports, such as providing researchers to be part of the project team or access to its technology, infrastructure, or sites [**PROCEED TO Q11**]
- Providing opportunities to researchers, such as retreats or related interactions [**PROCEED TO Q11**]
- Providing opportunities to students, such as mentoring or access to research opportunities [**PROCEED TO Q11**]
- Providing supports for dissemination of project findings and products [**PROCEED TO Q11**]
- None [**ASK Q10**]

10. [ASK ONLY IF RESPONDENT DOES NOT IDENTIFY ANY AREAS OF COLLABORATION IN Q8—AND THEN SKIP TO Q19] Why was {NAME OF INDUSTRY PARTNER} not involved in your research project?

[Probe] Where there any challenges partnering with {NAME OF INDUSTRY PARTNER} that prevented you from collaborating with them in any way? What were they? Are there specific areas where you had hoped that {NAME OF INDUSTRY PARTNER} would be involved?

11. How were the activities coordinated between {NAME OF INDUSTRY PARTNER} and research staff? How well did this coordination work?

[Probe for any of the areas mentioned] Who from {NAME OF INDUSTRY PARTNER} did you work with? Was there more than one individual or group? Can you give me some specific examples of what was done?

12. How well did {NAME OF INDUSTRY PARTNER} communicate with you and other research staff?

[Probe] Frequency of communication and mode

13. Overall, how would you describe the engagement of {NAME OF INDUSTRY PARTNER}?

14. How did you monitor whether {NAME OF INDUSTRY PARTNER} delivered expected activities and met their goals?

15. What benefits resulted from your interactions with {NAME OF INDUSTRY PARTNER}?

[Probe] Ask about potential areas of added value

- Building broader research communities/networks of researchers
- Allowing for interdisciplinary approaches/multiple perspectives/transformational approaches/different methodologies
- Accelerating discovery and innovation
- Accelerating transition from basic research to product
- Providing new opportunities for career development
- Disseminating findings to a broad and diverse audience

16. Were there any challenges in partnering with {NAME OF INDUSTRY PARTNER}? If yes, what were they? Why did these challenges occur and how did you try to overcome them?

[Probe] Ask about any challenges encountered

- Burdens
- Conflict between priorities
- Disagreement on intellectual property
- Lack of clarity surrounding the role of {NAME OF INDUSTRY PARTNER}
- Lack of reliable access to {NAME OF INDUSTRY PARTNER}

17. Have you continued to work with {NAME OF INDUSTRY PARTNER} on extension of the research being discussed here or new research ?

[Probe] If Yes: In what capacity did you involve {NAME OF INDUSTRY PARTNER} after the project ended?

[Probe] If No: Why didn't you engage with {NAME OF INDUSTRY PARTNER} after the project ended? Are there ways in which you would have liked to have engaged with {NAME OF INDUSTRY PARTNER} but were unable to do so?

18. Did you involve other industry partners in this research project?

[Probe] Which other private industry partners did you engage with? How and why did you engage each of these partners?

CONCLUSION

19. Are there areas that you think NSF could improve to promote better collaboration between industry partners and researchers on research projects?

Thank you for taking the time to talk with us about this work. Your insights have been very helpful.