



NSF's Convergence Accelerator

# Collaboration Agreement





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# Context

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Today, national-scale challenges cannot be solved by a single discipline, which is why the National Science Foundation's Convergence Accelerator brings together convergent teams to **merge ideas, approaches, and technologies to drive innovation**. As a member of a Convergence Accelerator research team, you are expected to work efficiently and effectively with team members from other disciplines and professions on a complex, use-inspired research project. The Convergence Accelerator Program recognizes that you must attend to the process of collaboration if you want to facilitate accelerated success. The science is critically important, of course, but unless your team works efficiently and effectively, you will have difficulty doing all the work necessary by the end of Phase I.

# Overview

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## Purpose

The Convergence Accelerator Collaboration Agreement template is designed to help your team be explicit about the details of your collaboration. It is important for your team to devote effort early to designing your collaboration so that you are set up for success and can focus on the science and technology of your project. Additionally, your team's collaboration agreement will be directly relevant to your Phase II proposal in both the Partnerships Collaboration Plan and the Phase I Portfolio. It is not intended to be busy work for you to complete by cutting and pasting elements from your proposal or by responding with high-level, vague answers.

This template contains questions in several topic areas that guide team reflection on what is working and not working, discussion of strategies for working together successfully, and development of approaches for preemptively addressing potential conflicts. It is intended to facilitate dialogue about shared rules and norms of collaboration and open pathways for anticipating, identifying, and addressing obstacles as they arise. Your team includes a diversity of disciplines and professions, personalities, and work and communication styles and this template can surface and elucidate these differences. If you are willing to acknowledge, examine, and develop a shared understanding of how to address them, this can propel your team toward more successful outcomes.

## Objectives

This template is designed to assist you in:

- **Making explicit and therefore transparent** important aspects of your approach to collaboration
- Ensuring you **have a shared vision** for your work together
- Recognizing that your science is dynamic and will require you to **adapt over time**
- Recognizing that your **working relationships are dynamic**, individually and as a team, and will require flexibility and a willingness to adapt over time
- **Establishing expectations** for working together, including what you do and say
- **Preparing for disagreements and even conflicts**, especially in the early stages and along the way when there are changes in team composition

# Instructions

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This template consists of **three sections** devoted to specific topics. Each section contains dialogue prompts and questions that address important aspects of its topic. We encourage you to interact with this template in the following way:

- 1. Read through the full template** to familiarize yourself with the motivation behind it and the topics that it raises.
- 2. After selecting a section to work on, discuss the dialogue prompts at the top of the section with your team.** These prompts are designed to highlight the theme of the section and can facilitate explicit expression of the full range of relevant views in the team. As they are rating response items, we would encourage each teammate to respond to them individually and then discuss them collectively in a dialogue facilitated by the PI or the project manager. In the dialogue, teammates should articulate and compare their reasons for responding as they do, using the prompts to highlight aspects of the collaboration that could profit from further attention. This dialogue should help enhance mutual understanding in the team so that it is easier to reply to the questions. *(See “Engaging with Prompts” for an example of how prompt dialogues might unfold.)*
- 3. After discussing the section theme in dialogue, respond to the questions in a way that reflects your team’s considered opinions about the issues they raise.** Your responses should clarify (i) how each question is understood, (ii) how proposed collaboration steps are to be implemented, and (iii) how teammates will be held accountable for following these steps. Remember that these responses represent explicit attempts to be transparent about how your team will function in this project.
- 4. If after discussion you conclude that a question doesn’t apply to your team, you should explain why in your response.** Because your team can change in composition and dynamic, a question that doesn’t apply at one time can become applicable at a later time, so it is useful to keep a record of what applies at one time but not at another time. (But be careful – don’t assume without discussion that a question doesn’t apply.)

# Instructions (continued)

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This template forms the backbone of the team science curriculum, and you will have the opportunity to work on it with guidance from the team science faculty. Each section of it will receive attention in the team science sessions that take place in the weeks to come.

Each of the sections addresses a topic of equal importance to a highly functional team. You may decide that a later section deserves your attention now – please feel free to respond to the topics that seem most pressing to you first.

In discussing the questions, be sure to invite and then listen to all perspectives. The dialogue prompts can be helpful in framing this discussion. As with the science you are conducting, your collaboration agreement should draw on everyone's experiences. Working through this template represents an opportunity to build a transparent and inclusive communication culture within your team.

For your team to realize the full value of your collaboration agreement, you should revisit it from time to time, updating it when appropriate (e.g., when there is a change in team membership, when the project vision has shifted, when tensions arise among team members).

## **Resources**

Bennett, L. M., Gadlin, H., Marchand, C. (2018). *Collaboration and Team Science Field Guide*. Bethesda, MD: National Institutes of Health. (Available at: [teamscience.nih.gov](https://teamscience.nih.gov))

Hall, K. L., Vogel, A. L., Crowston, K. (2019). *Comprehensive collaboration plans: Practical considerations spanning across individual collaborators to institutional supports*. In K. L. Hall, A. L. Vogel, and R. T. Croyle (Eds.), *Advancing Social and Behavioral Health Re-search through Cross-Disciplinary Team Science: Principles for Success* (pp. 587–612). Berlin/Heidelberg: Springer.

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*“Who is on a team matters less than **how the team members interact**, structure their work, and view their contributions”* ~ Julia Rozovsky - Director, People Operations - Google

# Engaging with Prompts

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Per instruction point 2, we thought it might be helpful to provide a brief example of how dialogue might unfold between team members. Once you have rated the prompt, you can begin the dialogue with following two statements, *"This is what I scored..."* and *"I scored it this way because..."*.

**We use the following prompt:** *We understand what deep integration looks like in our project.*

**Team member 1** - *I scored it a 3. I scored it this way because I have been part of projects where the different disciplines really connected the work well and I see that happening in this project. However the "we" gets me. I don't know how others understand deep integration because we haven't discussed it.*

(Another team member then shares their score and perspective.)

**Team member 2** - *I scored it a 4. I scored it this way because I felt like we laid out what integration meant to us in the proposal and I think we're hitting those marks. I didn't score it a 5 because there are people I haven't spoken to on the project and I'm not sure they are aligned with my interpretation of integration. Is this something we should discuss as a team further?*

Again, prompts are a mechanism for helping teams reflect on one another's perspectives and enhance mutual understanding.

## Two tips for engaging with teammates in a reflective manner

### 1. Ask clarifying questions or for elaboration

*"What do you mean by..."*  
or  
*"Could you say more about..."*

### 2. Reflect on your assumptions

We interpret others responses through our own filter. To minimize misinterpretations it's good to check that you have properly understood team members. It's helpful to reiterate how you have understood statements made and then ask, "What did I miss?" so they have an opportunity to clarify if needed.

# Team Management

This section addresses collaborative processes and protocols associated with working toward project success. Each question addresses an important aspect of managing a team to be successful. Responding to the questions as a team will ensure that everyone is clear from the beginning about how the team will function in pursuit of project objectives. This should help the team be more efficient and address challenges that arise more quickly and effectively.

## Dialogue Prompts

1. I understand the role I will play in this project.

Disagree 1 2 3 4 5 Agree

2. It is clear how the team will make important decisions in this project.

Disagree 1 2 3 4 5 Agree

## Project success

Type your answers in the box below:

1. What does success look like for this project (e.g., achieve Phase II funding, advance our careers, develop a marketable deliverable, function well as a team, sustain our motivation)?
  - a. What does a successful scientific deliverable look like?
  - b. What does a successful team dynamic look like?



## Team functioning

Type your answers in the boxes below:

1. How will important project decisions be made for this team (e.g., about budgets, funding, reports, team function, user interviews, personnel decisions, data management)?
2. What are the expected contributions of each team participant? (E.g., who is leading user interviews; who is responsible for what regarding POC/prototype build, community outreach, evaluation metrics, partnership coordination, and general project tasks; who will represent the team at curriculum sessions; who is responsible for assessing progress or challenges on sub-tasks)

## Accountability

1. How will we hold each team member accountable for doing their part of the project?

## Onboarding new teammates

1. What process will we follow to onboard new team members and, when appropriate, ensure they take joint ownership of the project?

*Additional questions related to team management can be found in Appendix 1.*

# Team Dynamics

Successful research teams are as good at scientific collaboration as they are at tending to team dynamics and relationships. This section addresses two critical aspects of functional teams: psychological safety that grounds trust and encourages risk taking, and conflict management that will help teams work through difficult conversations and succeed together. By responding to the questions as a team, you will create transparent infrastructure that supports risk taking, conflict management, and accountability. This should help the team be more innovative and teammates feel more secure.

## Dialogue Prompts

1. I can discuss any idea I have in our meetings, no matter how outlandish it sounds.



2. We can do better as a team to offer assistance when a challenge arises.



## Psychological safety

Type your answers in the box below:

1. Are there differences in how we understand our project that we will need to closely manage?
2. Are there differences in how we relate to each other that we will need to closely manage?
3. How will we ensure it is safe for everyone to take a risk in our group (e.g., present ideas about the science or the team dynamics that others may think will not work)?

1. What will be our process for ensuring all team members can raise concerns, prior to overt conflict??
2. What processes can we agree on to manage scientific conflicts when they arise?
3. What processes can we agree on to manage relationship conflicts when they arise?
4. What process do we follow if we cannot resolve a conflict among ourselves?

*“We now have to work a little harder to share what we’re thinking, **to ask questions.**”*

~ Amy Edmondson

*Additional questions related to team management can be found in Appendix 1.*

# Team Communication

This section concerns internal communication among members of the team. The overall focus is on communication norms, i.e., consensus-based standards for exchanging information and managing relationships with your teammates. It also concerns the challenge of communicating across differences in the team, such as, but not limited to, differences in research perspective, level of detail needed during conversations, or in conflict style.

## Dialogue Prompts

1. I know what the communication norms are in our project.



2. I know how all the pieces of our project will come together.



## Communication

Type your answers in the box below:

1. What will our communication norms be?

(Communication norms could include: frequency of team communication, plans for addressing communication problems, plans for conducting research meetings, ways of discussing team functioning, what to do if teammates don't communicate as expected.)



2. What mechanisms (e.g., email, text, Slack) will we use for routine communications among team members (top-down and bottom-up) to keep everyone fully informed of relevant issues?
3. How can we learn from and leverage the differences that exist in our team (e.g., differences in opinion, personality, expertise, work styles)?
4. Can we successfully realize our shared vision and meet the associated goals with the mix of perspectives currently on our team or do we need additional perspectives?

*“It’s not only the defining of the process, it’s the **following of the process**”*

~ Convergence Accelerator Office

*Additional questions related to team management can be found in Appendix 1.*

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Type your notes in the box below:

# Appendix

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## Additional Questions to Consider

Each team follows a different trajectory, and because of differences in **team composition, goals, and values, different issues will arise for different teams**. As a result, no one list of planning topics will cover all and only the issues of concern for a given team. Below are a few more topics that we know are issues for some teams. There will likely be topics that arise for your team that we have not included. As we mentioned above, it is useful to augment the list with those missing topics that are important considerations for your team. We wish you luck with your project!

# Additional Questions

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## Team Management

Type your answers in the box below:

1. What team processes, procedures, and structures do we need to put in place to be successful (e.g., balancing individual needs vs. team needs, identifying where standard operating procedures will be useful, determining how meetings will be run)
2. What will the workflow be for critical project tasks and how will these tasks be structured?
3. What tools or information do we need to conduct our research and collaborate effectively?





## Psychological Safety and Trust

Type your answers in the box below:

1. How will we ensure that all input will be regarded as valuable (even if we think it will not work)?
2. How will we ensure that all ideas shared among our team members are treated as valuable contributions to the evolution of our thinking, whether they relate to the science or to our collaboration?

## Managing Intellectual Property

Type your answers in the box below:

1. When and how will we handle intellectual property and patent applications?
2. What mechanism do we need to put in place to trigger a group conversation about IP?

## Contingencies

Type your answers in the boxes below:

1. How will we negotiate the development of new collaborations and spin-off projects, if any?
2. How will we identify potential conflicts of interest among team members? With others?
3. Should a team member move to another institution or leave the project, how will we handle data, specimens, laboratory books, and authorship and credit?
4. What accountability does the owner of an effort have if they cannot follow through as originally planned

1. What will be our criteria and process for assigning authorship and credit?
2. How will credit be attributed to each collaborator's institution for public presentations, abstracts, and written articles?
3. How and by whom will public presentations be made?
4. How and by whom will media inquiries be handled?