

U.S. NATIONAL SCIENCE FOUNDATION 2415 EISENHOWER AVENUE ALEXANDRIA, VIRGINIA 22314

NSF 24-073

Frequently Asked Questions (FAQs) for Sustainable Regional Systems Research Networks (SRS RNs)

GENERAL TOPICS

- 1. Where can we sign up for the SRS Research Networks (RNs) solicitation webinar?
- 2. I would like to ask SRS program directors questions. Is it possible to have a consultation with one of the SRS RNs program directors?
- 3. I noticed that this solicitation does not include a Track 2 Planning Grant option. Are there any options for smaller projects?
- 4. I noticed that CISE is no longer listed on the solicitation. Does that mean that CISE relevant topics are no longer within the scope of the solicitation?

ELIGIBILITY

- 5. Do you have to have an awarded Planning Grant from the previous round of SRS RN to submit a proposal this year?
- 6. Can non-profit or industry personnel serve as Lead PI?
- 7. Are there restrictions on the number of partners in an SRS RN?
- 8. The solicitation states, Research Networks must include either/or:
- 9. What is meant by "geographical diversity" in this solicitation?

ABOUT DISCIPLINARY REQUIREMENTS

- 10. What is meant by interdisciplinary SRS RN research and education?
- 11. What is the preferred contribution level that should be provided by each project participant/discipline?

ABOUT THE SCOPE OF RESEARCH AND EDUCATION

12. I noticed that throughout the solicitation, SRS are described in plural (i.e., systems

versus system). Does this mean my project must study more than one system or can I focus on a single system?

- 13. Can my SRS research be place-based, region-specific, or context-dependent?
- 14. Can a region be defined as a single neighborhood?
- 15. Our team is considering proposing to SRS, but we would like to clarify the differences between NSF's SRS Program and NSF's Smart and Connected Communities (S&CC) Program.
- 16. How do Sustainable Regional Systems Research Networks differ from TIP's Regional Innovation Engines (NSF Engines)?
- 17. I would like to study the health dimensions of SRS. Is this allowable under the SRS RNs program?
- 18. If a project explores social, behavioral, or economic solutions and/or linkages among SRS, does it meet the requirements of this solicitation?
- 19. I am interested in proposing advanced cyberinfrastructure enabling research in SRS. Can you provide insights into the cyberinfrastructure aspects of the solicitation?

ABOUT THE TEAM

- 20. Is there a limit to how large my team can be?
- 21. How many Co-PIs can be included in the SRS RN proposal? There are many leadership roles we need to fill in a research network. Can we have more than 4 co-PIs? I did not see any specifics in the Program Solicitation.
- 22. Can a member of the project leadership team be listed as something other than a PI, co-PI, or Senior/Key Personnel?
- 23. I am a researcher at a Federally Funded Research and Development Center (FFRDC) or a federal agency. May my organization submit a proposal and serve as lead PI?
- 24. Can an SRS RN project involve international research and/or involve international collaborators?
- 25. One of my team leaders is at an international institution. I have listed them as "non-NSF funded collaborators" in the Overview section as required so that I can include their biographical sketch in the appropriate section of the proposal. Do I need to include Current and Pending (Other) Support or Collaborators and Other Affiliations information for this international participant?
- 26. My international collaborator is applying for funding from their country's research funding agency. How will this affect the success of my proposal?

27. I would like to include undergraduate students in my project. How do I incorporate Research Experiences for Undergraduates (REU) within my proposal?

PROPOSALS AND PROPOSAL SUBMISSION

- 28. What is the anticipated start date of the SRS RNs awards for Fiscal Year 2025?
- 29. Am I required to use a specific site to submit my proposal?
- 30. Should the project description contain the Results from Prior NSF Support?
- 31. Will separately submitted collaborative proposals be accepted for this competition?
- 32. I see a deadline for submission is indicated in this solicitation. Does this deadline mean I can submit up until 5 p.m. (submitting organization's local time) on that date? Is the deadline flexible?
- **33**. This seems to be a very complicated solicitation with many required parts and pieces. Is there a checklist to ensure I have submitted all the necessary parts?
- 34. Can I submit the same proposal to SRS RN and other programs or solicitations at NSF?
- **35.** Can I obtain a waiver of the page limitation for the project description if my project is large and complex, or if my project includes multiple organizations?
- 36. Can you provide some guidance on partnership and/or partner participation plans?
- 37. There is a lot of emphasis on the Education and Education Research Plan. What are some examples of activities that are appropriate for the SRS Education Plan?
- 38. Do all proposals require a Data Management Plan?
- 39. Do all proposals require a Project Management Plan?
- 40. The solicitation requires Collaborators and Other Affiliations (COA) information as well as 2 separate tables in the Supplementary Documents section that list (1) participating project personnel and affiliations and (2) participating organizations. These seem redundant. Why are they all necessary?
- 41. Is the duration of the required SRS RNs Annual Grantees Conference estimated to be 1 day?
- 42. As part of our project, we would like to provide significant funds for partner driven projects, is it possible to set up a seed project fund in our SRS RN proposal?

GENERAL TOPICS

1. Where can we sign up for the SRS Research Networks (RNs) solicitation webinar?

The SRS RN solicitation webinar recording and slides will be available here: https://new.nsf.gov/events/sustainable-regional-systems-research-networks-srs/2024-03-05.

2. I would like to ask SRS program directors questions. Is it possible to have a consultation with one of the SRS RNs program directors?

Yes, please send an email to SRS@nsf.gov with your questions.

3. I noticed that this solicitation does not include a Track 2 Planning Grant option. Are there any options for smaller projects?

This solicitation only offers SRS RNs for up to 5 years and \$15 million dollars. Future SRS opportunities will be subject to the availability of funds.

4. I noticed that CISE is no longer listed on the solicitation. Does that mean that CISE relevant topics are no longer within the scope of the solicitation?

No, CISE relevant research topics are still within the scope of the solicitation and encouraged.

ELIGIBILITY

5. Do you have to have an awarded Planning Grant from the previous round of SRS RN to submit a proposal this year?

No, any team is allowed to submit a proposal regardless of previous success in SRS RN.

6. Can non-profit or industry personnel serve as Lead PI?

Yes, provided that the eligible submitting organization agrees that the individual can serve in that role.

7. Are there restrictions on the number of partners in an SRS RN?

A proposed SRS RN must be multi-institutional, with a lead domestic organization and additional core partners. However, there is no maximum number of partners.

8. The solicitation states, Research Networks must include either/or:

 If the team of core organizations include academic organizations, then at least one must be a university or college that serves populations of students historically underrepresented in STEM. To qualify as a core partner organization, there must

be financial support for a minimum of three faculty members participating in the SRS RN along with financial support for a minimum of three students.

 A core partner, such as a community group, a non-profit, or other group/organization that supports an underrepresented community within the scope of the proposed research project. To qualify as a core partner organization, they must be allocated a minimum of 10% of the total budget request for the entire SRS RN.

For the second option above, may we engage several organizations and have their requested budgets in sum total to 10% of the entire requested budget?

It is permissible to have more than one such partner, and together have their combined requested budgets total to 10% of the overall budget. However, the proposal would have to present a compelling explanation about how the efforts and activities would be coordinated, adequately supported, and managed toward reaching defined and specific goals. One possibility might be to form a formal consortium of the partner organizations, with that consortium charged with responsibility and accountability for coordinating and managing toward reaching defined and specific goals. But other alternatives might be proposed to assure that the efforts and activities would be coordinated and managed.

9. What is meant by "geographical diversity" in this solicitation?

Geographical diversity can be reflected in the involvement of more than one geographical area in an SRS RN. For example, a proposal must span at least one urban area and one rural area. There are, of course, different types of urban areas and rural areas in diverse geographical locations. For example, there are mega-cities, large cities, middle size cities, small cities, and towns, all in diverse geographical locations. There also are different types of rural areas, all in diverse geographical areas. Some might even consider "hinterlands" to be different from rural areas, an understandable distinction. Among rural (including hinterland) areas there are farmlands, forests, mining regions, coastal vs. inland areas, etc. All of these distinctions constitute viable forms of geographic diversity. Please see Question 16 below for additional information.

ABOUT DISCIPLINARY REQUIREMENTS

10. What is meant by interdisciplinary SRS RN research and education?

Proposals are expected to document that the proposed research and education is truly interdisciplinary by showing that the respective components are fully integrated and of high relevance for the successful execution of the proposed project. Plans for integration of the research and education components must be clearly described in the proposal and reinforced within the management plan.

11. What is the preferred contribution level that should be provided by each project participant/discipline?

There are no specific requirements for the relative distribution of disciplinary expertise, yet each component should be included at a level commensurate with the problem scope. The project team should be developed in accordance with the specific project objectives. Strong and well-defined interdisciplinary integration is an important element of the SRS RN program. Multidisciplinary, convergent research requires multidisciplinary expertise. The appropriateness of the research team's disciplinary composition and expertise will be factors in the merit review of the proposals. See the Additional Review Criteria Section of the solicitation for more information.

ABOUT THE SCOPE OF RESEARCH AND EDUCATION

12. I noticed that throughout the solicitation, SRS are described in plural (i.e., systems versus system). Does this mean my project must study more than one system or can I focus on a single system?

The study of multiple aspects of a single "system" (e.g., the food supply chain, including food waste, or transportation) is allowed, as long as ecological, technological, and social aspects are considered in depth. It is important to define the specific system or systems to be studied, as well as why the system or systems are important in understanding the dynamics of an SRS.

13. Can my SRS research be place-based, region-specific, or context-dependent?

Yes. However, the generalizability of models, solutions, and results is an important consideration of the SRS RN program. While studies of SRS in a single region are within the scope of the solicitation, proposals should articulate how the results and outcomes of such a project will be applicable or generalizable in a much broader context.

14. Can a region be defined as a single neighborhood?

No. A single neighborhood would not include the relevant interconnected systems that make up a region. Proposals addressing neighborhoods should be directed to the Smart & Connected Communities solicitation.

15. Our team is considering proposing to SRS, but we would like to clarify the differences between NSF's SRS Program and NSF's Smart and Connected Communities (S&CC) Program.

Both programs are part of NSF's portfolio of investments in interdisciplinary research that advances fundamental knowledge about urban, rural, and other communities and

systems https://new.nsf.gov/oia/advisory-committee-environmental-

research/communities-in-the-21st-century. Below is a comparison of some of the key differences between the SRS and S&CC programs. For additional clarity on the areas of interest within a given program as well as the structure of that program, please contact the cognizant program officers.

	NSF's S&CC Program	NSF's SRS Program
NSF's definition of the target systems	A "smart and connected community" is defined as a community that synergistically integrates intelligent technologies with the natural and built environments, including infrastructure, to improve the social, economic, and environmental well-being of those who live, work, or travel within it. Communities are defined as having geographically-delineated boundaries – such as towns, cities, counties, neighborhoods, community districts, rural areas, and tribal regions – consisting of various populations, with the structure and ability to engage in meaningful ways with proposed research activities.	"Sustainable regional systems" are connected urban and rural systems, including all systems in between, designed with the goal of measurably advancing the equitable well-being of people and the planet. Regions are defined as networks of urban, rural, and all systems in between, that make up a dynamic, symbiotic system with complex social and physical interactions. Urban systems are geographical areas with a high concentration of human activity and interactions, embedded within multi-scale interdependent social, engineered, and natural systems. Rural systems are any settlements with population, housing, economic activity, or areas not in an urban geographical area.
Interdisciplinary and team requirements	Tight integration of technological and social science dimensions together with deep community engagement.	Interdisciplinary, multi-institutional teams of investigators and partners working collaboratively to produce cutting-edge convergent research, education, and outreach.

	<u> </u>	<u></u>
Partner participation	Community partners should be integrated into the projects in order to co-create, pilot, and evaluate solutions that are directly informed by the needs, challenges, and opportunities of present and future communities. Note that piloting solutions together with the community is an essential component of the research activities for this program.	Meaningful engagement with practitioners, decision makers, and/or other community organizations or community members – that are considered integral to the research. May be through co-production, advisory councils or boards, citizen science, or other means. Additional details are in the answer to question #41 in the FAQs.
Research- impact time- horizon	Around 3-10 years.	Around 10+ years.
Full award size, duration, and expected number of awards	Two research tracks: (i) awards less than and (ii) greater than \$1.5M. Each track calls for awards of 3- to 4-year durations. Expected to support 10-15 awards in the current solicitation.	Awards of up to \$15M. Calls for awards of 5-year durations. Expected to support 1-3 awards in the current solicitation.

16. How do Sustainable Regional Systems Research Networks differ from TIP's Regional Innovation Engines (NSF Engines)?

The NSF Engines program emphasizes innovation and economic development while the SRS RNs program emphasizes environmental sustainability. Further, while both programs address regional systems, the NSF Engines program prioritizes U.S. geographic regions that do not have well-established innovation ecosystems while the SRS RN program includes geographic regions similar to NSF Engines and may also go beyond to include multiple connected regional systems or supra-aggregations of connected regional systems.

17. I would like to study the health dimensions of SRS. Is this allowable under the SRS RNs program?

Yes. You will need to make sure that the project meets NSF and the extra SRS RN solicitation requirements. For example, NSF supports research that examines the ecological, social, behavioral, and/or physical and engineering dimensions of systems that cause adverse health outcomes. SRS RN could support a project that includes a sociologist or an epidemiologist who plans to quantify adverse health outcomes of people within a regional system. Similarly, SRS RNs could support a project that incorporates plans to examine the hydrological, ecological, or behavioral processes that spread human pathogens or other contaminants (e.g., chemicals, nanoparticles, microplastics) within regional systems. NSF does not fund clinical or toxicological research.

18. If a project explores social, behavioral, or economic solutions and/or linkages among SRS, does it meet the requirements of this solicitation?

Yes, so long as it includes research and education making the project interdisciplinary. SRS RN defines SRS very broadly, incorporating physical processes (such as built infrastructure and new technologies for more efficient resource utilization), natural processes (such as biogeochemical and hydrologic cycles), biological processes (such as urban-rural agroecosystem structure and productivity), and social and behavioral processes (such as decision making and governance). Therefore, proposals that examine social, behavioral, or economic solutions and/or linkages among SRS are encouraged as long as the project design sufficiently integrates across multiple disciplines for convergent research and education.

19. I am interested in proposing advanced cyberinfrastructure enabling research in SRS. Can you provide insights into the cyberinfrastructure aspects of the solicitation?

This solicitation encourages investments that would introduce new capabilities, advanced computation, and novel cyberinfrastructure approaches, especially with respect to (a) fully engaging partners and public outreach, (b) addressing the computational challenges, and (c) data integration challenges inherent in SRS, leading to previously unattainable results. However, proposed projects must be interdisciplinary.

ABOUT THE TEAM

20. Is there a limit to how large my team can be?

The team size depends on the overall scope of the project, in addition to the project's budgetary and practical constraints. There are no specific limits on the maximum number of participants or partners. However, a team with no partners is not a network.

21. How many Co-PIs can be included in the SRS RN proposal? There are many leadership roles we need to fill in a research network. Can we have more than 4

co-Pls? I did not see any specifics in the Program Solicitation.

The rules on this point are the same as for all NSF proposals. There must be one PI, and there can be only up to 4 co-PIs, no more than that. However, other investigators can take on leadership roles as Senior/Key Personnel. Separately submitted collaborative proposals are also allowed for this solicitation and each collaborative proposal would have one PI and up to 4 co-PIs.

22. Can a member of the project leadership team be listed as something other than a PI, co-PI, or Senior/Key Personnel?

No. All members of the project leadership team must be listed as PI, co-PI, or Senior/Key Personnel. If a member of the leadership team is not being funded, they should still be listed as Senior/Key Personnel. This will allow the submission of their required biographical sketch in the appropriate section. Current and Pending (Other) Support and Collaborators and Other Affiliations Information must also be provided for each individual identified as Senior/Key Personnel.

23. I am a researcher at a Federally Funded Research and Development Center (FFRDC) or a federal agency. May my organization submit a proposal and serve as lead PI?

No. To be eligible for NSF funding or co-funding, you can participate in a proposal only as part of a subaward or via a letter of collaboration. In these instances, a researcher at an FFRDC can be listed as a co-PI or Senior/Key Personnel.

24. Can an SRS RN project involve international research and/or involve international collaborators?

SRS RN projects can involve international research. International collaborators, however, should seek support from non-NSF sources. Funding guidelines for involving international collaborators (see PAPPG) allow only the following expenses to be included in the NSF budget: 1) Travel expenses for U.S. scientists and students participating in travel integral to the project; 2) Limited project-related expenses for international partners to engage in research activities while in the United States as project participants; 3) costs for specific services provided by an international partner that are essential to the success of the project and cannot be provided by a U.S. person or organization; and 4) project-related expenses for U.S. participants to engage in research activities while abroad. Services listed under (3) above could be provided by a researcher from a developed country with their own sources of research funding, such a request that includes more than minimal and truly essential expenses (see FAQ #26 for more information). For projects that are partially or completely centered on an international location, the proposal must make the case for why this research is

beneficial to the United States.

25. One of my team leaders is at an international institution. I have listed them as "non-NSF funded collaborators" in the Overview section as required so that I can include their biographical sketch in the appropriate section of the proposal. Do I need to include Current and Pending (Other) Support or Collaborators and Other Affiliations information for this international participant?

For cooperative projects involving U.S. and foreign organizations, support will only be provided for the U.S. portion. Researchers from a foreign organization must be listed in the Overview section of the Project Summary as "non-NSF funded collaborators". A letter of collaboration from their organization is required. In addition, if one of the personnel is a foreign collaborator(s) who does (do) not already have funding, a letter of collaboration is required in which the foreign collaborator(s) must identify a point of contact in the foreign funding agency or agencies that is or are considering their proposal. Current and Pending (Other) Support and the Collaborators and Other Affiliations information is not required.

26. My international collaborator is applying for funding from their country's research funding agency. How will this affect the success of my proposal?

International collaborations are encouraged, and we appreciate that it is hard to synchronize funding. You should describe the research that your collaborator would do and how it improves the intellectual merit and broader impacts of your proposed efforts. However, since your collaborator's funding is not guaranteed, it would be best to ensure that their research effort is not essential for your project to be successful. For instance, it may be preferable to rely on their existing data or analyses that they can do without additional funding. You should explain that if they do receive funding your collaborative efforts would go further, even though your efforts would not be fully integrated. If their efforts are required for your research to be successful and your foreign collaborator(s) does/do not already have funding, you are required to include a letter of collaboration where your foreign collaborator(s) must identify a point of contact in the foreign funding agency or agencies that is/are considering their proposal.

27. I would like to include undergraduate students in my project. How do I incorporate Research Experiences for Undergraduates (REU) within my proposal?

Incorporation of an REU experience within a proposal is an effective mechanism to integrate undergraduate educational activities into a research project. The Research Experiences for Undergraduates (REU) solicitation (NSF 23-601) notes that support for undergraduate students involved in carrying out research under NSF awards may be included as part of the research proposal itself instead of as a post-award supplement to

the research proposal. Please consult the REU solicitation for further details.

PROPOSALS AND PROPOSAL SUBMISSION

28. What is the anticipated start date of the SRS RNs awards for Fiscal Year 2025?

The anticipated start date of the SRS RNs awards is September 1, 2025.

29. Am I required to use a specific site to submit my proposal?

Full proposals can be submitted through Research.gov or Grants.gov.

30. Should the project description contain the Results from Prior NSF Support?

No. As stated in the SRS RNs solicitation, "Results from NSF Prior Support" should be provided as a Supplementary Document and should follow the content requirements in the NSF PAPPG Chapter II.D.2.d.iii.

31. Will separately submitted collaborative proposals be accepted for this competition?

Yes. Separately submitted collaborative proposals will be accepted for this competition as well as submissions by a lead institution with subawards to collaborating organizations.

32. I see a deadline for submission is indicated in this solicitation. Does this deadline mean I can submit up until 5 p.m. (submitting organization's local time) on that date? Is the deadline flexible?

You are only able to submit proposals up to the deadline on May 15 at 5 p.m. the submitting organization's local time. Please note that proposals will not be accepted after the deadline. Starting the submission process early is strongly encouraged to ensure that you meet the deadline.

33. This seems to be a very complicated solicitation with many required parts and pieces. Is there a checklist to ensure I have submitted all the necessary parts?

Yes. We recommend starting the proposal upload and submission process early and referring to the list provided below. All of the required sections from the PAPPG should be included in your proposal. The list below only outlines deviations or supplements to the PAPPG.

SRS RNs PROPOSAL CHECKLIST

- Cover Page
 - All Titles should start with "SRS RN:..."

 Project Description (Not to Exceed 25 pages, a separate section for Broader Impacts is required but should only include the following statement "See Sections 1-6 of the Project Description". Intellectual Merit and Broader Impacts should be an integral part of the narrative of each portion of the Project Description):

In addition to the PAPPG requirements, the following sections must be included:

- Scope and Scale
- Convergent Research
- Partnerships and Partner Engagement for Impact
- Diversity, Equity, Inclusion, and Access (DEIA)
- Social Sustainability
- Education and Education Research

Note: The "Results from Prior NSF Support" section normally required in the Project Description should be submitted as a Supplementary Document.

- Biographical Sketches All members of the project leadership team should be listed as PI, a co-PI, or as Other Senior/Key Personnel. All members of the leadership team should have a biographical sketch in the appropriate section.
- Budget In addition to standard budget requirements in the PAPPG, each proposal must contain:
 - Appropriate funds to support broader impact activities
 - Funds for attendance at an annual SRS RN Awardee Conference
 - Funds to support an independent evaluator for the education plan
 - If applicable funds for approved international collaborations
- Supplementary Documents
 - Postdoctoral Mentoring Plan (if a postdoctoral researcher funds are requested) - The plan must offer mentoring beyond that which would normally occur as part of a project at a single site or single laboratory.
- Other Supplementary Documents
 - A list of partner organizations and project personnel
 - Project Management Plan (up to 5 pages)
 - Results from Prior NSF Support (up to 5 pages)
 - Letters of Collaboration This section should include any letters of collaboration from individuals or organizations that are integral parts of the proposed network, such as collaborating organizations, organizations granting permission to access sites, materials, or data for research. In addition, if one of the senior personnel is a foreign collaborator(s) who does/do not already have funding, a letter of collaboration is required in which the foreign collaborator(s) must identify a point of contact in the foreign funding agency or agencies that is/are considering their proposal.

 Other Personnel Biographical Information: If an education evaluator is named in the proposal, and is not in the role of PI, co-PI, or other senior personnel, a biographical sketch must be included following the format specified in the PAPPG.

34. Can I submit the same proposal to SRS RN and other programs or solicitations at NSF?

No. NSF prohibits PIs from submitting the same proposal to more than one program or solicitation at NSF. Please be aware that submission of duplicate or substantially similar proposals concurrently for review by more than one program at NSF without prior NSF approval will result in the return of the redundant proposals.

35. Can I obtain a waiver of the page limitation for the project description if my project is large and complex, or if my project includes multiple organizations?

No. All proposal Project Description sections must adhere to the page limit given in the solicitation (25 pages). Note that "Results from Prior NSF Support" has been moved to "Supplementary Documents" for this solicitation.

36. Can you provide some guidance on partnership and/or partner participation plans?

The AC-ERE Sustainable Urban Systems (SUS) report recommends "developing the science of knowledge co-production among researchers, communities, industry groups, practitioner groups, and governments at multiple levels, leveraging real-world experimentation ongoing in urban areas." As an outcome of a study hosted by the NSFfunded National Socio-Environmental Synthesis Center (NSF award DBI-1052875), Lemos et al. published an article (Nature Sustainability, Vol. 1, December 2018, pages 722-724), stating "...scientists, stakeholders and funders increasingly believe that collaborating to co-produce knowledge will increase its use in policy, decision-making and practice... In the process of co-production, stakeholders and researchers often have complementary and overlapping knowledge that are essential for problem-solving... The evidence that co-production increases the likelihood that knowledge will be used in decision-making is compelling... We need a stronger understanding of how to foster the kind of knowledge production and use that yield sustainability outcomes, and we can only achieve that through deeper integration of research and practice." Co-production is one possible form of partner participation. Some other forms include advisory councils or boards, citizen science, etc. Partner participation is defined, for the purposes of this solicitation, as meaningful engagement of researchers along with practitioners, decision makers, and/or other community organizations or community members — where the latter are considered integral to the research. For those projects that include collaboration between scientist and non-scientist actors, see the AC-ERE report on

Engaged Research for core elements to aid in organizing thinking around engaged research design (https://nsf-gov-resources.nsf.gov/2022-12/Engaged-research-for-environmental-grand-challenges-508c.pdf).

Researchers and partners are encouraged to work closely throughout the project, including during project inception and proposal design. Partners may also have leadership roles and can serve as a PI or co-PI as appropriate for the project, subject to the policies of the submitting organization. Additionally, industry partners can be added as a co-PI through the "Grant Opportunity for Academic Liaison with Industry (GOALI) opportunity (please see the PAPPG GOALI section at

https://new.nsf.gov/policies/pappg/23-1/ch-2-proposal-preparation#2F5). However, industry partners can be included in the project through other means besides the specific GOALI mechanism. A partner participation plan should identify partners and make clear the role of the partners in research, education, and outreach, including articulation of rationale, engagement strategies, tasks, expected outputs, and timetable. Proposed compensation for participating partners may be included in the plan. Letters of collaboration from the partners should be provided in Supplementary Documents. Research on social equity issues is highly recommended to be included in a partner participation plan. Resources that may assist in formulating a partner participation plan are available, for example, at https://www.usdn.org/index.html#/, and elsewhere, such as city and regional non-profit organizations and community groups (e.g., see https://www.cnt.org).

37. There is a lot of emphasis on the Education and Education Research Plan. What are some examples of activities that are appropriate for the SRS Education Plan?

Some example elements (not an exhaustive listing, and not in any particular order) are:

- Education research, to better understand or improve formal and informal education systems, programs, practices, tools, and policies and the impacts on future workforce preparation or development, student cognition and social emotional development, learning, DEIAJ-related success, and other outcomes
- Development of courses/degree programs in SRS or adapting existing ones
- Development of new modules on convergent scientific and engineering knowledge with incorporated societal issues such as attention to social equity and environmental justice
- Development of innovative teaching and learning practices and resources
- Faculty professional development to increase the use of evidence-based practices in teaching and learning
- Incorporation of research/experiential learning activities that are grounded in research on learning into SRS courses
- Research on advancing educational innovation: For example, utilizing/mining large

data sets from regional systems to enhance traditional teaching and learning methods

- Research on students' learning and conceptual development in SRS science and engineering
- Comparison of modalities for citizen science in regional systems: Development of new ways of learning from the rich experiments ongoing in many communities in the US and across the world
- Developing knowledge of the science of co-production among researchers, communities, industry groups, practitioners, and the government
- Generation of new knowledge on how to transform SRS education programs in institutions to be more inclusive, equitable, and innovative
- Outreach and mentoring activities to enhance scientific and engineering literacy or involve students from groups that have been traditionally underrepresented in science and engineering
- Application of SRS convergence education practices to inform, advance, and energize STEM education in general.

38. Do all proposals require a Data Management Plan?

Yes, all proposals are required to have a Data Management Plan submitted as a Supplementary Document.

39. Do all proposals require a Project Management Plan?

Yes, all proposals are required to have a Project Management Plan submitted as a Supplementary Document.

40. The solicitation requires Collaborators and Other Affiliations (COA) information as well as 2 separate tables in the Supplementary Documents section that list (1) participating project personnel and affiliations and (2) participating organizations. These seem redundant. Why are they all necessary?

Both lists are necessary because they are used for different purposes. The COA is available only to NSF and is used to manage reviewer selection. The Personnel Table and the Organization Table are provided to ad hoc reviewers and panelists to assist with project evaluation. The Personnel and Organization Tables should be submitted as Supplementary Documents and formatted as described in the instructions contained in the solicitation. Collaborators & Other Affiliations (COA) information specified in the PAPPG should be submitted as a Single Copy Document using the instructions and spreadsheet template found on the Collaborators and Other Affiliations Information website.

41. Is the duration of the required SRS RNs Annual Grantees Conference estimated to

be 1 day?

The likely duration will be two full days, or, if virtual, perhaps three days, for only a few hours each day.

42. As part of our project, we would like to provide significant funds for partner driven projects, is it possible to set up a seed project fund in our SRS RN proposal?

From the solicitation, proposals must include:

- If the team of core organizations include academic organizations, then at least one must be a university or college that serves populations of students historically underrepresented in STEM. To qualify as a core partner organization, there must be financial support for a minimum of three faculty members participating in the SRS RN along with financial support for a minimum of three students.
- A core partner, such as a community group, a non-profit, or other group/organization that supports an underrepresented community within the scope of the proposed research project. To qualify as a core partner organization, they must be allocated a minimum of 10% of the total budget request for the entire SRS RN."

Therefore, the proposal may provide significant funds for stakeholder driven projects with research support. For the second bullet above, it is acceptable for the minimum of 10% to be allocated across several partner groups. However, each partner group must be identified, and the proposal must describe the role of each partner group in the overall project. Additionally, the proposal must describe how the work of the partner group(s) will be managed by the NSF awardee(s).