

NSF 20-057

Frequently Asked Questions (FAQs) for ADVANCE Solicitation NSF 20-554

GENERAL QUESTIONS

- 1. What do you mean by evidence-based strategies?
- 2. Are all strategies (or activities) implemented by past grantees appropriate to adapt in a new ADVANCE proposal?
- 3. What do you mean by "adaptation" in the ADVANCE solicitation can't we just propose to do what others have already done?
- 4. What do you mean by a symptom of systemic inequity?
- 5. Do we have to use evidence-based practices from prior ADVANCE work only?
- 6. Where can I find more information on prior ADVANCE work?
- 7. Are there any other resources or communities of practice on equity in STEM academics?
- 8. Are there any resources to learn more about systemic inequities?
- 9. Are there any resources to learn more about intersectionality?
- 10. What is the difference between "organizational culture" and "organizational climate"?

PROPOSAL DEADLINES

- 11. Which proposal deadlines are fixed?
- 12. Which proposal deadlines are flexible?

INNOVATION

- 13. What do you mean by "innovative systemic change strategies" in Institutional Transformation proposals?
- 14. Would it be innovative to adapt systemic change strategies from a research institution to a community college or other different type of institution?

PROJECT SCOPE

- 15. What are the differences between the ADVANCE tracks?
- 16. Do Adaptation or Partnership projects have to address all gender, racial, and ethnic inequities for STEM faculty that have been identified in our analysis?
- 17. Does my proposal have to address all three ADVANCE objectives described in the Program Description section of the solicitation?
- 18. What do you mean by "regional" or "national" impact for Partnership projects?
- 19. How could one ADVANCE project have "national" impact?
- 20. What counts as "significant reach"?

PARTNERSHIP

- 21. What kind of organizations can serve as partners?
- 22. What are unfunded strategic partners?
- 23. Are one or more partners in a Partnership proposal expected to have prior ADVANCE grant experience?
- 24. Can my IHE or organization be a partner on more than one Partnership proposal?
- 25. Can my IHE or organization submit any other ADVANCE proposal (Institutional Transformation, Adaptation or Catalyst) and be a partner on one or more Partnership proposals?

QUESTIONS ON THE OPPORTUNITY FOR COLLABORATION WITH PROJECTS INITIATED WITH NSF FUNDS

- 26. Can we collaborate with an NSF initiated project that no longer is funded by NSF?
- 27. How do I request the additional funds for the opportunity for collaboration in my Adaptation or Partnership proposal?
- 28. What should be included in a letter from the project representatives for the opportunity for collaboration?
- 29. What kind of activities can be proposed for the additional funds for the opportunity for collaboration with NSF-initiated projects?
- 30. If we partner with an NSF-initiated project can we use the additional funds to provide direct support to students, graduate students or postdoctoral scholars to completer their degree or training program?
- 31. What is the NSF INCLUDES National Network?

LETTERS OF COLLABORATION

- 32. The solicitation requires "letters of collaboration" from key administrators and partners. Are these letters of collaboration required to follow the language specified in PAPPG II.C.2.j?
- 33. Can we include a "letter of support" for our project from a person or organization not involved in the implementation of the project as a partner?
- 34. We are planning on collaborating with an NSF-initiated project. Should we include letters of collaboration from these partners and should it follow the recommended language in the PAPPG II.C.2.j?

LETTERS OF INTENT (LOIS)

- 35. Are letters of intent required for all ADVANCE tracks?
- 36. Should we wait to start writing our Adaptation or Partnership proposal until after we submit the letter of intent?
- 37. What information should be included in the letter of intent?
- 38. Does each partner in a Partnership submit a letter of intent?
- 39. Can we make changes between submitting the LOI and the full proposal?
- 40. What is the difference between a Letter of Intent and the Preliminary proposal?

PRELIMINARY PROPOSALS

- 41. Are preliminary proposals required for all ADVANCE tracks?
- 42. What information should be included in the IT-Preliminary proposal?

ELIGIBILITY

- 43. My IHE had an ADVANCE IT-Catalyst (or IT-Start) award. Can we apply for a Catalyst grant under this solicitation?
- 44. We had an Institutional Transformation (IT) award many years ago and would like to adapt strategies previously developed that were focused on gender equity to racial and ethnic equity. Can we apply for an Adaptation project to do this work?
- 45. My IHE has or had an Institutional Transformation (IT) award, can we apply for another IT award?
- 46. My IHE has or had an Institutional Transformation (IT) award, can we apply for an Adaptation or Catalyst award?

- 47. My IHE has or had an Institutional Transformation (IT) award, can we be the lead or a partner on a Partnership proposal?
- 48. My IHE wants to submit an IT-Preliminary proposal, can we also submit an Adaptation proposal?
- 49. My IHE wants to submit an IT-Preliminary proposal, can we also submit a Catalyst proposal?
- 50. Can we resubmit an IT-Preliminary proposal immediately if we are discouraged by NSF?
- 51. My IHE wants to submit an Adaptation proposal, can we also submit a Catalyst proposal?
- 52. Are single STEM departments eligible for an ADVANCE Adaptation or Catalyst award?
- 53. Can two or more STEM departments at different institutions partner in a Partnership proposal?

GENERAL QUESTIONS

1. What do you mean by evidence-based strategies?

The strategies (or activities) that are proposed in the ADVANCE proposal must have some evidence of effectiveness in addressing systemic inequities in academic workplaces and/or in the academic profession. Evidence may come from the relevant social or behavioral science research literature on diversity in the STEM workforce, equity in workplaces, organizational change, and organizational culture and climate. Evidence may also come from the lessons learned by others from the implementation of the strategy(ies). This could be from published papers and reports, evaluation reports, site visits, and/or discussions about the impacts with those who have implemented the strategy(ies). Evidence does not need to come from the ADVANCE community.

2. Are all strategies (or activities) implemented by past grantees appropriate to adapt in a new ADVANCE proposal?

Not necessarily, for the following reasons: 1) Not everything that was implemented was successful at addressing systemic inequities, and without evidence of effectiveness it may not be appropriate to adapt, at least not without modifications informed by the research literature; 2) Prior strategies were primarily focused on gender equity so in order to be intersectional you may need to be adapt those strategies to the intersection of gender, race and ethnicity and/or other social identities in STEM academics; 3) Some strategies may no longer be relevant or necessary because issues have changed or the strategies have become common operating practices within similar organizations; and 4) Many strategies that have been implemented by past ADVANCE grantees were designed to address the impact of systemic inequity(ies) on individuals (the symptoms) and these should not be adapted without also proposing other strategies designed to address the underlying systemic issues. In your proposal you need to communicate that you understand the difference between the symptoms and the underlying systemic issues and ensure that you are proposing at least some systemic change strategies. Note that *IT* projects must also include innovation in the proposed strategies.

3. What do you mean by "adaptation" in the ADVANCE solicitation – can't we just propose to do what others have already done?

You need to adapt those strategies to your context and the systemic inequities that you have. Your data collection and data analysis must be done before you identify potential strategies. For example, your analysis may indicate that your equity issues are with retention of faculty of color in STEM after the initial hiring and before tenure. Before adapting ADVANCE strategies focused on tenure, you first need to discover the underlying reasons for this problem at your organization(s) or in your discipline(s). For one organization the issues may be with the culture and climate in departments, for another it may be unclear, inconsistent, subjective criteria for tenure, for another the issue may be with service workload, access to resources such as research and teaching assistantships, and clerical support. Each reason would require very different strategies to resolve.

4. What do you mean by a symptom of systemic inequity?

A "symptom" is the impact or what is observed in the data or otherwise, but the symptoms are caused by the underlying systemic inequity or inequities. In your proposal you need to communicate that you understand the difference between the symptoms and the underlying systemic inequity(ies) and ensure that you are proposing overall systemic change strategies to address the inequities. You may propose to implement strategies that mitigate the individual impacts (symptoms) of systemic inequity(ies) at the same time, but proposals that focus solely on helping individuals survive in the system without also positively changing the system will not be competitive.

5. Do we have to use evidence-based practices from prior ADVANCE work only?

No. Strategies may include new strategies that are informed by other sources such as the equity and organizational change research literature. However, projects are expected to be aware of prior ADVANCE work to avoid costly and time-consuming redevelopment of strategies, tools, materials, that others have developed and tested.

6. Where can I find more information on prior ADVANCE work?

Many past ADVANCE grantees have program websites with downloadable tools, materials and other resources that they have developed to address various systemic inequities. These websites can frequently be found by searching for ADVANCE and the name of the grantee institution. An updated list of past ADVANCE Institutional Transformation awardees can be found here. Another potential source is the project StratEGIC website described by the authors as "This practical Toolkit distills and shares lessons learned about particular interventions and how they combine into an overall change portfolio. Organizations can strategically choose and combine interventions as they work to support the success of women scholars in STEM fields."

7. Are there any other resources or communities of practice on equity in STEM academics?

The ADVANCE Resource Coordination Network (ARC Network) https://equityinstem.org/ is a new resource operated by the Association for Women in the Sciences (AWIS) that will focus on information curation and community engagement through virtual communities and convenings. The network launched in September 2018 and will be ramping up services and resources on the website over time. The community is open to anyone who wants to join; you do not need to have an ADVANCE grant or be a member of AWIS to participate.

8. Are there any resources to learn more about systemic inequities?

The social and behavioral science literature includes many research publications on inequity and equity in STEM education and the workplace and systemic barriers to inclusion and success of diverse individuals in STEM. Some websites that may be useful include: Center for Gender Equity in Science and Technology, The Gender Equity Project, Gendered Innovations, European Institute for Gender Equality, StratEGIC website, Tools for Change, Worklife Law, Women in Science & Engineering Leadership Institute, African American Policy Forum

9. Are there any resources to learn more about intersectionality?

The social and behavioral science literature includes many research publications on intersectionality. Some potential references are included at the end of this FAQ. Intersectionality refers to the cumulative way that different forms of social identities (which have associated advantages or disadvantages) combine, overlap, and interact to influence the experience of the individual in different settings, such as workplaces. All ADVANCE proposals are expected to take an intersectional perspective and consider the salient categories of social identity when appropriate. Specifically, proposers should recognize that gender, race and ethnicity do not exist in isolation from each other and other categories of social identity, such as such as disability status, sexual orientation, economic background, first-generation status, faculty appointment type, etc. Intersectional perspectives are important in ADVANCE proposals for identifying equity issues and solutions for underrepresented STEM faculty. Intersectional perspectives are also important for identifying factors that need attention in order to effectively involve other STEM faculty whose social identities in addition to gender, race,

and ethnicity, such as age, seniority and rank, being foreign-born and/or foreign-trained, may impact the culture and climate of the institution and require tailored equity building strategies to address. ADVANCE proposals should offer strategies to promote equity for all faculty. Some websites that may be useful include: Center for Intersectionality and Social Policy Studies, African American Policy Forum, American Psychological Association Public Interest Directorate.

10. What is the difference between "organizational culture" and "organizational climate"?

The culture and climate of an organization are factors that can impact equity, retention, success, and inclusion. Organizational culture can be thought of as a **system of shared assumptions, values, and beliefs**, which govern how people behave in an organization. These shared values have a strong influence on people in the organization and can dictate how they behave and implement their jobs. Organizational climate comes from the aspects of the organization that are **observed and perceived** by people in the organization and thereby influence people's actions and job performance. These definitions are offered as one way to distinguish between organizational culture and organizational climate but there may be other appropriate definitions that may be applied and used for an ADVANCE proposal.

PROPOSAL DEADLINES

11. Which proposal deadlines are fixed?

While the ADVANCE program solicitation is active, *Adaptation* and *Partnership* proposals have deadlines each year for both the required letter of intent and the full proposal.

ADVANCE Tracks with set deadlines (all 5pm submitter's local time)

	Letter of Intent	August 2, 2021 and first Monday in August annually thereafter
Adaptation	⊢ ⊫IIII nronosai	November 3, 2021 and first Wednesday in November annually thereafter
	Letter of Intent	August 2, 2021 and first Monday in August annually thereafter
Partnership	Filli proposal	November 3, 2021 and first Wednesday in November annually thereafter

12. Which proposal deadlines are flexible?

While the ADVANCE program solicitation is active, the program can accept *Catalyst*, *IT-Preliminary* and *IT* proposals anytime.

ADVANCE Tracks with flexible deadlines

Catalyst	Proposals accepted any time because the solicitation has a target date and indicates that proposals are accepted before and after the target date. Proposers are encouraged to discuss timelines with the ADVANCE program office.			
IT-Preliminary	Proposals accepted any time because the solicitation has a target date and indicates that proposals are accepted before and after the target date. Proposers are encouraged to discuss timelines with the ADVANCE program office.			
Institutional Transformation (IT)	IT full proposals accepted only after submission of an IT-Preliminary proposal that is encouraged by NSF to submit a full IT proposal; IT proposers can submit any time and should negotiate a timeline with the ADVANCE program office.			

INNOVATION

13. What do you mean by "innovative systemic change strategies" in Institutional Transformation proposals?

With the IT track, the ADVANCE program is seeking to support innovative projects that need a longer and larger investment to develop, implement, and evaluate. IHEs interested in adapting existing strategies from others should submit an Adaptation proposal. It is possible that there are yet to be identified systemic equity issues or emerging issues within STEM academic organizations that need new and innovative strategies to address them. If you have identified systemic gender equity issues that cannot be addressed with systemic change strategies previously developed, then you will have to innovate to develop new strategies to address those systemic equity issues and should consider submitting an *IT-Preliminary* proposal. Submitting an *IT-Preliminary* proposal is the only way to submit a full *IT* proposal.

14. Would it be innovative to adapt systemic change strategies from a research institution to a community college or other different type of institution?

The ADVANCE program is very interested in supporting this work, but it should be done through the **Adaptation** or **Catalyst** tracks since it is not necessarily innovative to do this adaptation. It **might** be innovative if there are different or new systemic inequities that need to be addressed at non-research institutions and innovative new strategies need to be developed.

PROJECT SCOPE

15. What are the differences between the ADVANCE tracks?

NSF ADVANCE Track	Institutions of Higher Education (IHE)	Non-Academic Organizations	Prior NSF ADVANCE status	Multiple Organization	Budget	Preliminary Proposal or Letter of Intent (LOI)
Institutional Transformation (IT)	Yes (must include all STEM disciplines at the institution)	No	IHEs cannot have had an ADVANCE IT	Not permitted (systems & multi-campus IHEs are permitted)	Up to \$3M for five year	Preliminary Proposal Required, NSF will encourage or discourage submission of IT proposal
Adaptation	Yes (must include all STEM at the institution)	Yes (one or more STEM discipline(s), with National or regional reach)	IHEs cannot have had an ADVANCE <i>IT</i> or <i>Adaptation</i> <i>award</i>	Not permitted (systems & multi-campus IHEs are permitted)	Up to \$1M for 3 years + up to \$250K more for partnering with a NSF project	LOI Required – all LOIs are accepted and can submit full proposal
Partnership	Yes (one or more STEM discipline(s), with National or regional reach)	Yes (one or more STEM discipline(s), with National or regional reach)	May have, or have had, an ADVANCE grant but it is not required	Required -two or more in the partnership	Up to \$1M for 3 to 5 years + up to \$250K more for partnering with a NSF project	LOI Required – all LOIs are accepted and can submit full proposal
			IHEs cannot			

Catalyst	Yes (must include all STEM disciplines at the institution)	No	have been the lead on any ADVANCE award	Not permitted (systems & multi-campus IHEs are permitted)	Up to \$300K for 2 years	No LOI or Preliminary proposal required for Catalyst
----------	--	----	---	---	-----------------------------	--

16. Do Adaptation or Partnership projects have to address all gender, racial, and ethnic inequities for STEM faculty that have been identified in our analysis?

No. It may not be possible to address all the issues identified in your problem analysis given your context and/or the maximum length of ADVANCE projects and the budget amount. Projects may address one or more of the issues of systemic inequities that you have identified in your data collection and analysis. You should make the case in the project description for focusing on one or a subset of issues within the project over other issues. Noting that all ADVANCE proposals are still expected to incorporate intersectional approaches.

17. Does my proposal have to address all three ADVANCE objectives described in the Program Description section of the solicitation?

Not all three, but your project should be linked to one or more of these objectives and the link(s) should be made explicit in your proposal. The proposal should clearly identify the metrics that will be used to measure progress toward the objective(s).

18. What do you mean by "regional" or "national" impact for Partnership projects?

Partnership projects are expected to have regional or national impact. The impact of your project should be clearly explained in your proposal. You should define the regional impact in your proposal. A "region" may be one or more states or territories, or a geographic area in a state (rural Arkansas) or in the country (the southeastern states). National impact means the project is designed to impact individuals and/or organizations throughout the country (chemistry department chairs). The case should be made for the project's focus on the proposed region, individuals, and/or organizations. The degree of systemic change and equity enhancement that will result from the project should also be clear to the reader. A regionally focused **Partnership** project might propose to create a cadre of implicit bias experts specializing in providing training for leaders of two-year institutions in the southwest region of the country. Another **Partnership** project might propose to work with predominantly undergraduate institutions in one state to create equitable workplace policies for adjunct and part-time STEM faculty.

19. How could one ADVANCE project have "national" impact?

A *Partnership* project could have national impact by focusing on improvements in national level policies that impact higher education, for example, infusing an equity lens into accreditation or certification policies and processes. Another *Partnership* project could focus on one STEM discipline to clarify and expand discipline-wide expectations for academic excellence to mitigate differential recognition of service, teaching, and research. In an *Adaptation* proposal, for example, a professional society may propose to incorporate training on equity issues during annual meetings for department chairs and provide coaching and technical assistance for those chairs who want to implement systemic changes.

20. What counts as "significant reach"?

You should make the case in your *Partnership* or *Adaptation* (if the *Adaptation* is not focused on one single IHE) proposal that the project will have a significant reach. This will be different depending on the systemic inequity issues that are being addressed, the population(s) targeted, and the proposed strategies. Describe the intended reach of the project in numbers and percentages as well as the impact of the project in terms of the expected systemic, cultural and/or climatic change. Depending on your project, the number and percent reached

of a targeted population may be inversely proportional to the degree of systemic change that is expected by each participant. For example, a project that focuses on arts and science college deans could focus on reaching all deans in the country with training on how to implement accountability mechanisms in faculty searches, or a project could focus on a subset of deans with training and post-training technical assistance to implement a suite of several systemic change strategies within their college. Each has significant reach but in different ways. The first project has significant reach in terms of the percent of all deans participating but does not necessarily result in systemic change at IHEs, and the other reaches a limited percent of deans but has significant reach in terms of the systemic changes that will be implemented. The significance of the reach is also related to the numbers and percent of others indirectly reached by the effort (for example projects focused on presidents, deans, and chairs can indirectly influence the academic careers of hundreds of STEM faculty). Significance is also related to the impact of the resulting systemic and/or organizational cultural and climatic changes that are expected from the effort. For example, a project that will incorporate an equity lens into higher education accreditation policies may focus on one or two organizations but could have significant long-term impact on many institutions of higher education and potentially thousands of faculty. Note that the reach of *Adaptation* proposals from a single IHE is understood to be the systemic change that impacts all the STEM faculty at the institution.

PARTNERSHIP

21. What kind of organizations can serve as partners?

Partnering organizations can include any non-profit institution of higher education (IHE) located in the U.S. and/or non-profit, non-academic organization eligible for NSF support. For example, non-profit, non-academic partners may include professional societies, STEM or higher education related organizations, publishers, and policy and research entities. Partners may include unfunded strategic partners such as industry partners or foundations. More information on who may submit proposals can be found in the NSF PAPPG Chapter I.E. Categories of Proposers.

22. What are unfunded strategic partners?

Your project may include partners that do not receive funds from the NSF ADVANCE grant. Most likely these partners may be benefiting from the partnership in other ways such as access to a resource or toolkit or equity training or by providing perspectives to the project. Whether funded or unfunded, the partnerships in the project should be purposeful and necessary to implement the project and/or meet the project goals for the reach of the project to various STEM stakeholders. Please review the NSF PAPPG language on Unfunded Collaborations (II.C.2.d(iv) regarding how to document such collaborations in the in the Facilities, Equipment and Other Resources section of the proposal (Chapter II.C.2.i) and the section on cost sharing (II.C.2g(xii)).

23. Are one or more partners in a Partnership proposal expected to have prior ADVANCE grant experience?

No. Previous or current funding from ADVANCE is not a prerequisite to be a partner or lead on a *Partnership* project. All the partnering organizations may be new to the ADVANCE program.

24. Can my IHE or organization be a partner on more than one Partnership proposal?

Yes. However, an IHE or organization can only be the lead on one *Partnership* proposal.

25. Can my IHE or organization submit any other ADVANCE proposal (Institutional Transformation, Adaptation or Catalyst) and be a partner on one or more Partnership proposals?

Yes. However, any one IHE or organization can only be the lead on one *Partnership* proposal.

QUESTIONS ON THE OPPORTUNITY FOR COLLABORATION WITH PROJECTS INITIATED WITH NSF FUNDS

26. Can we collaborate with an NSF initiated project that no longer is funded by NSF?

Yes. You can propose a collaboration if the NSF funding has ended, but the project is still in operation because it has been sustained. The letter of collaboration from the project representative should explain that the project has been sustained beyond the NSF funding period.

27. How do I request the additional funds for the opportunity for collaboration in my Adaptation or Partnership proposal?

If your ADVANCE proposal will include the special opportunity for collaboration to align systemic change and institutional transformation efforts and/or diffuse equity and intersectionality into other projects, your ADVANCE budget request and budget justification should include the additional funds. The project description must include information on the activities, management, and evaluation of the collaboration. The proposal needs to include a letter of collaboration (PAPPG II.C.2.j) from a representative of the partnering project that agrees to the proposed collaboration as described in the project description. The collaboration can also be described in the letter of intent (LOI) if known when the LOI is submitted.

28. What should be included in a letter from the project representatives for the opportunity for collaboration?

The letter of collaboration (PAPPG II.C.2.j) from a project representative of the partnering project(s) should indicate that the partnering organization agrees to the proposed collaboration as described in the project description. If applicable, the letter of collaboration from the project representative should explain that the project has been sustained beyond the NSF funding period.

29. What kind of activities can be proposed for the additional funds for the opportunity for collaboration with NSF-initiated projects?

The ADVANCE proposer should explain how the additional funds will be allocated and how this supports the ADVANCE project goals and creates a mutually beneficial collaboration. There are no limits on how the additional funds are used except that no ADVANCE funds should be allocated for direct student or postdoctoral support unless those students and scholars are working to implement or evaluate the ADVANCE project as project staff. Costs might include but are not limited to: travel expenses, staff time to implement the collaboration activities, sharing expertise, and increasing the reach or rate of the adaptation. The collaboration could be designed to infuse intersectional and equity approaches into a NSF-initiated project to enhance the impact of that project. One collaboration may align the work of an IUSE institutional and community transformation project and the ADVANCE project or promote the translation of the ADVANCE project's systemic change strategies for faculty to the graduate level, such as adapting work-life balance policies and addressing implicit bias in decision making committees. Another example could be to collaborate with an NSF INCLUDES Design and Development Launch Pilot project to build on the stakeholder development work started by the pilot if relevant to ADVANCE goals.

30. If we partner with an NSF-initiated project can we use the additional funds to provide direct support to students, graduate students or postdoctoral scholars to completer their degree or training program?

No. The entire ADVANCE project still needs to focus on systemic changes to mediate or eliminate systemic inequities. No ADVANCE funds should be allocated for direct student or postdoctoral support unless those students and scholars are working to implement or evaluate the ADVANCE project as project staff.

31. What is the NSF INCLUDES National Network?

Information on the NSF INCLUDES National Network can be found at https://www.nsf.gov/news/special_reports/nsfincludes/index.jsp. This site will provide links to NSF INCLUDES Alliance awards and the NSF INCLUDES Coordination Hub. The ADVANCE partnership can be with one or more current or past NSF INCLUDES grantees including the Coordination Hub.

LETTERS OF COLLABORATION

32. The solicitation requires "letters of collaboration" from key administrators and partners. Are these letters of collaboration required to follow the language specified in PAPPG II.C.2.j?

No, the solicitation provides guidance to provide more information in letters of collaboration from key partners and leaders about their role and commitment to the project implementation, evaluation, and sustainability. The PAPPG language is "recommended" language if there is no additional guidance provided in the solicitation. Note that the ADVANCE program does not require cost sharing. Please review the guidance on the Facilities, Equipment and Other Resources section of the proposal (Chapter II.C.2.i) and the section on cost sharing (II.C.2g(xii)).

33. Can we include a "letter of support" for our project from a person or organization not involved in the implementation of the project as a partner?

No. Only letters of collaboration are permitted in ADVANCE proposals and NSF may return without review any proposal that includes letters of support (II.C.2.j).

34. We are planning on collaborating with an NSF-initiated project. Should we include letters of collaboration from these partners and should it follow the recommended language in the PAPPG II.C.2.j?

Yes, letters of collaboration should be included from a representative of the NSF-initiated project that will participate in the proposed collaboration. The letters can include more information beyond that the "recommended" language in the PAPPG. Information on the collaborator's facilities, equipment and resources may be included in the Facilities, Equipment and Other Resources section of the proposal (Chapter II.C.2.i).

LETTERS OF INTENT (LOIS)

35. Are letters of intent required for all ADVANCE tracks?

NO. Letters of intent are required only for the *Adaptation* and *Partnership* tracks.

36. Should we wait to start writing our Adaptation or Partnership proposal until after we submit the letter of intent?

NO. The letter of intent is required, but all who submit a letter of intent can submit a full proposal. You should NOT wait for feedback from NSF on your letter of intent to begin work on your full proposal. Given the complexity of institutional transformation project and partnership development, most likely you should have started work on the full proposal well before the letter of intent deadline.

37. What information should be included in the letter of intent?

The letter of intent should contain the information requested in the solicitation in the Proposal Preparation and Submission Instructions section.

38. Does each partner in a Partnership submit a letter of intent?

NO. Only one letter of intent for each planned Partnership proposal should be submitted. If an institution is involved in more than one Partnership proposal one LOI should be submitted for each proposal noting that the same institutions cannot be the lead on more than one Partnership proposal when the full proposals are submitted.

39. Can we make changes between submitting the LOI and the full proposal?

YES. You can make changes to the scope and activities. You can also change proposed PIs and co-PIs as well as changes to the partners including to the lead partner on **Partnership** proposals. There is no need to communicate these changes to NSF prior to submitting the full proposal.

40. What is the difference between a Letter of Intent and the Preliminary proposal?

Letters of Intent (LOI) are only brief descriptions and are only required for those who want to submit a full **Adaptation** or **Partnership** proposal. LOIs are not externally evaluated and are not used to decide funding. Preliminary proposals are only required for those who want to submit a full **Institutional Transformation** proposal, are more detailed and will be reviewed by NSF.

PRELIMINARY PROPOSALS

41. Are preliminary proposals required for all ADVANCE tracks?

NO. Only those interested in submitting a full *Institutional Transformation* proposal have to submit an *IT-Preliminary* proposal. Full *IT* proposals will only be accepted from those IHEs that have submitted an *IT-Preliminary* proposal and received a notice of encouragement or discouragement from NSF.

42. What information should be included in the IT-Preliminary proposal?

The preliminary proposal should contain the information requested in the solicitation in the Proposal Preparation and Submission Instructions section.

ELIGIBILITY

43. My IHE had an ADVANCE IT-Catalyst (or IT-Start) award. Can we apply for a Catalyst grant under this solicitation?

No. Former *IT-Catalyst* and *IT-Start* grantees are encouraged to apply to the *Adaptation* or *Institutional Transformation* track or as part of a *Partnership*. Under this solicitation, *Catalyst* proposals may only be submitted by non-profit IHEs that are not, and have not been, the lead grantee on **any type** of ADVANCE award. This includes the following types of ADVANCE awards: Institutional Transformation (IT), Leadership, Partnerships for the Adaptation, Implementation and Dissemination (PAID), Partnerships for Learning and Adaptation Networks: STEM Discipline (PLAN-D), Partnerships for Learning and Adaptation Networks: IHE (PLAN-IHE), IT-Catalyst, IT-Start, Catalyst, Adaptation, and Partnership.

44. We had an Institutional Transformation (IT) award many years ago and would like to adapt strategies previously developed that were focused on gender equity to racial and ethnic equity. Can we apply for an Adaptation project to do this work?

No, another single institution focused grant for a past *IT* grantee would not be appropriate for an *Adaptation* proposal, but you could apply for a *Partnership* project with other organizations (which could include other past or current *IT* grantees). Note that all ADVANCE proposals are expected to take an intersectional perspective and consider the salient categories of social identity for the project. Specifically, proposers should recognize that gender, race and ethnicity do not exist in isolation from each other and other categories of social identity, such as disability status, sexual orientation, economic background, first-generation status, faculty appointment type, etc..

- 45. My IHE has or had an Institutional Transformation (IT) award, can we apply for another IT award?

 No.
- 46. My IHE has or had an Institutional Transformation (IT) award, can we apply for an Adaptation or Catalyst award?

No.

47. My IHE has or had an Institutional Transformation (IT) award, can we be the lead or a partner on a

Partnership proposal?

Yes, your IHE can participate in multiple *Partnership* projects. Note that an IHE or organization can only be the lead on one *Partnership* proposal per competition.

48. My IHE wants to submit an IT-Preliminary proposal, can we also submit an Adaptation proposal?

Yes, an IHE could submit proposals to both at the same time because the IT-Preliminary proposal only results in encouragement or discouragement to submit a full *IT* proposal. But your IHE **can not** have both an *IT* and *Adaptation* award at the same time. The IHE would need to choose which to pursue - *IT* or *Adaptation* - if they were encouraged to submit a full *IT* proposal based on the preliminary proposal review and submitted an *Adaptation* Letter of Intent by the deadline. Note that an IHE can only have one ADVANCE *IT* award. An institution that gets an *Adaptation* award could apply for an *Institutional Transformation* project later, but not the other way around.

49. My IHE wants to submit an IT-Preliminary proposal, can we also submit a Catalyst proposal?

Yes, but these types of projects are very different in scope and it would not make sense for one IHE to apply to both. The *Catalyst* proposal will be asking for basic support to do ground work to assess the institution where as the *IT* proposal that would follow an *IT-Preliminary* proposal would be asking for advanced support to do original social science research on gender equity and to innovate new strategies to address inequities. An IHE could not have both an *IT* and *Catalyst* award at the same time. An institution that gets a *Catalyst* award could apply for an *Adaptation* or *Institutional Transformation* project later but not the other way around.

50. Can we resubmit an IT-Preliminary proposal immediately if we are discouraged by NSF?

You should wait at least nine months to resubmit an IT-Preliminary proposal noting that it must be substantially revised. You are welcome to submit a proposal to any other ADVANCE track during this time.

51. My IHE wants to submit an Adaptation proposal, can we also submit a Catalyst proposal?

No. Your IHE should determine which type of ADVANCE project is more appropriate for submission in this competition. An institution that gets a *Catalyst* award would be eligible to apply for an *Adaptation* or *Institutional Transformation* project later but not the other way around.

52. Are single STEM departments eligible for an ADVANCE Adaptation or Catalyst award?

No. **Adaptation** and **Catalyst** projects from IHEs must include all the STEM disciplines that the institution has in the ADVANCE project. Note that a partnership between STEM departments at different institutions within a discipline area would be appropriate for a **Partnership** proposal if the project proposed to result in national or regional impact within that discipline area.

53. Can two or more STEM departments at different institutions partner in a Partnership proposal?

Technically this would be permitted but note that all *Partnership* proposals are expected to have regional or national impact and demonstrate a significant reach. A partnership between two STEM departments is likely not going to result in regional or national impact or have significant reach. However, a partnership of a significant number of doctoral granting physics departments, **might** be able to make the case for national impact and significant reach. If several STEM departments within a single institution are interested in this work, then you should review the *Adaptation* and *Catalyst* opportunities which would include all the STEM departments at your institution (please review the eligibility limitations for each of these opportunities).

LITERATURE THAT MAY BE HELPFUL

 American Psychological Association, Office on Sexual Orientation and Gender Diversity https://www.apa.org/pi/lgbt/index.aspx

- Arellano, G., Jaime Acuã, O., Graeve, O., & Madsen, L. (2018). Latino engineering faculty in the United States. MRS Bulletin, 43(2), 131-147.
- Austin, A. E., & Laursen, S. L. (2015). Strategies for Effecting Gender Equity and Institutional Change (StratEGIC). https://www.colorado.edu/eer/research-areas/women-science/strategic-toolkit.
- Bilimoria, Diana, Xiangfen Liang (2012). *Gender Equity in Science and Engineering*. Routledge, New York and London
- Booksh, K., & Madsen, L. (2018). Academic pipeline for scientists with disabilities. MRS Bulletin, 43(8), 625-632.
- Bowman, K., & Madsen, L. (2018). Queer identities in materials science and engineering. MRS Bulletin, 43(4), 303-307.
- Branch, Enobong H. Editor. (2016) Pathways, Potholes, and the Persistence of Women in Science. MD: Lexington Books.
- Brayboy, Bryan McKinley Jones. (2003). The Implementation of Diversity in Predominantly White Colleges and Universities. *Journal of Black Studies*, vol. 34, 1: pp. 72-86
- Britton, Dana M. (2017). Beyond the Chilly Climate: The Salience of Gender in Women's Academic Careers. *Gender & Society* 31(1): 5-27.
- Burrelli, Joan. (2008). Thirty-Three Years of Women in S&E Faculty Positions. InfoBrief Science Resource Statistics, National Science Foundation, Division of Science Resources Statistics (NSF 08-308).
- Bystydzienski, Jill M., Bird, Sharon R. Eds. (2006). Women in Academic Science, Technology, Engineering and Mathematics: Removing Barriers. Indianapolis, IN: Indiana University Press.
- Cadwalader, Erin L., Joan M. Herbers, and Alice B. Popejoy. (2014). Disproportionate Awards for Women in Disciplinary Societies. In *Gender Transformation in the Academy*, edited by Vasilikie Demos, Catherine White Berheide, and Marcia Texler Segal, 19:243–63.
- Cech, E., Rubineau, B., Silbey, S. and C. Serond. (2011). Professional Role Confidence and Gendered Persistence in Engineering, *American Sociological Review*, 76:641-666.
- Cho, S., Crenshaw, K. W., & McCall, L. (2013). Toward a field of intersectionality studies: Theory, applications, and praxis. Signs, 38(4), 785-810.
- Collins, Patricia H., Bilge, Sirma. (2016) Intersectionality. Cambridge, UK: Polity Press.
- Dovidio, J. F. (2013). Included but invisible? The benefits and costs of inclusion. In R. J. Ely & A. J. C. Cuddy (Eds.), Gender & work: Challenging conventional wisdom (pp. 11-20). Boston: Harvard Business School.
- Dowd, Alicia, and Bensimon, Estella M. (2015) Engaging the Race Question: *Accountability and Equity in the US Higher Education*. New York: Teachers College Columbia University.
- Else-Quest, N. M., & Hyde, J. S. (2016a). *Intersectionality in Quantitative Psychological Research: I. Theoretical and Epistemological Issues*. Psychology of Women Quarterly, 40(2), 155–170.
- Else-Quest, N. M., & Hyde, J. S. (2016b). *Intersectionality in Quantitative Psychological Research: II. Methods and Techniques*. Psychology of Women Quarterly, 40(3), 319–336.
- Etzkowitz, Henry, Carol Kemelgor, and Brian Uzzi. (2000). *Athena Unbound: The Advancement of Women in Science and Technology*. New York, NY: Cambridge University Press.
- Frank Fox, Mary, Colatrella, Carol. (2006). Participation, Performance, and Advancement of Women in Academic Science and Engineering: What is at Issue and Why. *Journal of Technology Transfer*, (31): 377–386.
- Grant, C., Peeples, T., & Madsen, L. (2018). Professional societies and African American engineering leaders: Paving pathways and empowering legacies. MRS Bulletin, 43(9), 703–709.
- Griffin, K. A., Pifer, M. T., Humphrey, J. R., Hazelwood, A. M. (2011). (Re)Defining departure: Exploring black professors' experiences with and responses to racism and racial climate. American Journal of Education, 117(4), 495–526.
- Griffin, K. A., Bennett, J. C., Harris, J. (2013). Marginalizing merit? An analysis of gender differences in Black faculty D/discourses on tenure, advancement, and professional success. *The Review of Higher Education*, 36(4), 489–512.
- Gu, Diane Y. (2016) Chinese Dreams? American Dreams? The Lives of Chinese Women Scientists and Engineers in the United States. Netherlands: Sense Publishers.
- Handley, Ian M., Elizabeth R. Brown, Corinne A. Moss-Racusin, and Jessi L. Smith. (2015). Quality of Evidence Revealing Subtle Gender Biases in Science Is in the Eye of the Beholder. *Proceedings of the National Academy*

- of Sciences 112, no. 43 (October 27, 2015): 13201-6.
- Hill, Catherine, Corbett, Christianne, St. Rose, Andresse. (2010). Why So Few? Women in Science, Technology and Mathematics. Washington, DC: AAUW.
- Holmes, Mary Anne, Suzanne O'Connell, Kuheli Dutt, Eds. (2015). Women in the Geosciences: *Practical, Positive Practices Toward Parity*. Hoboken, New Jersey: AGU and Wiley & Sons.
- Hunt, Valerie, Shauna Morimoto, Anna Zajicek, and Rodica Lisnic. (2012). Intersectionality and Dismantling Institutional Privilege: The Case of the NSF ADVANCE Program. *Race, Gender & Class* 19, no. 1/2 (2012): 266–90.
- Ireland, D. T., Freeman, K. E., Winston-Proctor, C. E., DeLaine, K. D., McDonald Lowe, S., & Woodson, K. M. (2018). (Un) Hidden Figures: A Synthesis of Research Examining the Intersectional Experiences of Black Women and Girls in STEM Education. Review of Research in Education, 42(1), 226–254.
- Kalev, A, Erin Kelly, and Frank Dobbin. (2006). Best Practices or Best Guesses? Diversity Management and the Remediation of Inequality. *American Sociological Review*, (71): 589-917.
- Long, J. Scott, ed. (2001). From Scarcity to Visibility: Gender Differences in the Careers of Doctoral Scientists and Engineers. Washington, D.C.: National Academy Press.
- Martínez—Alemãn, Ana, Pusser, Brian, Bensimon, Estela M. Eds. (2015). Critical Approaches to the Study of Higher Education: A Practical Introduction. Baltimore, MD: Johns Hopkins University Press.
- Massachusetts Institute of Technology. (1999). A Study on the Status of Women Faculty in Science at MIT. The MIT Faculty Newsletter, (XI): 4. [http://web.mit.edu/fnl/women/women.html]
- Misra, J., Lundquist, J. H., Templer, A. (2012, June). Gender, work time, and care responsibilities among faculty. Sociological Forum, 27(2), 300–323.
- Morimoto, Shauna A., Zajicek, Anna. (2014). Dismantling the 'Master's House': Feminist Reflections on Institutional Transformation. *Critical Sociology*. 40 (1) 135-150.
- Moss-Racusin, C. A., J. F. Dovidio, V. L. Brescoll, M. J. Graham, and J. Handelsman. (2012). Science Faculty's Subtle Gender Biases Favor Male Students. *Proceedings of the National Academy of Sciences* 109, no. 41: 16474–79.
- Núãez, Anne–Marie, Hurtado, Sylvia, and Calderón Galdeano, Emily. Eds. (2015) Hispanic-Serving Institutions: Advancing Research and Transformative Practice. New York and London: Routledge.
- National Academies of Sciences, Engineering, and Medicine. Committee on the Impacts of Sexual Harassment in Academia; Committee on Women in Science, Engineering, and Medicine; Policy and Global Affairs. (2018) Sexual Harassment of Women Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine. Paula A. Johnson, Sheila E. Widnall, and Frazier F. Benya, Editors, Washington, D.C.: The National Academies Press.
- National Academy of Sciences, National Academy of Engineering, and Institute of Medicine. Committee on Maximizing the Potential of Women in Academic Science and Engineering and the Committee on Science, Engineering, and Public Policy. (2007). Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering. Washington, D.C.: The National Academies Press.
- National Research Council. (2010). Gender Differences at Critical Transitions in the Careers of Science, Engineering, and Mathematics Faculty. Washington, D.C.: The National Academies Press.
- Nelson Diversity Surveys, Donna J. Nelson, (2002, 2005, 2007, and 2012). A National Analysis of Minorities in Science and Engineering Faculties at Research Universities. Last accessed June 2016.
- Nelson, D., & Madsen, L. (2018). Representation of Native Americans in US science and engineering faculty.
 MRS Bulletin, 43(5), 379-383.
- Núãez, Anne–Marie, Jessica Rivera & Tyler Hallmark (2019) Applying an intersectionality lens to expand equity in the geosciences, *Journal of Geoscience Education*.
- O'Meara, KerryAnn, Alexandra Kuvaeva, Gudrun Nyunt, Chelsea Waugaman, and Rose Jackson (2017). Asked More Often: Gender Differences in Faculty Workload in Research Universities and the Work Interactions That Shape Them. American Educational Research Journal. Vol 54, Issue 6, pp. 1154 – 1186
- O'Meara, KerryAnn, and Nelly P. Stromquist. (2015). Faculty Peer Networks: Role and Relevance in Advancing Agency and Gender Equity. Gender and Education 27, no. 3: 338–58.
- Partridge, Eric V. Ramon Barthelemy, Susan Rankin. (2014) Factors Impacting the Academic Climate for LGBQ

- STEM Faculty. The Journal of Women and Minorities in Science and Engineering. Vol 20 (1), 75-98.
- Rhoades, G., Kiyama, J. M., McCormick, R., & Quiroz, M. (2008). Local cosmopolitans and cosmopolitan locals: New models of professionals in the academy. *Review of Higher Education*, 31(2), 209-235.
- Rosser, Sue V. (2004). The Science Glass Ceiling: Academic Women Scientists and the Struggle to Succeed. New York: Routledge.
- Rosser, Sue V. and Jean-Lou Chameau. (2006). Institutionalization, Sustainability, and Repeatability of ADVANCE for Institutional Transformation. *Journal of Technology Transfer*, (32): 331-340.
- Sarsons, H. (2107). Recognition for Group Work: Gender Differences in Academia. *American Economic Review:* Papers and Proceedings. 107 (5):141–145.
- Smith, Jessi L., Ian M. Handley, Alexander V. Zale, Sara Rushing, and Martha A. Potvin. (2015). Now Hiring! Empirically Testing a Three-Step Intervention to Increase Faculty Gender Diversity in STEM." *BioScience*.
- Stepan-Norris, J., and J. Kerrissey. (2015). Enhancing Gender Equity in Academia: Lessons from the ADVANCE Program. *Sociological Perspectives*,.
- Settles, Isis H., Lilia M. Cortina, Abigail J. Stewart, and Janet Malley. (2007). Voice Matters: Buffering the Impact of a Negative Climate for Women in Science. *Psychology of Women Quarterly*, (31): 270-281.
- Steinpreis, Rhea, Katie A. Ander, and Dawn Ritzke. (1999). The Impact of Gender on the Review of the Curricula Vitae of Job Applicants and Tenure Candidates: A National Empirical Study. *Sex Roles*, (41): 509-528.
- Stewart, Abigail J., and Virginia Valian, (2018) An Inclusive Academy Achieving Diversity and Excellence. MIT Press, Cambridge, MA.
- Stewart, Abigail J., Janet E. Malley, and Danielle LaVaque-Manty, Eds. (2007). *Transforming Science and Engineering: Advancing Academic Women*. University of Michigan Press, Ann Arbor, MI.
- Sturm, Susan. (2006). The Architecture of Inclusion: Advancing Workplace Equity in Higher Education. *Harvard Journal of Law and Gender*, (29): 247-334.
- Thomas-Hunt, Melissa C. and Katherine W. Phillips. (2004). When What You Know Is Not Enough: Expertise and Gender Dynamics in Task Groups. *Personality and Social Psychology Bulletin* 30: 1585–1598.
- Thompson, Mischa and Denise Sekaquaptewa. (2002). When Being Different Is Detrimental: Solo Status and the Performance of Women and Racial Minorities. *Analyses of Social Issues & Public Policy*, 2: 183–20.
- Trix, F. and C. Psenka. (2003). Exploring the color of glass: letters of recommendation for female and male medical faculty. *Discourse & Society* (14): 191–220.
- Trower, C. A. (2012). Success on the tenure track: Five keys to faculty job satisfaction. Baltimore, MD: Johns Hopkins University Press.
- Trower, C. and R. Chait. (2002). Faculty Diversity: Too Little for Too Long, Harvard Magazine (104)4.
- Valian, V. (1998). Why So Slow? The Advancement of Women. Cambridge, Mass.: MIT Press.
- Wenneras, C. and A. Wold. (1997). Nepotism and sexism in peer-review. Nature, 387: 341–343.
- West, Martha S. and John W. Curtis. (2006). AAUP Faculty Gender Equity Indicators 2006. Washington, DC: American Association of University Professors. [https://www.aaup.org/reports-publications/publications/see-all/aaup-faculty-gender-equity-indicators-2006]
- Williams, J. C. (2003). Litigating the glass ceiling and the maternal wall: Using stereotyping and cognitive bias evidence to prove gender discrimination. Employee Rights & Employment Policy Journal, 7, 401–547.
- Yuval-Davis, Nira. (2016) Power, Intersectionality and the Politics of Belonging. In: Harcourt W. (eds) The Palgrave Handbook of Gender and Development. Palgrave Macmillan, London.
- Zambrana, Ruth Enid, Rashawn Ray, Michelle M. Espino, Corinne Castro, Beth Douthirt Cohen, and Jennifer Eliason (2015). "Don't Leave Us Behind": The Importance of Mentoring for Underrepresented Minority Faculty. American Educational Research Journal. Vol 52, Issue 1, pp. 40 – 72
- Zippel, Kathrin. (2017) Women in Global Science Advancing Academic Careers through International Collaboration. Stanford, California: Stanford University Press.