NATIONAL SCIENCE FOUNDATION
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NSF 20-080

NSF IUCRC 20-570 Frequently Asked Questions (FAQs)

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GENERAL INFORMATION

1. **What is an IUCRC?**

   An Industry-University Cooperative Research Center (IUCRC) is a consortium of industry, government, and academia. Typically, universities converge around a research topic of interest to industry and apply for support from the National Science Foundation. The IUCRC conducts pre-competitive research recommended by the industry Members, which may be large corporations, middle-market companies, small businesses and startups, non-profit organizations, government agencies, and/or other interested non-academic parties.

   Industry Members pay membership fees to support pre-competitive research projects conducted by university faculty and students, and NSF provides a governance framework and funding for Center operations and management.

2. **What sort of research does an IUCRC conduct?**

   IUCRCs conduct use-inspired basic research that is considered pre-competitive and intended for publication through standard academic and scientific venues, such as peer-reviewed journals and conferences. Pre-competitive research allows firms that are typically commercial competitors to mutually collaborate and support a Center's research activities.

3. **What is use-inspired research?**

   Use-inspired research is basic research strongly motivated by the need to create knowledge or knowhow to help develop practical solutions to address societal challenges. Use-inspired research may have significant potential to support downstream technological developments. In an IUCRC, industry Members help identify the critical needs that could be addressed by basic research.

4. **What are the elements required for an IUCRC?**

   An IUCRC requires a) a capable research and management team with a strong entrepreneurial mindset; b) universities, faculty, and students interested in conducting research of interest to industry; and c) a community of industry partners seeking pre-competitive, use-inspired research projects. Each IUCRC is expected to grow and be independently sustainable by the end of NSF support.

5. **How much NSF funding is available to support an IUCRC?**

   Funding is available to plan a Center and operate it through up to two subsequent five-year Phases.

   A Planning Grant provides up to $20,000 per university Site for a year of planning activities.

   In Phase I a total of $750,000 for a 5-year grant per site is available.

   In Phase II (II+), a total of $500,000 ($750,000) for a 5-year grant per site is available.

   In Phase III (limited only to active Phase II Centers funded under prior solicitations), a total of $250,000 for a 5-year grant per site is available.

FUNDING MODEL

6. **Is NSF moving to a two-phase model?**

   Yes, NSF has redesigned the IUCRC program as a two-phase program with higher funding levels for Phase II than previously offered. The goal of this modification is to accelerate outcomes and results over shorter time frames. Through the Phase II+ option,

the program provides more funding to support greater industry participation than before. All newly proposed Centers and existing Phase I Centers will follow the new two-phase model. Only active Phase II Centers funded under prior solicitations are offered the option to pursue Phase III.

7. **What is the difference between Phase II and Phase II+?**

   Phase II+ requires the Center to maintain a 50% higher level of industry membership than **Phase II**. In recognition of stronger industry involvement, NSF provides 50% more funding for **Phase II+** ($150,000/year/Site) relative to **Phase II** ($100,000/year/Site).

   For example, an N-Site Center in **Phase II** must have 4xN members, while a **Phase II+** Center must have 6xN members.

8. **Can an active Phase II Center, funded under prior solicitations, transition to Phase II+?**

   No. However, Phase II grantees funded under prior solicitations may compete for a Phase III award.

9. **Can a Phase II awardee under this solicitation transition to the funding model of Phase II+ during the 5-year award period?**

   No. Phases II and II+ are mutually exclusive options for the second five-year period. The choice of Phase II or Phase II+ must be made at the time of a Phase II proposal submission.

10. **Can a Phase II+ award be downgraded to a Phase II during the 5-year award period?**

    No. Phase II+ awards must maintain the level of industry membership and other requirements throughout the award period and do not have the option to switch between Phase II+ and Phase II. The Phase II+ awardee will be held to the industry membership requirements of a Phase II+ award.

11. **Can an IUCRC add new Sites after being funded in a given Phase?**

    Yes. New Sites can apply to join an active IUCRC funded by NSF.

12. **Do all Sites within an IUCRC transition to a next phase at the same time?**

    Yes. All Sites (Lead and Partner) within an IUCRC must apply simultaneously to transition to the next phase, under the same proposal submission due date. This requirement is to align all Site awards with identical periods of performance so they can partner efficiently, without funding discontinuities.

13. **May a non-academic, non-profit organization submit proposals to form an IUCRC?**

No. Only Institutions of Higher Education (IHEs) – Two- and four-year IHEs (including community colleges) accredited in and having a campus located in the U.S may submit proposals in response to the solicitation.

14. **Do IUCRC PIs need to be tenured?**

Tenured faculty are typically PIs on IUCRC Proposals. However, non-tenured faculty may serve as a PI on a proposal if a waiver is requested from NSF and it is granted. Waivers are requested via email and should include documentation to demonstrate clear institutional support and endorsement of the non-tenured faculty seeking to serve as the PI.

15. **May I serve as a PI or co-PI in more than one active IUCRC?**

No. A PI/Co-PI may have only one active IUCRC Site award at any given time. PIs and Co-PIs can only submit one proposal per submission period.

PROGRAM ASPECTS

16. **What are the expectations for a new IUCRC?**

New IUCRCs should seek to address unmet or underserved research needs in areas that could make a significant impact on the U.S. economy. IUCRCs are expected to work on research that is transformative and helps reshape the frontiers of knowledge for industry. IUCRCs help Member organizations connect directly and efficiently with university researchers to achieve three primary objectives:

1. Conduct high-impact research to meet shared and critical industrial needs in companies of all sizes;
2. Enhance U.S. global leadership in driving innovative technology development; and
3. Identify, mentor and develop a diverse, highly skilled science and engineering workforce.

17. **How significant a concern is overlap in supporting proposed IUCRCs?**

NSF seeks to fund new IUCRCs to conduct research in areas of minimal overlap with existing NSF and other Federal investments in similar consortia. NSF encourages the formation of multi-university (i.e., multi-Site) Centers, each of which should address distinct, unique needs. A prospective Principal Investigator (PI) should confirm that a proposed Center does not overlap with existing Centers in the Directory (https://iucrc.nsf.gov/); in the event of overlap with an existing IUCRC, the PI should

explore the possibility of joining that Center.

18. **What is the process and timeline required from idea/concept to establishing an IUCRC?**

Creating an IUCRC is like launching an academic startup, requiring a strong desire to build public-private partnerships, knowledge of pressing industry needs, a capable leadership team, access to students, and research infrastructure. To launch an IUCRC, the university team must identify the needs of an economic sector under transformation, confirm alignment of university leadership, secure financial commitments from industry players, and establish an effective governance framework.

From concept to Phase I center creation, the process involves numerous activities spanning several distinct stages requiring multiple years, namely, ideation; planning grant proposal submission; NSF merit review and planning grant award; workshop planning and execution; identification of research areas of strong industrial interest/need; realization of industrial support commitments; submission of a Phase I center proposal; and NSF merit review followed by a Phase I center award to support creation of an NSF IUCRC.
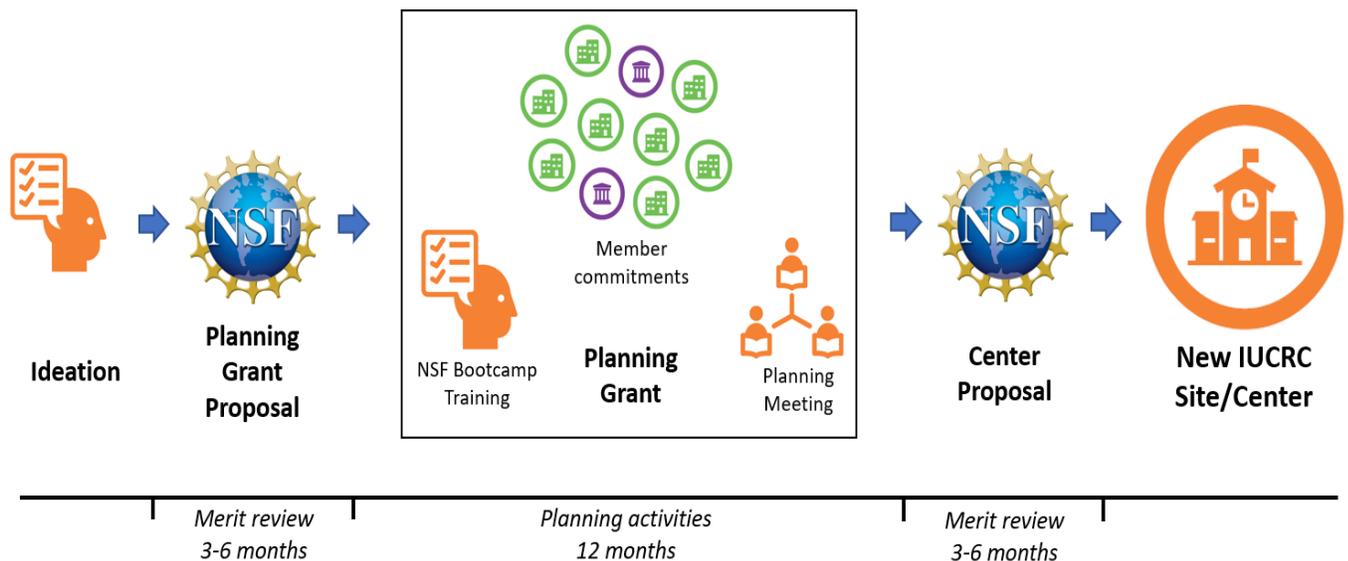
19. **If extensive Center planning has already been done with a team of PIs from other universities and industry, is it still mandatory to seek a Planning Grant?**

The solicitation allows for a Planning Grant Waiver for teams that are ready to directly submit a Phase I proposal. The waiver request is subject to NSF review and approval.

20. **What is a Preliminary Proposal?**

A Preliminary Proposal is a brief document that presents initial information on the proposed Center to help NSF assess fit with the IUCRC Program.

21. **How quickly will I hear back from NSF after submitting a Preliminary Proposal?**

Typically, NSF will provide a non-binding Encourage/Discourage recommendation for submission of a Full Planning Grant Proposal within one month of receipt of the Preliminary Proposal.

22. **What would be some of the most significant activities that a PI must focus on during the Planning Grant stage?**

Planning Grant recipients are required to participate in two significant activities:

1. a Boot Camp to learn how to create a sustainable Center; and
2. a two-day Planning Workshop organized by the grantees, engaging potential Members in a discussion of the proposed Center research focus, its value propositions, potential research projects, and a research roadmap of strong interest to industry members.

These activities require a cohesive and collaborative research team, and substantial time for industry outreach, communication, and customer discovery to help bring the most convergent industry participants to engage in the planning workshop. A key goal is to secure letters of industry financial commitment and convergence on the Center's research focus to develop a strong Phase I proposal to NSF.

23. **How many university Sites are required to establish an IUCRC?**

IUCRC Centers may have multiple Sites (preferred) or a single Site.

24. **Do Sites have specific roles in an IUCRC?**

In a multi-Site Center, one institution serves as the Lead Site and the others are designated Partner Sites. The Lead Site is responsible for collecting and distributing funds to support Center research activities, along with administrative and management responsibility for the Center-wide activities such as Member recruitment and retention, organization of Industry Advisory Board meetings, collection and allocation of membership fees, and managing Center operations. The Lead Site administrative role and associated expenses are defined and budgeted in a required Memorandum of Understanding (MOU) executed by all Sites.

25. **Does NSF have a preference on the number of Sites in an IUCRC?**

NSF typically encourages formation of multi-Site Centers.

26. **Can an IUCRC have international Partner Sites?**

Yes. With prior approval of the Industry Advisory Board and NSF, a Center may submit a supplemental funding request to foster collaborative work with an international partner.

27. **What are the roles of the Center Director and the Site Director(s)?**

The Center Director is the Lead Site PI; oversees the Center operations, management, and research programs; and serves as the main point of contact for the Center.

A Site Director is the PI for a Partner Site; and serves on the Academic Leadership Team, manages the Site's research program, and serves as the point of contact for the Site-related activities.

28. **What is the Industry Liaison Officer and their role?**

The NSF recommends that the IUCRC include an Industry Liaison Officer. This position is typically associated with the Lead Site and has the primary responsibilities for communicating Center value, identifying and recruiting new Members, and building and maintaining existing industry relationships. Partner Sites are expected to provide partial support for this position by contributing funds via subawards to the Lead Site, as part of the Lead Site's Center operations and management responsibilities.

29. **What is the Academic Policy Committee's role at an IUCRC Site?**

Each Site has an Academic Policy Committee composed of faculty members of the institution's administration (for example, Vice President of Research, Dean, Associate Dean of Research, Vice Dean of Innovation, Department Chair, etc.). Examples of this committee's responsibilities include managing Conflict of Interest or personnel performance issues within the Center/Site.

30. **What is the Industry Advisory Board and its role?**

The Industry Advisory Board (IAB) is an advisory body composed of representatives from the Center's Member organizations. The IAB elects a Chair and Vice-Chair and makes recommendations on (a) the Center's research projects, (b) the apportionment of resources to these research projects, and (c) bylaws. The IAB ensures that the university team is conducting research of high relevance to the industry Members. The IAB helps to refine the mission, vision, and research roadmap for the Center.

31. **What is the Academic Leadership Team and its role?**

The Academic Leadership Team is a team comprising the PIs and co-PIs of all Sites, with responsibility for overseeing and carrying out the IAB-recommended research activities and ensuring Center success.

32. **When are Preliminary Proposals required?**

Preliminary Proposals are required 1) as a precursor to submitting a Planning Grant Proposal, or 2) to request a Planning Grant Waiver. Each Site proposing to form the Center must submit a separate Preliminary Proposal.

33. **When are Full Proposals required?**

Full Proposals are required for Planning Grants, Phase I, Phase II, Phase II+ and Phase III submissions.

34. **Must each institution in an IUCRC submit a separate proposal (for Preliminary or Full Proposals)?**

Yes. Each institution submits an individual proposal. The solicitation provides guidance on what to include in Lead and Partner Site proposals. Each Site proposal is reviewed and evaluated individually, but in the context of the entire Center collaboration.

35. **How are Site proposals reviewed by NSF?**

Proposals from multiple Sites are typically reviewed as a group in the standard NSF Merit Review Process. This way, the review generates an integrated view of the proposed Center.

36. **What is a Letter of Interest?**

A Letter of Interest is provided by a prospective industry member during the Center's planning phase, expressing support of the Center's concept and proposed research agenda. Such industry members would then potentially be interested in participating the Center's Planning Workshop to assess and evaluate the opportunity to join the Center as a paying member if funded by NSF.

37. **What should a Letter of Interest say?**

Letters of Interest demonstrate the importance of the proposed Center to the broader industry and US competitiveness. Information that supports the Center's intellectual merit and broader impact would be valuable. To the extent possible, Letters should articulate which research areas are strongly in need of NSF support.

38. **What is a Letter of Financial Commitment?**

Letters of Financial Commitment show a serious intent by a prospective industry Member to provide financial support and formally join a Center. The following template language must be included in a Letter of Financial Commitment: "...Should {Center Name} be

selected by NSF for funding, {Company Name} commits to joining {Center Name} as a {Full/ Associate} member at the membership level of ${amount} on an annual basis, pending availability of funds, and accepting the NSF's required Membership Agreemen..." The letter should also include language that justifies the value proposition and illuminate why NSF should support the Center.

39. **When is a Letter of Financial Commitment required?**

    Letters of Financial Commitment are required when submitting a Full Proposal for Phase I Center creation, transitions to Phases II or II+, and Site Addition proposals to demonstrate the additional industrial financial commitment generated by the Site's addition.

40. **What should the MOU between the Lead and Partner Sites contain?**

    The MOU must describe how Sites plan to operate the Center, share administrative and managerial responsibilities, handle the collection of membership fees, and manage the allocation of Program Income within and across sites following IAB selection of research projects.

41. **What should the bylaws of a Center describe?**

    The bylaws are developed by the Center's leadership team to describe the operational and management procedures of the Center. They lay out in detail how the Center's research activities will be managed. They describe the procedures used for project selection, intellectual property issues, internal reporting requirements, etc. The bylaws must not contradict the membership agreement and be approved by the IAB and NSF. The bylaws must define a voting process for the approval of all research projects funded using member fees. Bylaws are typically published on an active IUCRC's website.

42. **When do bylaws need to be created?**

    Bylaws are typically finalized at the Center's first kickoff Industry Advisory Board meeting, after receipt of the Phase I award.

43. **How should budgets of the Lead and Partner Sites be structured?**

    In any given Phase of funding, NSF expects that the Lead Site will receive funding from the Partner Sites to support operations, management, and administration responsibilities on behalf of the Center. The solicitation presents two distinct options to help provide this funding for the Lead Site.

44. **How can Program Income (industry funding) be used?**

    Industry funding (recognized as Program Income as per the Proposal and Awards

Policies and Procedures Guide (PAPPG)
(https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_8.jsp#VIIID4) is intended to be exclusively used to support research activities. At least 90% of industry funds must be devoted to support the direct costs of research. With the approval of both the IAB and NSF Cognizant Program Director, Program Income may be used to fund other activities to support the Center's mission.

45. **How can NSF IUCRC funding be used?**

NSF funds must be used toward management and operations of the IUCRC. NSF requires the federally negotiated indirect rate to be requested on proposal budgets. Advance approval by the Cognizant Program Director is required to use NSF funds for research.

46. **Is the indirect cost rate on NSF funding subject to the same policy as the Program Income?**

No, the NSF indirect cost rate should be consistent with the university's negotiated rate for federally sponsored projects.

MEMBERSHIP

47. **What is Program Income?**

All funds contributed by Members are classified as Program Income (https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_8.jsp#VIIID4),including funds that count toward Membership Fees. Program Income contributes to the Center's research program activities. At least 90% of the IUCRC Program Income must be used to support the direct costs of research, with up to 10% used to support indirect costs.

48. **Which entities are typically members of an IUCRC?**

Members are typically companies (large and small businesses, startups, for-profit and non-profit entities) and government agencies (federal, state and local) that pay annual membership fees, recognized as Program Income. Members agree to the terms of the Center membership agreement and bylaws. A member must have an Employer Identification Number (EIN) issued by the U.S. Internal Revenue Service. Exceptions to this requirement must be approved in writing by the Cognizant Program Officer.

49. **What are the Membership Requirements for an IUCRC?**

Membership Requirements ("number of members" *and* "aggregate membership fees") vary with the number of Sites in a Center and the funding Phase of the Center. Details are in Table 1 of the Solicitation.

50. **What are the types of Memberships?**

Membership categories include Full, Associate and Affiliate memberships. The solicitation provides definitions of each membership type and an example in Table 2.

51. **May divisions of government agencies contribute research funds to an IUCRC?**

Yes. Federal government agencies, Federally Funded Research and Development Centers (FFRDC) and National Laboratories may become IUCRC Members with the same rights and responsibilities as industry members. However, to ensure that IUCRC research remains pre-competitive, federal entities may not use the IUCRC to conduct contractual research. NSF provides government agencies the option to use either Inter-Agency Agreements (IAAs) or Military Interdepartmental Purchase Requests (MIPRs) to provide funds to support research at an IUCRC.

52. **May the standard IUCRC membership agreement terms be modified (e.g. Intellectual Property, indemnity, etc.)?**

No. The NSF requires adherence to the IUCRC template. All Center Members sign the same membership agreement. No member-specific customization is allowed. Clarifications and Member-specific issues/terms may be addressed in the Center bylaws, as long as such terms do not contradict the terms and conditions of the NSF IUCRC template membership agreement.

53. **What happens if an IUCRC falls below its membership requirement?**

If a Center drops below the minimum membership requirement the Center will have an opportunity to address the issue. If this remains unresolved, the Center may be subject to appropriate corrective actions by NSF, as outlined in the solicitation.