



National Science Foundation
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Frequently Asked Questions (FAQs) for Large Proposals to the CISE IIS Core Programs of Cyber-Human Systems (CHS), Information Integration and Informatics (III), and Robust Intelligence (RI)

"Frequently Asked Questions" are not comprehensive. Individuals should refer to the IIS: Core Programs solicitation ([NSF 16-581](#)) and the *NSF Grant Proposal Guide* ([NSF 16-001](#)).

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GENERAL

1. **Why is CISE/IIS issuing this FAQ?**

In recent years, a decreasing number of Large proposals have been awarded through the IIS core solicitation. There are many reasons why proposals have not been successful. Some of the more common reasons include: little or no explanation of the innovative aspects of the work; lack of a significant impact to the science of the IIS core program; an inadequate description of the synergistic nature of the proposed work; an insufficient justification for why a Large project is needed for the work (rather than a collection of Small projects); and an inadequate plan for how the collaboration will be achieved and evaluated. This FAQ focuses on these issues, to stress more clearly what IIS expects in successful Large core projects.

2. Can I receive feedback on my idea for a Large IIS proposal prior to submission?

Yes. We strongly encourage you to contact (via email) a relevant IIS program officer, and discuss with him/her the appropriateness of your idea for a Large IIS core proposal, prior to submission. This conversation should take place early in your proposal writing process.

3. Does this FAQ describe new or revised requirements for Large IIS proposals?

No. This FAQ simply emphasizes and further explains the requirements that are already stated in the solicitation.

PROJECT DESCRIPTION

4. What are the characteristics of successful Large proposals for the IIS core programs?

Large proposals should describe research that is potentially groundbreaking and transformative, and that could have a significant impact to the science of the IIS core program. These proposals should have a longer-term vision, with objectives that could not be attained simply by a collection of smaller projects provided with similar resources. Large projects will typically integrate research from various areas, either within a program or across programs, or tackle ambitious goals not feasible with smaller projects. Project descriptions must be comprehensive, appropriately detailed, and well integrated, and should make a convincing case that the research needs to be conducted as a unified Large project, rather than a collection of Small projects. The overall impact to the science of the IIS core program should be greater than the sum of each of the individual investigator contributions.

5. What topics are suitable for a Large IIS proposal?

A Large IIS proposal should address research that impacts the fundamental science of the program to which it is submitted (i.e., CHS, III, or RI) and be representative of the goals of that program, as outlined in the solicitation. While contributions to other disciplines will help strengthen a proposal's broader impacts, the proposed work must make clear and significant scientific contributions to the core IIS program, commensurate with the resources requested. Successful Large IIS proposals typically address more than one sub-discipline within a core program; this is especially true for the RI program. We encourage a synergistic integration of different core sub-disciplines. Large proposals can also cross core program boundaries. For all proposals, it should be clear from the project description how the research has an important impact to the scientific objectives of each program.

6. What is the difference between the requirements for Large IIS proposals and those for Medium IIS proposals?

Medium and Large IIS proposals share many requirements. Both are expected to have comprehensive and well-integrated project descriptions, and make a convincing case that the collaborative contributions of the project team will be greater than the sum of each of their individual contributions. Both are required to provide sufficient justification of the budget, consistent with the scope of the project. They also both require thoughtful descriptions of the coordination mechanisms that ensure a synergistic research project. The main differences are in the scope and projected impact of the research. A Large project often has a broader scope, crossing multiple sub-disciplines of the IIS core program to which it is submitted. Large projects can also address difficult topics that often require unusual investments, whether in equipment, support personnel, or conducting multiple experimental studies that must be done together. Large proposals also address research that is particularly compelling, groundbreaking, and/or transformative, and holds promise for opening up a new direction of research in the field.

PROJECT BUDGET

7. To what extent should the project budget be justified for IIS Large core proposals?

Rationale must be provided to explain why the requested budget is required to carry out the proposed work. It should be clear how the project scope justifies the level of investment requested. It should also be clear how the budget is apportioned among the participating team members and institutions, and reflects the tasks and effort in the overall plan. Because a Large project represents a substantial portion of the overall funding available for an IIS core program, the investment must be compelling and representative of the scientific goals of the IIS core program.

COLLABORATION PLAN

8. Is a Collaboration Plan required for Large IIS core proposals?

Yes, every Large proposal must have a Collaboration Plan of up to 2 pages. This plan must be submitted as a document under Supplementary Documentation.

9. Is the content of the Collaboration Plan considered during the review?

Yes, the content of the Collaboration Plan is important for explaining how the proposed research team will work together to ensure that the project as a whole meets its stated objectives. Large projects are not just parallel activities by a group of individual researchers. Instead, Large projects are expected to involve coordination and synergy across investigators, disciplines, and/or institutions. The Collaboration Plan should provide a thoughtful, strong justification for the larger team of researchers, and describe how the researchers will work collaboratively and effectively. The Collaboration Plan should clearly demonstrate how the participating investigators will work synergistically to accomplish the project objectives. It should be clear what role each investigator is taking in each sub-project of the research, and how the components of the research will come together over the course of the project, with a timeline for the integrative activities.

PAST AWARDS

10. How do I find recent IIS Large core awards to see what types of awards have been made in the past?

The NSF awards database (advanced search at <http://www.nsf.gov/awardsearch/advancedSearch.jsp>) can be used to search for Large awards

made through IIS under the IIS: Core Programs solicitation. Under the "Program Information" section, enter the following:

- For NSF Organization, select "IIS - Div Of Information & Intelligent Systems".
- For Element Code, enter one of the following: "7367" for CHS (formerly HCC), "7364" for III, or "7495" for RI.
- For Reference Code, enter "7925".
- For both active and expired awards, check the "Expired Awards" box.

(Note that many of the proposals found by this search were awarded several years ago, and thus may not be representative of the current areas of research emphasis in the IIS core programs. Prospective principal investigators are strongly encouraged to review the latest IIS core programs solicitation, available at https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13707, and to talk with relevant IIS program officers about your ideas.)
