



NATIONAL SCIENCE FOUNDATION
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NSF 20-061

Dear Colleague Letter: Request for Information on Future Topics for the NSF Convergence Accelerator and Call for Future Topics Conference Proposals

March 23, 2020

Dear Colleague:

OVERVIEW

This Dear Colleague Letter (DCL) replaces [NSF 19-065](#), which was a Request for Information (RFI) on Future Topics for the NSF Convergence Accelerator for FY2020.

The purpose of this RFI and call for future topics conference proposals is to seek input from global industry, institutions of higher education (IHEs), non-profits, government entities, and other interested parties on potential NSF Convergence Accelerator tracks for FY 2021.

Potential NSF Convergence Accelerator tracks for FY 2021 can be related to [Industries of the Future \(IoTf\)](#), [NSF's Big Ideas](#), or other topics, that may not relate directly to an IoTf or Big Idea, but nonetheless have the potential for significant national impact. Ideas suggested in response to this RFI should be similar in breadth to [NSF 19-050](#) tracks, which are broad enough to each support a set of related research teams working together as a cohort.

Note that this RFI does not invite research proposals, though the process itself may result in the identification of potential topics for future research funding opportunities. Respondents to this RFI may submit their ideas and they are highly encouraged to also submit conference proposals to develop and refine those ideas so as to incorporate convergence research, breadth, and collaboration among key stakeholders from industry, IHE's, non-profits, government entities, and other interested parties.

BACKGROUND

The objectives of the NSF Convergence Accelerator are to *accelerate use-inspired convergence research* in areas of national importance, and to initiate convergence team-

building capacity around exploratory, potentially high-risk proposals addressing selected topics (tracks).

The NSF Convergence Accelerator, an organizational structure to accelerate the transition of convergence research into practice, brings teams together in a cohort with time-limited tracks to focus on grand challenges of national importance that require a *convergence* research approach, namely the merging of ideas, approaches and technologies from widely diverse fields of knowledge to stimulate innovation and discovery. The teams are interdisciplinary and leverage partnerships across academia, industry, government, non-profit and other sectors. The NSF Convergence Accelerator is modeled on acceleration and innovation activities from the most forward-looking companies, IHE's, and non-profit organizations.

The previous DCL ([NSF 19-050](#)) invited proposals for the NSF Convergence Accelerator Pilot. Initial tracks were chosen from [NSF's Big Ideas](#). Track A1 of the pilot, *Open Knowledge Networks*, relates to the [Harnessing the Data Revolution](#) (HDR) Big Idea. Track B1, *AI and Future Jobs*, and track B2, *National Talent Ecosystem*, relate to the [Future of Work at the Human-Technology Frontier](#) (FW-HTF) Big Idea. The *NSF Convergence Accelerator Pilot* resulted in a total of 43 Phase 1 awards-21 in Track A1 and 22 in Tracks B1 and B2.

OBJECTIVE

The objectives of this DCL are to (1) solicit ideas in use-inspired research for NSF Convergence Accelerator tracks for FY 2021 that build upon prior foundational research in the lotF, NSF's Big Ideas or other areas of research related to areas of national importance; and (2) solicit conference proposals to develop and refine those ideas to develop the technical content that will be used in a future solicitation. The topics must emphasize *convergence research*, which requires deep interdisciplinary collaborations.

Due to the interdisciplinary nature of convergence research, the breadth of the ideas sought, and the number and variety of key stakeholders involved, NSF strongly encourages the submission of conference proposals, in addition to the submission of concepts via the online RFI questionnaire (see below). Conference proposals are welcome from industry, IHEs, and non-profits that will help refine NSF Convergence Accelerator topic ideas and expand collaboration among stakeholders and partners to transition research outputs to use and, ultimately, significant impact for society.

WHAT NSF IS LOOKING FOR

Submissions for future NSF Convergence Accelerator track topics should provide responses to all of the items below:

1. Concept title and point of contact;
2. Description of the track topic and the need for convergence research

3. Evidence of research community readiness (list of reports, other publications);
4. Scientific and societal needs in the topic area;
5. Stakeholders in the ecosystem (including industry such as investors, start-ups, etc., IHEs, non-profits, government entities) and the potential for partnerships;
6. Deliverables that could be expected within a two-year research effort by a cohort of teams (e.g., products, prototypes or proof-of-concepts); and
7. Expected impacts (including scientific and societal impacts) of the project looking forward 10 years.

NSF Convergence Accelerator conference proposals should propose a conference/workshop whose aim would be to better understand the scientific and community needs, opportunities, and significant challenges for the suggested topic over the next 2-5 years. Further, NSF Convergence Accelerator conference proposals should be distinctly different from other types of conference proposals usually submitted to NSF. The conference proposals should clearly describe how the conference will deepen the teams understanding and integration of items 1-7 above and broaden its inclusion of stakeholders. A conference proposal must reference its corresponding RFI for the NSF Convergence Accelerator Future Topic submission. To be considered for the 2021 Convergence Accelerator solicitation, conference proposals should plan to hold the conference by October 16, 2020.

WHO SHOULD RESPOND

Researchers and key stakeholders in global industry, IHEs, non-profits, and government entities are invited to submit RFI responses for future NSF Convergence Accelerator tracks.

Researchers and other key stakeholders in U.S. industry, IHE's, and non-profits may submit corresponding conference proposals and are strongly encouraged to do so.

HOW TO RESPOND TO THIS RFI

To submit a concept for future NSF Convergence Accelerator tracks, please visit: <https://www.surveymonkey.com/r/2021RFI> and complete the online questionnaire no later than May 29, 2020. Use the email contact field provided to enable a courtesy copy of your response to be sent to your Authorized Organizational Representative or institutional leadership to ensure organizational awareness of your submission.

HOW TO SUBMIT CONFERENCE PROPOSALS

Proposals for NSF Convergence Accelerator conferences (which may take the form of symposia or workshops) may be submitted as unsolicited proposals as described in Chapter II.E.7 of the *NSF Proposal & Award Policies and Procedures Guide* (PAPPG). Conference proposal titles should begin with "NSF Convergence Accelerator:" to help ensure identification and internal routing of proposals. Conference proposals may be submitted at

any time, but only those that are received by May 29, 2020, and having a budget under \$100,000 will be considered for support with FY 2020 funds. In light of current travel restrictions and physical distancing requirements, proposers are encouraged to propose options for holding virtual conferences in order to meet the October 16, 2020, deadline for consideration in the 2021 Convergence Accelerator solicitation.

WHAT NSF WILL DO WITH THIS INFORMATION

All concept information submitted for future NSF Convergence Accelerator tracks will be protected to the extent allowed by law, including the Privacy Act of 1974. The information submitted will help NSF's internal planning of future NSF Convergence Accelerator activities. Summary information may be presented publicly in aggregate form.

Sincerely,

Douglas Maughan
Office Head
NSF Convergence Accelerator