

**Charge to the Subcommittee on International Network-to-Network Collaboration
Advisory Committee for International Science and Engineering
National Science Foundation**

Overview

The National Science Foundation (NSF) hereby initiates the formation and operation of a Subcommittee on International Network-to-Network Collaboration (Subcommittee) of the NSF Advisory Committee for International Science and Engineering (AC-ISE). The purpose of the Subcommittee is to provide advice to the AC-ISE on factors NSF should consider in determining the need for a future program or program emphasis on international network-to-network collaboration.

Context

In September 2017, the NSF Office of International Science and Engineering (OISE) released a Dear Colleague Letter (DCL) inviting individuals or groups of individuals from the U.S. research community to submit White Papers on topics in science, engineering, and/or STEM education ripe for international network-to-network collaboration. Increasing investment in science, engineering, and STEM education by other nations has created new communities of research excellence. Through the DCL, OISE sought input from the U.S. research community to identify respective networks in the U.S. and abroad that could be better connected to leverage expertise, data, facilities, and/or other resources to stimulate critical research advances through networks of networks.

Working with an Internal Study Group of NSF experts, OISE analyzed the responsive White Papers received and determined a slate of exemplar White Papers. These exemplars represent a cross-section of community input deemed the most relevant to informing OISE in its consideration of program planning related to international network-to-network collaboration.

Subcommittee Charge

An important component of the application of the White Papers to OISE deliberations is discussion among community experts of the community input that holds the greatest potential to accelerate discovery, and thereby inform OISE's program planning. The Subcommittee will read the exemplar White Papers and consider them as reference materials providing context to and informing Subcommittee recommendations. The Subcommittee members will couple the input provided in the exemplars with their own knowledge and experiences in network-to-network collaboration, international and interdisciplinary science, and the science of team science to provide input to OISE.

The Subcommittee will submit a report to the AC-ISE that addresses the following questions and other critical points that the Subcommittee deems relevant to inform OISE program planning related to international network-to-network collaboration:

- What factors should OISE consider in determining research areas of focus?
- What factors are most significant to the success of a network of networks in advancing research discoveries?
- What factors related to network management, coordination, and team engagement should OISE consider in promoting innovative approaches and/or overcoming challenges?
- In planning for a potential future program or program emphasis involving international network-to-network collaborations:
 - What factors should OISE consider regarding the sustainability of such collaborations?

- What additional factors should NSF consider, e.g., focus areas, stage of network readiness or maturity, other aspects?

To carry out this charge, the Subcommittee may meet with NSF leadership and staff, as appropriate, and representatives from other agencies with programs or activities that support research networks to benefit from experience at those agencies. The Subcommittee may collaborate with the AC-ISE if the Subcommittee deems it necessary to do so.

Subcommittee Operation

OISE will organize and convene one in-person Subcommittee meeting at NSF, comprised of the Subcommittee members, NSF staff cognizant of this effort and issues concerning the Subcommittee, and any additional individuals considered necessary to carry out this charge. Participants will be invited to submit written materials to the Subcommittee for reference in the report preparation. NSF will provide logistical and travel support for invited non-local participants. Additional in-person or virtual meetings will be considered depending on need and budgetary resources.

The Subcommittee Chair will submit the final written report to the AC-ISE by March 9, 2018, and provide a verbal presentation on the report's key recommendations at a virtual or in-person AC-ISE meeting. The AC-ISE will discuss and deliberate on the report at the meeting, and accept it and make it publicly available. The AC-ISE may also provide feedback on the report to OISE by way of a cover letter.

Subcommittee Membership

The AC-ISE's Designated Federal Official, working with OISE staff, shall initiate a list of 6-8 individuals for Subcommittee membership, including at least one AC-ISE member who shall serve as the liaison to the AC-ISE. OISE shall approve final membership, in consultation with the AC-ISE Chair, as appropriate.

Additional Background or Materials

- Dear Colleague Letter requesting community input.
- Overview of full set of responsive white papers received in response to DCL.
- Overview of Internal Study Group charge resulting in exemplar white papers
- Exemplar white papers.
- Reference materials on networks-of-networks, the science of team science, and international science collaboration.

Termination

The Subcommittee will terminate upon satisfactory completion of the activities set forth in this charge.