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NSF 25-025

Frequently Asked Questions (FAQs) for the for the Quantum Leap Challenge Institutes Program (NSF 24-599)

The following set of questions and answers refer to the Quantum Leap Challenge Institutes (QLCI) Program Solicitation (NSF 24-599). They are not intended to modify the Program Solicitation. If there are any inconsistencies between the QLCI Program Solicitation and these FAQs, the information in the Program Solicitation prevails.

1. Does NSF intend to fund any new Centers during this competition?

2. What are the main differences between the new QLCI Solicitation (NSF 24-599) and the older one (NSF 19-559)?

3. If our Preliminary Proposal team is Not Invited to submit a Full Proposal, or if our Full Proposal is Declined, may we submit our concept again in future competitions held under the QLCI Solicitation NSF 24-599?

4. How is the QLCI program different from other NSF programs supporting large-scale QISE research projects?

5. Is my plan competitive enough?

6. How does the QLCI program define "cross-disciplinary" and how will proposals be evaluated for cross-disciplinarity?

7. What does the QLCI program mean by "benefit from an Institute/Center approach"?

8. Are senior/key personnel who participated in an award made under the previous QLCI Solicitation NSF 19-559 restricted from participating in an NSF 24-599 proposal?

9. Who is eligible to submit a proposal under NSF 24-599?

10. Which technical topical areas and what technology readiness levels should QLCI projects submitted focus on?

11. If a Sponsored Projects Office (SPO) covers multiple institutions or campuses, does the submission limit of two apply at the SPO or institution/campus level?

12. What is the purpose of a Letter of Intent? Should I expect a response to my Letter of Intent?

13. Is the number of senior/key project personnel limited for a QLCI project? Is the number of participating organizations limited?

14. Should multiple Letters of Intent be submitted for a collaborative project?

15. How are the potential industrial and national laboratory collaborators identified in the Letter of Intent? Are they listed as senior/key personnel, Co-PIs, or simply as collaborators?

16. Is it permissible for the project team in a proposal to have a different composition (changed project roles or changed personnel) from the team specified in the Letter of Intent?

17. Who decides which projects at an institution should submit Letters of Intent or Preliminary Proposals?

18. What occurs if a single institution submits more than two Preliminary Proposals?

19. Can an institution submit a QLCI proposal while a similar proposal is under review in another program or agency?

20. Who is responsible for the submission of a collaborative project involving multiple institutions or organizations?

21. The Strategic Plan required by QLCI Solicitation 24-599 includes "Plans for long term sustainability after expiration of NSF funding under the QLCI program." What does NSF mean by sustainability? Is continuing financial commitment from the lead institution required?

22. One of the Supplementary Documents required by QLCI Solicitation 24-599 is an Institute Ramp-Up Plan: "Proposals for a new institute should include a description of implementation activities necessary to establish the institute and to have it fully operational within six months of the start of the project." What does "fully operational within six months" from the start date?

23. Is there a limit on the number of PI/co-PIs in a proposal?

24. Is there a limit on the number of sub-awards on a preliminary proposal or full proposal?

25. Is there a preferred project team size and budget, with respect to number of senior/key personnel and funding per senior/key personnel?

26. Can an individual be listed on the Cover Sheet (PI, co-PI) of a Full Proposal and participate on another Full Proposal?

27. Is it permissible for the project team in a Full Proposal to have a different composition

(changed project roles or changed personnel) from the team specified in the Preliminary Proposal?

28. Can Challenge Institute award funds be used to develop new infrastructure? If so, are there limitations on the type of infrastructure or the budget for this?

29. Can companies receive NSF funds?

30. How can companies benefit from becoming part of a QLCI proposal?

31. Is a Federally Funded Research and Development Center (FFRDC) eligible to participate as a sub-awardee to a university?

32. Do all participating investigators need to be based in the U.S.?

33. Is it encouraged or discouraged to have co-PIs from institutions outside the U.S.?

34. Are there limitations on how expenditures can be allocated for non-U.S. universities?

35. If a U.S.-based institution has an international campus, is the international campus allowed to receive QLCI funds?

36. How will research security be considered in the QLCI proposal review process?

37. How should a QLCI proposal or project handle proprietary information?

38. Considering NSM-10, "National Security Memorandum on Promoting United States Leadership in Quantum Computing While Mitigating Risks to Vulnerable Cryptographic Systems," and recent export controls on quantum technology, can a QLCI project focus on challenges of scaling up quantum computers, or advancing the art of quantum error correction?

GENERAL QUESTIONS

1. **Does NSF intend to fund any new Centers during this competition?**

   Yes, this is an open competition.

   As stated in the QLCI Solicitation NSF 24-599, "The QLCI program can support awards to continue existing Quantum Leap Challenge Institutes or to establish and operate new Quantum Leap Challenge Institutes."

   Solicitation NSF 24-599 also states that, subject to the availability of funds, the estimated number of QLCI awards for the upcoming competition is 5 to 10.

2. **What are the main differences between the new QLCI Solicitation (NSF 24-599) and the older one (NSF 19-559)?**

   In QLCI Solicitation NSF 24-599, the required major activities are streamlined to emphasize (1) research, (2) education and workforce development, and (3) coordination.

   The Solicitation-specific review criteria (in NSF 24-599) are similarly streamlined to emphasize the vision; research; education and workforce development; coordination; the team; and the strategic plan.

3. **If our Preliminary Proposal team is Not Invited to submit a Full Proposal, or if our Full Proposal is Declined, may we submit our concept again in future competitions held under the QLCI Solicitation NSF 24-599?**

   There will only be a single competition under the QLCI Solicitation NSF 24-599. You may submit proposals to other NSF programs or solicitations, if eligible.

4. **How is the QLCI program different from other NSF programs supporting large-scale QISE research projects?**

   Quantum Leap Challenge Institutes are expected to:

   - Enable large, ambitious research efforts to overcome specific scientific/technological challenges at the frontiers of QISE, where expertise from various disciplines, institutions, and industry can be leveraged as needed; and
   - Foster cross-disciplinary approaches for education and workforce development; and
   - Galvanize the community and promote a sustainable innovation ecosystem through coordination, by facilitating partnerships, and enhancing infrastructure in ways that provide value-added from the institute approach.

5. **Is my plan competitive enough?**

   Proposals will be reviewed according to the information in Section VI.A. "Merit Review Principles and Criteria" of the QLCI Solicitation NSF 24-599.

   The NSF program directors are not able to provide feedback on project ideas prior to submission of proposals.

6. **How does the QLCI program define "cross-disciplinary" and how will proposals be evaluated for cross-disciplinarity?**

   The QLCI Solicitation NSF 24-599 states that, "Successful institutes will coordinate a variety of approaches to specific scientific, technological, and educational goals in these

fields, including multiple institutions and building upon multiple disciplines, as motivated by the science and engineering challenges." It also states that, "Quantum Leap Challenge Institutes will promote a sustainable innovation ecosystem where expertise from various disciplines, research institutions, and industry can be leveraged, as needed, to overcome scientific, technological, and workforce challenges in quantum information science and engineering. The multidisciplinary scope of quantum information science and engineering, in turn, holds promise for the development of radically new and more powerful scientific and technological tools that will open new science and engineering vistas."

The degree to which collaboration between researchers from multiple disciplines enhances the proposal will be evaluated as part of the intellectual merit and broader impacts review criteria, and the solicitation specific review criteria.

7. **What does the QLCI program mean by "benefit from an Institute/Center approach"?**

   As stated in the QLCI Solicitation NSF 24-599, Challenge Institutes are expected to, "demonstrate value added from coordination both within the Institute and with the larger QIST community. As part of their research, education, and coordination activities, Challenge Institutes are expected to enable new and existing partnerships, improve access to infrastructure, facilitate international collaborations, and provide opportunities for technology translation."

   The solicitation further states that, "Coordination both within each Institute and with new partners and the broader ecosystem should also serve to galvanize the community and catalyze the research and education activities in ways that go beyond what smaller projects could accomplish in isolation."

GENERAL ELIGIBILITY

8. **Are senior/key personnel who participated in an award made under the previous QLCI Solicitation NSF 19-559 restricted from participating in an NSF 24-599 proposal?**

   No. These are separate competitions. It is allowable to re-compete for a new QLCI award.

9. **Who is eligible to submit a proposal under NSF 24-599?**

   As stated in QLCI Solicitation NSF 24-599, "Proposals may only be submitted by: *Institutions of Higher Education (IHEs)* ... having a campus located in the U.S."

10. **Which technical topical areas and what technology readiness levels should QLCI**

projects submitted focus on?

The QLCI Solicitation NSF 24-599 states, "Institutes are expected to catalyze breakthroughs on important problems underpinning QIST, for example in the focus areas of quantum computation, quantum communication, quantum simulation and/or quantum sensing. Successful institutes will coordinate a variety of approaches to specific scientific, technological, and educational goals in these fields, including multiple institutions and building upon multiple disciplines, as motivated by the science and engineering challenges."

The QLCI program welcomes projects on a wide range of topics related to quantum information science and engineering. This could include work on advancing fundamental science and engineering underpinning QIST or developing and pioneering new applications for quantum technologies across numerous fields.

11. **If a Sponsored Projects Office (SPO) covers multiple institutions or campuses, does the submission limit of two apply at the SPO or institution/campus level?**

    NSF policy is that Organizations must have their own UEI, be registered in Research.gov, and have separate Sponsored Projects Offices that have the ability to submit proposals directly to NSF in order to be considered independent for purposes of funding opportunities that have limited submissions.

QLCI LETTERS OF INTENT

12. **What is the purpose of a Letter of Intent? Should I expect a response to my Letter of Intent?**

    Letters of Intent will not be subject to review and are used only to help NSF staff anticipate the size and range of the competition, enabling earlier selection and better management of reviewers and to help avoid potential conflicts of interest in the review process. NSF will not provide feedback to Letters of Intent, and proposers should not expect a response.

13. **Is the number of senior/key project personnel limited for a QLCI project? Is the number of participating organizations limited?**

    There is no limit on the number of senior/key project personnel or participating organizations in a Quantum Leap Challenge Institute proposal (or Letter of Intent).

    The NSF Letter of Intent system has a software limitation on number of entries for Other Senior Project Personnel and Participating Organizations , but this is not intended to limit the number of sub-awards or senior/key personnel or participating organizations in a QLCI project.

For letters of intent, please simply ensure that all participating organizations (sub-awardee or not), senior/key personnel, and senior collaborators (unfunded) are listed somewhere in the Letter of Intent. If there is not enough room among the available slots for Other Senior Project Personnel and Participating Organizations, please list the additional senior personnel, collaborators, and organizations in the text boxes of the Letter of Intent.

14. **Should multiple Letters of Intent be submitted for a collaborative project?**

No. A single Letter of Intent should be submitted for an entire project; submission of multiple Letters of Intent for the same project is not permitted.

Looking ahead to the proposal stage, as described in the QLCI Solicitation NSF 24-599, multi-institutional Challenge Institute proposals must be submitted as a single proposal by the lead organization with sub-awards to the non-lead institutions. Linked collaborative proposals are not permitted.

15. **How are the potential industrial and national laboratory collaborators identified in the Letter of Intent? Are they listed as senior/key personnel, Co-PIs, or simply as collaborators?**

Letters of Intent will not be subject to review and are used only to help NSF staff anticipate potential conflicts of interest from potential reviewers for the (subsequent) proposal merit review process. For Letters of Intent, please simply ensure that all senior/key project personnel and senior collaborators are listed somewhere in the Letter of Intent. If there is not enough room among the available slots for Other Senior Project Personnel and Participating Organizations, please list the additional senior/key personnel, senior collaborators, and organizations in the text boxes of the Letter of Intent.

16. **Is it permissible for the project team in a proposal to have a different composition (changed project roles or changed personnel) from the team specified in the Letter of Intent?**

Yes, it is permissible for the roles of personnel in a proposal to be different from those in the Letter of Intent. It is also permissible to add or remove personnel when preparing the proposal. However, such modifications should be kept to a minimum.

17. **Who decides which projects at an institution should submit Letters of Intent or Preliminary Proposals?**

Institutions decide which Challenge Institute Proposals they will submit.

For the QLCI Solicitation NSF 24-599, limitations on the number of proposals per

organization do not apply to the Letters of Intent. However, lead organizations are limited to submitting no more than two (2) Challenge Institute Preliminary Proposals. In addition, Lead organizations will not receive more than two (2) invitations to submit Challenge Institute Full Proposals.

QLCI PROPOSAL SUBMISSION

18. **What occurs if a single institution submits more than two Preliminary Proposals?**

    If an institution submits more than two Preliminary Proposals, the NSF QLCI program will review only the first two eligible Preliminary Proposals submitted by the institution.

19. **Can an institution submit a QLCI proposal while a similar proposal is under review in another program or agency?**

    An institution may submit a Preliminary Proposal to the QLCI program even while a proposal with some similarity is under review by another NSF program, such as the Physics Frontiers Centers program, or Engineering Research Centers program, or programs at other U.S. agencies. However, awards will not be made to fund research that has scientific and budgetary duplication with other funded projects.

20. **Who is responsible for the submission of a collaborative project involving multiple institutions or organizations?**

    The proposal should be submitted by the one (Lead) institution, with funding for the participating organizations included in sub-awards Proposals should not be submitted as linked collaborative proposals.

21. **The Strategic Plan required by QLCI Solicitation 24-599 includes "Plans for long term sustainability after expiration of NSF funding under the QLCI program." What does NSF mean by sustainability? Is continuing financial commitment from the lead institution required?**

    NSF expects that the team within a QLCI will continue to make impactful advances in the field and in society beyond the Institute's grant's lifetime. As stated in the QLCI Solicitation NSF 24-599, the strategic plan portion of invited Full Proposals should address, "To what extent does the plan provide a convincing road map for the operation of the Challenge Institute in pursuit of its vision? To what extent does the plan describe roles and responsibilities for Senior/Key personnel, strategies for course correction, and options for sustainability beyond the QLCI funding?"

    The solicitation also states, "Inclusion of voluntary committed cost sharing is prohibited."

22. **One of the Supplementary Documents required by QLCI Solicitation 24-599 is an**

Institute Ramp-Up Plan: "Proposals for a new institute should include a description of implementation activities necessary to establish the institute and to have it fully operational within six months of the start of the project." What does "fully operational within six months" from the start date?

NSF expects that within six months from the start date of the award, a new QLCI will refine its key members roles and responsibilities and revisit its research plan to re-align with the current state-of-the art, which may have changed since the proposal was submitted.

As stated in the QLCI Solicitation NSF 24-599, "The ramp-up plan should include: A list of concrete tasks, personnel responsible, milestones and timeline for the ramp-up phase; Plans for creation of an Institute website; Plans for staffing and recruitment of personnel, including students, postdoctoral researchers, and scientists; Identification of key activities for establishing partnerships and associated agreements; Identification of any significant elements that may become fully operational after the ramp-up phase, including justification and estimated time-frame."

23. **Is there a limit on the number of PI/co-PIs in a proposal?**

    There is no limit on the number of senior/key personnel in a QLCI project. However, the proposal Cover Sheet allows a single PI and at most 4 co-PIs. There is no limit on the number of Other Senior/Key Personnel who may be included in the proposal.

24. **Is there a limit on the number of sub-awards on a preliminary proposal or full proposal?**

    No, the QLCI program has no limit on the number of sub-awards that are allowed in a proposal.

25. **Is there a preferred project team size and budget, with respect to number of senior/key personnel and funding per senior/key personnel?**

    Each project is unique, and it is up to the proposers to identify the resources sought to complete the project and to justify their request. The QLCI program does not prescribe a specific number of personnel or budget per senior/key personnel. Additionally, the QLCI Solicitation NSF 24-599 states, "A variety of Challenge Institute awards with a range of budget sizes and scopes will be considered. Each proposed Challenge Institute budget is expected to be commensurate with the associated QIST research, education, and coordination activities."

26. **Can an individual be listed on the Cover Sheet (PI, co-PI) of a Full Proposal and participate on another Full Proposal?**

The QLCI Solicitation NSF 24-599 states, "The lead PI and up to four additional co-PIs who are named on the Cover Sheet of a Challenge Institute Full Proposal must only participate in one Challenge Institute Full Proposal. Senior/Key Personnel who are not named on the cover sheet of a Challenge Institute Full Proposal may participate in no more than two (2) Challenge Institute Full Proposals."

27. **Is it permissible for the project team in a Full Proposal to have a different composition (changed project roles or changed personnel) from the team specified in the Preliminary Proposal?**

The lead PI and submitting institution may not change between the Preliminary Proposal and Full Proposal stages. It is permissible for the roles of other personnel in a Full Proposal to be different from those in the Preliminary Proposal. It is also permissible to add or remove personnel (excluding the lead PI) when preparing the Full Proposal. However, such modifications should be kept to a minimum.

28. **Can Challenge Institute award funds be used to develop new infrastructure? If so, are there limitations on the type of infrastructure or the budget for this?**

The QLCI solicitation does not constrain the categories of budget request. However, Challenge Institutes are expected to integrate where possible with other research, infrastructure, and workforce development activities. Therefore, Challenge Institute teams are expected to coordinate with their constituent organizations and partners to identify existing infrastructure, and to develop a concrete and workable plan for leveraging existing and new infrastructure resources.

If major new infrastructure investments are needed to address the proposed research challenges, other sources of funding such as the NSF Major Research Instrumentation program and the NSF Mid-scale Research Infrastructure-1, and Mid-scale Research Infrastructure-2 programs might be more appropriate. Information about NSF-supported major and mid-scale facilities is available at the NSF Research Infrastructure Office website.

INDUSTRY PARTICIPATION

29. **Can companies receive NSF funds?**

The Solicitation indicates that only IHEs can receive awards directly from NSF under this Solicitation. However, this does not exclude the recipient organizations from entering into partnerships or working with other entities.

The top priority of the QLCI program is to support the U.S. academic community in advancing the frontiers of quantum information science and engineering. The program can provide support for collaborations of U.S. university-based faculty, postdoctoral

researchers, and graduate students as appropriate with non-academic partners, including travel expenses, consultant fees, facility charges, usage fees, etc. Projects with an interest in such activities should include these expenses as part of proposals to the QLCI program.

Section II.B.3 of the QLCI Solicitation NSF 24-599 describes the general nature of partnerships between Quantum Leap Challenge Institutes and industrial partners. All partnerships with QLCI projects should be aligned with the research goals and objectives of the Institute.

Support for participating non-IHE institutions may be arranged through contracts or other mechanisms managed by the submitting, lead institution. It is the responsibility of the Sponsored Projects Office of the submitting institution to determine the allowability of expenses, subject to the NSF terms and conditions that apply to award recipients.

30. **How can companies benefit from becoming part of a QLCI proposal?**

Potential benefits to industrial partners from participating in a QLCI project include:

   a. Opportunity to collaborate (on a pre-competitive basis) with QLCIs to further the objectives of both the QLCIs and the industrial partners
   b. Opportunity to provide technical input to the research directions of QLCIs
   c. Opportunity to provide input regarding use-cases, thereby helping technology transition for commercial and societal outcomes
   d. Access to QLCI intellectual property under agreed-upon conditions
   e. Interactions with other partners, which may bring multiple benefits, for example:
      i. Networking and collaboration – e.g., to develop solutions for targeted use-cases and insight into the state of play in quantum R&D to enable better planning for the adoption of quantum technologies
      ii. Access to the next-generation quantum information science and engineering workforce

FFRDC PARTICIPATION

31. **Is a Federally Funded Research and Development Center (FFRDC) eligible to participate as a sub-awardee to a university?**

The Solicitation indicates that only IHEs can receive awards directly from NSF under this Solicitation. However, this does not exclude the recipient organizations from entering into partnerships or working with other entities.

The top priority of the QLCI program is to support the US academic community in advancing the frontiers of quantum information science and engineering. The program

will provide support for collaborations of U.S. university-based faculty, postdoctoral researchers, and graduate students as appropriate with non-academic partners, including travel expenses, consultant fees, facility charges, usage fees, etc. Projects with an interest in such activities should include these expenses as part of proposals to the QLCI program.

NSF does not normally support research or education activities by scientists, engineers, or educators employed by Federal agencies or FFRDCs. Under exceptional circumstances, research or education projects at FFRDCs that can make unique contributions to the needs of a QLCI project and are not available elsewhere may be supported by the NSF.

Support for participating non-IHE institutions may be arranged through contracts or other mechanisms managed by the submitting, lead institution. It is the responsibility of the Sponsored Projects Office of the submitting institution to determine the allowability of expenses, subject to the NSF terms and conditions that apply to award recipients.

INTERNATIONAL PARTICIPATION

32. **Do all participating investigators need to be based in the U.S.?**

    No. It is anticipated that the Challenge Institute teams will develop synergistic partnerships with industry, national laboratories, and international partners as appropriate. However, NSF funding through awards and sub-awards can only be allocated for eligible institutions, i.e., U.S. institutions of higher education. QLCI Solicitation NSF 24-599 states, "If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of sub-awards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus."

33. **Is it encouraged or discouraged to have co-PIs from institutions outside the U.S.?**

    Encouraged. While the top priority of the QLCI program is to support the US academic community in advancing the frontiers of QISE, the QLCI program does encourage collaborative arrangements and development of shared infrastructure with international partners, as appropriate for the project. The QLCI program can provide support for collaborations of U.S.-university faculty, postdoctoral researchers, and graduate students as appropriate with non-U.S. partners, including travel expenses, consultant fees, etc. Projects with an interest in such activities should include these expenses as part of proposals to the QLCI program.

    The QLCI program will not support the research and the collaborators at non-US

institutions; the non-U.S. counterparts would be unfunded collaborators. Consideration of support for foreign organizations, e.g., through sub-awards or consultant arrangements, can be given only if the involvement is essential to the project, not available elsewhere; in such cases, the proposer must justify the benefit to U.S. research and education. Further guidance on support of foreign organizations can be found in the NSF *Proposal and Award Policies and Procedures Guide* (PAPPG).

34. **Are there limitations on how expenditures can be allocated for non-U.S. universities?**

    Support for participating non-U.S. institutions may be arranged through contracts or other mechanisms managed by the submitting, lead institution. It is the responsibility of the Sponsored Projects Office (SPO) of the submitting institution to determine the allowability of expenses, subject to the NSF terms and conditions that apply to award recipients.

35. **If a U.S.-based institution has an international campus, is the international campus allowed to receive QLCI funds?**

    As stated in the QLCI Solicitation NSF 24-599, "If the proposal includes funding to be provided to an international branch campus of a U.S. institution of higher education (including through use of sub-awards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus and justify why the project activities cannot be performed at the U.S. campus."

QUESTIONS ON SECURITY

36. **How will research security be considered in the QLCI proposal review process?**

    As stated in the QLCI Solicitation NSF 24-599, "projects…are subject to research security policies as outlined by the NSF Office of the Chief of Research Security Strategy and Policy (OCRSSP) regarding the Trusted Research Using Safeguards and Transparency (TRUST) framework. The evaluation under the TRUST framework will be separate from the merit review process. If necessary, NSF may contact the proposer for additional information to inform the risk evaluation and identify mitigation measures to address potential risks."

37. **How should a QLCI proposal or project handle proprietary information?**

    Per the QLCI Solicitation NSF 24-599:

    Data Management and Sharing Plan:
    All proposals must include a Data Management and Sharing Plan that describes how the project will provide open and rapid access to quality-controlled and fully documented

data and information during and after the project. This plan must be consistent with NSF's policy on dissemination and sharing of research results (https://www.nsf.gov/bfa/dias/policy/dmp.jsp) and also NSF's PAPPG. In addition to the PAPPG requirements regarding the management and sharing of data products resulting from QLCI activities, and in alignment with the National Science and Technology Council report on "Guidance for Implementing National Security Presidential Memorandum 33 (NSPM-33)" and the National Security Memorandum 10 (NSM-10), QLCI proposals should also include in the Data Management and Sharing Plan a description of how any proprietary information or intellectual property will be managed. This description may include a discussion of how data will be shared with project partners and affiliates, how access to the data will be managed, and how the sensitivity of various data sets will be assessed. Research security concerns are relevant for QLCI projects because quantum technologies have the potential to impact U.S. economic and national security interests."

38. **Considering NSM-10, "National Security Memorandum on Promoting United States Leadership in Quantum Computing While Mitigating Risks to Vulnerable Cryptographic Systems," and recent export controls on quantum technology, can a QLCI project focus on challenges of scaling up quantum computers, or advancing the art of quantum error correction?**

NSF will continue funding cutting-edge science and engineering in a wide range of fields including quantum information science. It is the NSF mission to advance the progress of science.

NSF supports cutting-edge science and engineering for the long haul. NSF also coordinates with other government agencies in the National Quantum Initiative to ensure a whole-of-government approach to research leadership and understanding of QIS technologies. In this context, we are aware of an increasing interest in the national and economic security opportunities associated with quantum tech. We also realize that there are major science and engineering challenges for which NSF-funded academic research approaches are vital for discovery and innovation. While NSPM-33 and NSM-10 speak to some research security issues, for which we coordinate with the NSF Office of Research Security Strategy and Policy, we also look to the National Strategic Overview for QIS on https://www.quantum.gov/ as a strong endorsement of our aim to promote a culture of discovery and champion a science-first approach to QIS policy.