NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 20-031

Frequently Asked Questions (FAQs) for Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Phase I Programs

PROGRAM BASICS

1. What are SBIR and STTR? What are the differences and which is more appropriate for my project?
2. What are the funding priorities for NSF SBIR/STTR?
3. What is the best way to gauge whether a project is innovative and sufficiently technically challenging to be a good fit?
4. How does NSF select which projects to support? Who manages the review and selection process?
5. What activities and expenses are appropriate to be funded in a Phase I project? What activities and expenses are not permitted?
6. Will NSF fund work on a product that has already been developed? Will the program fund small businesses to pay for patent costs, sales & marketing, business development, or other related costs?
7. Must Phase I proposers submit preliminary data as part of the proposal?
8. Are new start-up companies appropriate candidates for the program?
9. Are first-time entrepreneurs appropriate candidates to participate in the program?
10. What is the expected outcome (deliverable) of a Phase I project?
11. Is there a "fast-track" option to apply directly for Phase II funding? Is there an option to apply for Phase I and Phase II simultaneously?
12. What other benefits does the program provide?
13. Where do I go to learn more?

14. Are examples available of recently-funded NSF Phase I proposals and/or awards?

ELIGIBILITY

15. The NSF SBIR/STTR Phase I program solicitation requires that I must receive an invitation to submit a full proposal. How do I get invited to submit?
16. What happens if I submit a Project Pitch and am not invited to submit a full proposal?
17. Must the proposing legal entity be formed at the time of the Project Pitch submission? At the time of the full proposal submission?
18. Does NSF SBIR/STTR support non-U.S. companies or work that is performed abroad?
19. Who is the Principal Investigator (PI) on an NSF SBIR/STTR Phase I grant? What are the responsibilities of the PI? Does the PI need to have a PhD? Can the PI be a graduate student?
20. May a faculty member at a college or university serve as the Principal Investigator on an NSF SBIR/STTR project?

THE PROJECT PITCH

21. The NSF SBIR/STTR Phase I program solicitation requires that I submit a Project Pitch prior to starting a full proposal. What is a Project Pitch and why is it required?
22. Who should submit a Project Pitch?
23. How do I submit my Project Pitch?
24. When should I submit my Project Pitch?
25. How does NSF determine who is the cognizant Program Director?
26. What happens after I submit my Project Pitch? How does NSF use this information to decide whether to invite a small business to submit a full proposal?
27. Is there a limit to how many Project Pitches my small business can submit?

PREPARING A FULL PROPOSAL

28. I have been invited to submit a proposal. What first steps I should take?
29. I noticed that the solicitation has submission "windows". How does this compare to a specific deadline? Is there a deadline?
30. May a small business submit multiple Phase I proposals during the same submission window?
31. Can NSF SBIR/STTR fund work on products whose target customers will be in the

defense sector, or whose customers or end users are government entities?

32. Both NSF and NIH fund biomedical/health projects through the SBIR/STTR program. How are the programs different? Can a small business apply to both programs?
33. May a small business submit identical or overlapping proposals to NSF SBIR/STTR and another federal agency?
34. If a proposing small business elects to partner with a university or research institute as part of an STTR Phase I proposal, must the partner also be part of that Phase II proposal?
35. What is the NSF Proposal & Award Policies & Procedures Guide (PAPPG)? Some guidelines in the NSF PAPPG are not spelled out in the NSF SBIR/STTR Phase I solicitation or conflict with information in the solicitation. Which policy document should I follow?
36. What are the rules or restrictions regarding contact with NSF SBIR/STTR Program Directors? Must a small business form a working relationship with a Program Director before submitting a proposal?
37. Where do I prepare and submit a full proposal?

FULL PROPOSAL PREPARATION AND SUBMISSION

38. Is help available for navigating FastLane or troubleshooting proposal submission problems?
39. What if there are changes or updates after a proposal is submitted? Does NSF SBIR/STTR review proposal materials as soon as they are submitted?
40. What rules must be followed to ensure that a proposal passes the initial administrative review for completeness and continues on to the peer review process?
41. If the System for Award Management (SAM) indicates that it will take several weeks for a proposing business's registration to be complete, what should the business do?
42. How does a proposer know that he or she has successfully submitted an NSF SBIR/STTR Phase I proposal?
43. How can proposers check on the status of a Phase I SBIR/STTR proposal after it has been submitted?

BUDGET PREPARATION

44. What is a reasonable salary for the PI and other personnel on the project?
45. Can I list a co-PI on an NSF SBIR/STTR proposal?

46. How should indirect costs be structured for a Phase I SBIR/STTR project if the proposing small business does not have an established indirect cost rate?
47. Can a person be listed on the budget as a subawardee (or consultant) and also on the main budget?
48. May I budget a subaward to a Federal lab or Federally-Funded Research and Development Center (FFRDC)?
49. What types of costs can be requested on a subaward budget?
50. May proposers submit a proposal with more than one subaward?
51. How does NSF define a project participant as a consultant (line G.3 of the budget)?
52. What are the budget requirements for consultants?
53. If other R&D will be performed by the proposing small business, in parallel to the NSF SBIR/STTR-funded research, should those efforts be described in the proposal?
54. How much of the NSF-funded research and development must be performed by the awardee? (In Phase I and Phase II)?

PROPOSAL REVIEW

55. What criteria are used to evaluate NSF SBIR/STTR proposals?
56. Who evaluates NSF SBIR/STTR full proposals? What does the review process entail?
57. How does NSF manage confidentiality and conflicts of interest during the peer review process? What can proposers do to ensure that their proprietary information is kept safe?
58. How important are letters of support? What does a strong letter of support contain?
59. Some NSF SBIR/STTR companies build on basic research previously funded by the NSF. Are companies proposing projects that are NOT related to NSF or any Federal funding at a disadvantage?
60. When does NSF release proposal decisions? What feedback is provided?
61. What happens if the company's R&D goals, business model, team, or vision change while the proposal is under review?
62. How does the NSF weigh the three major SBIR/STTR review criteria - Intellectual Merit, Broader Impact, and Commercial Impact - during the review process?

PHASE I AWARD

63. What are my obligations to the government in terms of the intellectual property

developed from NSF SBIR/STTR funding?

64. Does the government have the right to use my invention developed under my Federal grant?
65. What are the terms and conditions associated with a Phase I SBIR/STTR award?
66. What if there are changes to the business model or R&D strategy of a small business during the Phase I NSF SBIR/STTR project?
67. How and when does NSF release Phase I funding to my small business?
68. What other support do Phase I awardees receive?

BEYOND PHASE I

69. Does NSF have a Phase III SBIR/STTR program?
70. When and how do I apply for a Phase II award?
71. What are some significant outcomes or success stories that can be traced to NSF SBIR/STTR funding?

PROGRAM BASICS

1. **What are SBIR and STTR? What are the differences and which is more appropriate for my project?**

   The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are both Congressionally-mandated research and development (R&D) funding programs intended to support small businesses focused on bringing innovative technology to the marketplace. At NSF, both programs have identical philosophies, review criteria, processes, and award dollar amounts, and the two programs have similar success rates. The difference between SBIR and STTR programs at NSF is that small businesses which apply to the STTR program are required to partner with a not-for-profit research institution in their proposal. Such a partnership is optional for SBIR proposals.

   We recommend that potential proposers wait until invited to submit a full proposal to choose between SBIR and STTR. The budget requirements (see Question 55) of the programs can be used to determine which is more appropriate for a given project.

2. **What are the funding priorities for NSF SBIR/STTR?**

The NSF SBIR/STTR program seeks to support research and development of deep technologies, based on discoveries in fundamental science and engineering, for profound societal impacts. The portfolio is divided into broad technology areas listed here: https://seedfund.nsf.gov/portfolio/. However, this list is NOT exhaustive. A small business has the freedom to pursue any technology and market area (with the exception of technology advances requiring clinical trials). The program's proposal review does NOT take into account how well a proposal fits into a topic. Rather, Phase I proposals are evaluated based on the merit review criteria listed here: https://seedfund.nsf.gov/resources/review/peer-review/. The program seeks to support innovative, high-risk and high-impact R&D projects with a strong case made for commercialization.

3. **What is the best way to gauge whether a project is innovative and sufficiently technically challenging to be a good fit?**

   NSF SBIR/STTR funds R&D of deep technologies, which are based on discoveries in fundamental science and engineering for profound societal impact. There must be technical risk to be addressed. It is a good sign if the R&D has never been attempted and/or achieved, and if it is focused on an attempt to overcome significant technical hurdles. The nature of innovation varies with the field. If this is a significant question that will determine if you will submit a proposal, the best approach is to contact an NSF SBIR/STTR Program Director and ask for specific guidance if the project is a good match for the program. The Project Pitch submission (see Question 23) also helps the Program Director assess your project's fit with the program. You are free to submit a Project Pitch without reaching out to a Program Director.

4. **How does NSF select which projects to support? Who manages the review and selection process?**

   The program has two stages of review. The first stage is the submission and evaluation of a Project Pitch (see Question 21). If the Project Pitch results in an invitation, submitting a full proposal is the next step.

   All full proposals are carefully reviewed by a minimum of three experts in relevant technical and/or market areas. These reviewers are selected by NSF Program Directors, who in turn lead and oversee the review process. Each Program Director has technical and commercial expertise relevant to his/her portfolio area.

   All NSF SBIR/STTR proposals are evaluated through the use of three merit review criteria: intellectual merit, broader impacts, and commercial impact. Read more about the merit review criteria and process on the program website (https://seedfund.nsf.gov/resources/review/).

5. **What activities and expenses are appropriate to be funded in a Phase I project? What activities and expenses are not permitted?**

   NSF SBIR/STTR funding is for research and development (R&D) only. Generally, NSF SBIR/STTR funding can be used for salary and wages for company employees, associated fringe benefits, materials and supplies, and a number of other direct costs needed to conduct the proposed R&D. As appropriate, NSF SBIR/STTR projects may also fund consultants to the project and subawards to partner organizations. Some types of indirect costs necessary for the small business to conduct the project are also appropriate.

   In general, NSF SBIR/STTR Phase I funds cannot be used for business development, marketing and sales, production, patent costs, or any activity unrelated to the underlying research and development effort (either as direct or indirect costs), with two notable exceptions: First, an awardee may request a small fee as part of the award, and these funds are unrestricted. Second, NSF permits limited use of funds for certain business-related activities through an awardee's participation in NSF's Beat-The-Odds Boot Camp (see also Question 69 regarding other Phase I support).

   Equipment purchases and foreign travel expenses are not permitted on a Phase I award but are permitted in Phase II. Please consult the solicitation for more information.

6. **Will NSF fund work on a product that has already been developed? Will the program fund small businesses to pay for patent costs, sales & marketing, business development, or other related costs?**

   NSF SBIR/STTR funding is for R&D only. Direct costs must be focused on the execution of this R&D. Awardees may request indirect costs as per normal practice and as permitted by the Federal Acquisition Regulations (FAR). The aim of a Phase I project should be to demonstrate the technical feasibility of the proposed innovation and thereby bring the innovation closer to commercialization. If the idea has already been proven to be technically feasible and capital is required simply to perform analytical testing on the product, execute the business plan, and/or begin manufacturing, the project is NOT a good candidate for Phase I funding. Non-incremental innovations to an existing product might be appropriate if the innovation will **significantly** enhance commercial outcomes and if the small business must undertake R&D with a great degree of technical risk to achieve those outcomes. Projects focusing on incremental improvements to existing products will not be funded.

7. **Must Phase I proposers submit preliminary data as part of the proposal?**

   Preliminary data are not required for NSF SBIR/STTR Phase I proposals. However, in many cases, preliminary data can strengthen the case that the small business could

demonstrate technical feasibility with the proposed Phase I research and development.

8. **Are new start-up companies appropriate candidates for the program?**

   Yes. NSF encourages proposals from many types of small businesses. In fact, most NSF SBIR/STTR Phase I awards are made to companies that are newly formed and very small. Companies with no current revenues and/or minimal history of operations are encouraged to apply. However, those small businesses must show that, if NSF SBIR/STTR funding is awarded, they have a clear plan to quickly launch the company operations and assemble a team capable of carrying out the proposed Phase I project. Conversely, companies with significant history of operations and/or R&D funding will be evaluated based on their track record of prior technology development and commercialization.

9. **Are first-time entrepreneurs appropriate candidates to participate in the program?**

   NSF encourages proposals from entrepreneurs of all experience levels – new and seasoned. It is critical that the team demonstrate commitment to advance the technology to the market. The lack of a commercialization track record does not result in a disadvantage if the proposers show commitment to the business's mission and a path to successful commercial outcomes. Many, if not most, NSF SBIR/STTR grantees are first-time entrepreneurs.

10. **What is the expected outcome (deliverable) of a Phase I project?**

    The aim of the Phase I project should be to demonstrate the technical feasibility of the proposed innovation and thereby advance the innovation toward commercialization. Typically, an expected outcome of a Phase I project is not a product fully ready for market launch. The R&D outcomes best demonstrating technical feasibility vary widely based on the technology field and the particulars of the project.

    The required deliverable at the end of an SBIR Phase I grant is a report that summarizes the project's technical accomplishments. Phase I outcomes take many forms depending on the technology area and stage of the research. Outcomes could be proof-of-concept data, a prototype, analytical/testing results of the product under development, etc.

    Because Phase I R&D work should present high technical risk, not all projects will achieve the desired technical outcomes. However, successful projects will naturally be better placed to obtain follow-on funding, including an SBIR/STTR Phase II grant because a Phase I project should mitigate the technical risks central to future commercial success.

11. **Is there a "fast-track" option to apply directly for Phase II funding? Is there an**

option to apply for Phase I and Phase II simultaneously?

Small businesses must receive a Phase I award from NSF before applying for a Phase II award at NSF. There is no "fast-track" option.

12. **What other benefits does the program provide?**

    There are significant benefits beyond Phase I funding:

    - Merit Review: Even proposers who do not receive a Phase I award can benefit from the NSF's merit review process. NSF provides valuable feedback from technical experts and commercial reviewers for every full proposal it receives, and this information may positively impact a company's future technology development and/or business model.
    - The NSF "stamp of approval": NSF's recognized peer review process shows investors or partners that the subject project and technology met the high bar for novelty and innovation required by NSF.
    - Follow-on funding: Only Phase I awardees may apply for a Phase II award. Once a small business has obtained a Phase II award, it is eligible to apply for additional supplemental funding that could augment the total Phase II amount. Many Phase II awards end up totaling close to $1.5 million.
    - Coaching and training: NSF Program Directors add value above and beyond the R&D funding. Each staff member has experience working with startups along with technical and industrial expertise. Learn more about the NSF staff by reading their bios on the program website (https://seedfund.nsf.gov/contact/bios/).
    - Access to one of the nation's largest networks of promising startups and small businesses.

13. **Where do I go to learn more?**

    The program's website, seedfund.nsf.gov, is a great place to start.

14. **Are examples available of recently-funded NSF Phase I proposals and/or awards?**

    Companies and projects funded by NSF SBIR/STTR may be explored on the portfolio page: https://seedfund.nsf.gov/portfolio/. Company names, project titles, and abstracts of recently funded Phase I awards in each topic area are on the webpages linked from here: https://seedfund.nsf.gov/awardees/phase-1/. NSF SBIR/STTR does not provide sample proposals, nor do we disclose publicly any information about (or the existence of) declined proposals.

ELIGIBILITY

15. **The NSF SBIR/STTR Phase I program solicitation requires that I must receive an**

invitation to submit a full proposal. How do I get invited to submit?

Potential proposers must first submit a "Project Pitch" document via the NSF SBIR/STTR Phase I Project Pitch online form. The cognizant NSF SBIR/STTR Program Director will use the Project Pitch to determine whether the proposed project is a good fit for the program's objectives to support (i) innovative technologies with promise of commercial and/or societal impact and (ii) projects presenting technical risk. NSF will respond to all Project Pitches within three weeks of receipt.

16. **What happens if I submit a Project Pitch and am not invited to submit a full proposal?**

    A small business submitting a Project Pitch that is not invited to submit a full proposal is permitted to resubmit their Project Pitch (with revisions to address any deficiencies) **in the next submission window**. Please refer to the solicitation for submission window dates.

    A single small business may submit up to two unique Project Pitches per submission window. However, a second Project Pitch may be submitted in a given window only if the first did not lead to a full proposal invitation. A small business should wait for the final resolution of a pending Project Pitch before submitting a second Project Pitch.

17. **Must the proposing legal entity be formed at the time of the Project Pitch submission? At the time of the full proposal submission?**

    Submission of a Project Pitch is permitted even if no small business has yet been formed. The proposing small business needs to be a legal entity at the time of full proposal submission. A legal entity is required to complete all of the necessary registrations. However, Phase I proposing small businesses need not have commenced company operations at the time of submission.

18. **Does NSF SBIR/STTR support non-U.S. companies or work that is performed abroad?**

    SBIR/STTR eligibility guidelines state that the majority (more than 50%) of a small business' equity must be directly owned and controlled by one or more individuals who are U.S. citizens or permanent residents of the United States. Additionally, NSF SBIR/STTR only supports work that is performed in the U.S. (including work performed by subawardees and consultants).

19. **Who is the Principal Investigator (PI) on an NSF SBIR/STTR Phase I grant? What are the responsibilities of the PI? Does the PI need to have a PhD? Can the PI be a graduate student?**

The PI is often the technical lead on the project. However, the program is flexible on the PI profile, as long as s/he is capable of tracking and communicating technical progress on the award. The PI is responsible for communicating with the cognizant NSF Program Director and staff during the course of the award and monitors the performance of the project to assure adherence to performance goals, schedules, or other requirements as appropriate to the project or the terms of the award. The PI is also responsible for submitting required reports to the NSF.

The PI is NOT required to have a PhD or any other specific degree. A graduate student or post-doctoral researcher is eligible to serve as the PI on an NSF SBIR/STTR Phase I proposal, as long as s/he has a plan to meet the primary employment requirement at the time a Phase I award is made (see below). Many PIs have no post-graduate training.

However, the PI MUST be more than 50 percent legally employed by the proposing small business by the time of the award and for the entire duration of the Phase I project. NSF considers a full-time work week to be 40 hours and considers employment elsewhere of greater than 19.6 hours per week to be in conflict with this requirement. Additionally, anything that prevents an individual from meeting this legal employment requirement (including residency status or university policy) will make that individual ineligible to be PI.

In addition, the PI must commit a minimum level of effort to the project described in the application (not to be confused with the greater than 50% employment requirement). The minimum level of effort for the PI is one person-month per six months of project duration.

20. **May a faculty member at a college or university serve as the Principal Investigator on an NSF SBIR/STTR project?**

    In most cases, employment as a faculty member at a college or university conflicts with the primary employment requirement for the PI of an SBIR/STTR project (see Question 19). However, in some cases, the college or university may grant a leave of absence or otherwise indicate that the faculty member is permitted to be employed more than 50% at the small business.

THE PROJECT PITCH

21. **The NSF SBIR/STTR Phase I program solicitation requires that I submit a Project Pitch prior to starting a full proposal. What is a Project Pitch and why is it required?**

    The Project Pitch is a three-page document submitted by an entrepreneur or a small business that outlines the project objectives, technical innovation, and

associated technical risks. The Project Pitch is used to (i) provide specific feedback to potential proposers regarding whether proposed projects are a good fit for the NSF SBIR/STTR Phase I program, prior to initiating the full proposal submission process; and (ii) ensure that potential proposers do not expend time or resources in the development of full proposals where the goals are clearly not appropriate, given the NSF SBIR/STTR program objectives.

22. **Who should submit a Project Pitch?**

    We recommend that the Project Pitch be submitted by the expected PI of the project and/or an officer of the small business.

23. **How do I submit my Project Pitch?**

    You can submit the Project Pitch via the online form or use the upload document feature.

24. **When should I submit my Project Pitch?**

    Feel free to submit a Project Pitch at any time. NSF encourages small businesses to submit the Project Pitch as soon as they consider applying for funding. However, submitting a Project Pitch within six weeks of the full proposal submission window closing date may not leave enough time to submit a full proposal within that window. Once NSF receives the Project Pitch, it may take up to three weeks to extend an official invitation. A small business with an official invitation must obtain the required registrations, which may take up to one month, and then prepare and submit a high-quality full proposal. Small businesses submitting a Project Pitch within six weeks of the full proposal submission window closing date may have to wait for the subsequent window to submit a full proposal (if invited).

25. **How does NSF determine who is the cognizant Program Director?**

    NSF SBIR/STTR Program Directors review Project Pitches based on their technical topic areas. To see the list of Program Directors and topics, visit our website (https://seedfund.nsf.gov/portfolio/). If you are not sure whom to contact, simply send your Project Pitch to the most relevant technical topic area. Based on that information, NSF will identify the appropriate Program Director. Your Project Pitch may be re-assigned and reviewed under a different topic area if NSF determined there is better alignment. If you still have additional questions, contact us at sbir@nsf.gov.

26. **What happens after I submit my Project Pitch? How does NSF use this information to decide whether to invite a small business to submit a full proposal?**

Once NSF receives a Project Pitch, the cognizant Program Director will review its contents to determine whether the proposed project is a good fit for the NSF SBIR/STTR Phase I program's objectives to support **(i) innovative technologies showing promise of commercial and/or societal impact and (ii) addressing technical risk**. He or she may reach out to the small business for more information, extend an invitation to submit a full proposal (with additional guidance or feedback) or notify the small business that the proposed project isn't a fit for the NSF SBIR/STTR program.

27. **Is there a limit to how many Project Pitches my small business can submit?**

    Yes. A small business may submit two unique Project Pitches per submission window. (Please refer to submission window dates listed on the solicitation). However, a second Project Pitch may be submitted in a given window only if the first did not lead to a full proposal invitation. A small business must wait for the final resolution of a pending Project Pitch before submitting a new (or revised) Project Pitch. A small business receiving an invitation to submit a full proposal must wait for a resolution of the full proposal before submitting a second Project Pitch. Additional Project Pitch documents submitted during the same submission window will not be reviewed.

PREPARING A FULL PROPOSAL

28. **I have been invited to submit a proposal. What first steps I should take?**

    If you have been invited to submit a proposal, we STRONGLY recommend that the small business immediately start the process of completing the four required registrations, in the following order: DUNS, System for Award Management (SAM), FastLane, and the SBIR Company Registry (SBIR.gov).

    - Register with DUNS at http://www.dandb.com. A DUNS and Employer Identification Number (EIN) are required for SAM registration.
    - Register the small business in the System for Award Management (SAM): https://www.sam.gov **as early as possible!** Read the SAM Quick Start Guide for guidance.
    - Before applying, register your company with NSF in Research.gov. Only after registering with Research.gov can you login to FastLane (https://www.fastlane.nsf.gov) and begin preparing your proposal. (SBIR and STTR proposals are not accepted in Research.gov). We recommend you explore FastLane before submitting your application. For help in determining who should be the PI on the project, see Question 19.
    - Register with the SBIR Company Registry. See the "Registrations" page for more details: https://www.sbir.gov/registration.

Additionally, letters of support from outside individuals or organizations are an important part of the proposal. However, these letters take time to obtain. Potential proposers are recommended to start obtaining these letters as early as possible. See Question 58 for more information.

Invitations to submit a full proposal are valid for one year and expire one year from the date of the official email invitation from NSF. An invitation that is sent during a given submission window can still be used to submit a full proposal in a subsequent submission window, assuming it is within this one-year period.

29. **I noticed that the solicitation has submission "windows". How does this compare to a specific deadline? Is there a deadline?**

    Submission windows allow for more flexibility. Unlike a deadline date, submission windows allow the invited small business to submit a full proposal at any time during the specified time period (see SBIR/STTR Phase I solicitations for specific submission window dates). Once a submission window closes (at 5:00 pm proposer's time on the window closing date), another one opens immediately the next day - essentially allowing for continuous submission of proposals.

    A submission "window," rather than a deadline, also allows NSF staff to begin the review process at any time during the specified timeframe and gives NSF flexibility to accept proposals on a rolling basis. NSF staff may assemble submitted proposals at the end of a submission window to review similar proposals simultaneously. Therefore, we recommend that a small business work to submit their proposal before the submission window closes.

    The duration of the merit review process may vary among topic areas. More details about the timeline will be provided as part of the Project Pitch process when a full proposal is invited (see Question 24).

30. **May a small business submit multiple Phase I proposals during the same submission window?**

    No. A given small business may only submit ONE proposal to a given submission window (small businesses are prohibited from submitting the same project or separate projects to both the SBIR and STTR program in a single submission window). This requirement allows a proposer to focus on submitting one strong proposal that best aligns with the commercial goals of his/her business and the NSF SBIR/STTR review criteria.

31. **Can NSF SBIR/STTR fund work on products whose target customers will be in the defense sector, or whose customers or end users are government entities?**

NSF SBIR/STTR does not dictate which markets or customers small businesses may serve. However, if an intended customer for the solution developed under the SBIR/STTR grant will be the Department of Defense (DOD), the Department of Homeland Security (DHS), or the National Aeronautics and Space Administration (NASA), proposers should consider applying through the SBIR/STTR programs at those agencies (DOD - https://sbir.defensebusiness.org/; DHS - http://www.dhs.gov/science-and-technology/sbir; NASA - https://sbir.nasa.gov/). Those agencies and others focus on the acquisition of solutions developed under the SBIR/STTR program. The submission of an identical or overlapping proposal to both NSF and another agency is possible (see Question 33), if a project could be appropriate for both NSF and the other agency.

32. **Both NSF and NIH fund biomedical/health projects through the SBIR/STTR program. How are the programs different? Can a small business apply to both programs?**

    Generally, NSF SBIR/STTR funding is not aimed at supporting clinical trials, the clinical validation of information technologies or medical devices, or studies performed primarily for regulatory purposes. Limited studies with human subjects may be acceptable to the extent that they are performed in support of feasibility, proof-of-concept studies of early-stage technologies.

    More specific guidance on representative projects of NSF SBIR/STTR in biomedical and biological technologies may be found on our portfolio page. Please be aware that NSF SBIR/STTR technology topics and subtopics are NEITHER restrictive NOR exhaustive but give a general sense of the types of proposals received.

    Another way to explore typical awards under NIH and/or NSF is via the Award Search at SBIR.gov, which houses data on all SBIR/STTR awards regardless of the funding agency.

    Finally, the submission of an identical or overlapping proposal to both NSF and NIH SBIR/STTR is possible (see Question 33).

    Submission of a Project Pitch or direct communication with an NSF SBIR/STTR Program Director are the best ways to get specific feedback on this issue as it relates to your proposed project.

33. **May a small business submit identical or overlapping proposals to NSF SBIR/STTR and another federal agency?**

    Proposers may submit overlapping proposals to different agencies, but NSF will not make **awards** that duplicate research funded by, or anticipated to be funded by, other

agencies. It is very important to note potential overlap on the Cover Sheet of the NSF proposal. **If a proposer fails to disclose that another Federal Agency has received this proposal (or an equivalent or overlapping proposal) on the proposal Cover Sheet, the proposer could be liable for administrative, civil, or criminal sanctions.**

If a proposal is selected for award by NSF and another agency, the cognizant agencies will work together to determine which agency will fund the work. Sometimes, the project scope and/or budgets will be adjusted if both projects will be funded to ensure that no portion of the work is double-funded. However, NSF SBIR/STTR will not co-fund a single proposal with any other agency.

34. **If a proposing small business elects to partner with a university or research institute as part of an STTR Phase I proposal, must the partner also be part of that Phase II proposal?**

    First, proposing small businesses are welcome to partner with a university or research institute for SBIR, not just STTR. See Question 55 or the solicitation for budget requirements that may help determine which program is more appropriate.

    For Phase II STTR, a proposing small business must have a research partner, similar to Phase I. However, the research partner does not have to be the same subawardee of the Phase I STTR effort.

    If a Phase I STTR awardee does not wish to work with a research partner for Phase II, it may submit a Phase II proposal to the NSF SBIR program instead.

    A Phase I STTR awardee may submit a Phase II SBIR proposal and a Phase I SBIR awardee may submit a Phase II STTR proposal.

35. **What is the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG)? Some guidelines in the NSF PAPPG are not spelled out in the NSF SBIR/STTR Phase I solicitation or conflict with information in the solicitation. Which policy document should I follow?**

    The *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), found here: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg, contains NSF's general proposal preparation and submission guidelines. The SBIR/STTR programs have solicitations modifying the general provisions of the PAPPG, and in those cases the guidelines of the SOLICITATION must be followed.

    The SBIR/STTR Phase I solicitations include MANY instructions that deviate from the PAPPG. The solicitations include the rules and guidelines that proposers must follow to submit a proposal, referencing the PAPPG when necessary.

36. **What are the rules or restrictions regarding contact with NSF SBIR/STTR Program Directors? Must a small business form a working relationship with a Program Director before submitting a proposal?**

    Small businesses are permitted to contact the NSF SBIR/STTR Program Directors at any time. However, Program Directors become increasingly busy as each submission window closes, so small businesses are strongly encouraged to contact them early for guidance on submitting a Project Pitch or full proposal. If a small business does choose to engage an NSF Program Director, it should not contact multiple Program Directors in parallel without notifying them.

    However, there is absolutely no requirement to form a working relationship with a Program Director prior to proposal submission. Additionally, ALL invited full proposals passing the initial screening for completeness undergo a rigorous peer review and will be considered for award.

37. **Where do I prepare and submit a full proposal?**

    Full proposals are submitted via FastLane at https://fastlane.nsf.gov/

FULL PROPOSAL PREPARATION AND SUBMISSION

38. **Is help available for navigating FastLane or troubleshooting proposal submission problems?**

    The FastLane Step-by-Step Guide is a great resource: https://seedfund.nsf.gov/fastlane/.

    As a reminder, if this guide and the solicitation conflict, the solicitation rules apply.

    For advanced questions and troubleshooting, the FastLane Help Desk is another resource and can be reached at 1-800-673-6188 (available 7 a.m. to 9 p.m. Eastern time). NSF SBIR/STTR staff can be helpful regarding the contents of the proposal, but the experts for technical issues with FastLane are the FastLane Help Desk staff.

39. **What if there are changes or updates after a proposal is submitted? Does NSF SBIR/STTR review proposal materials as soon as they are submitted?**

    NSF SBIR/STTR may start processing or viewing proposals upon receipt. If your company has updates or new information pertinent to the project after the full proposal is submitted, we encourage you to contact the Program Director reviewing your Project Pitch to provide details.

40. **What rules must be followed to ensure that a proposal passes the initial administrative review for completeness and continues on to the peer review**

process?

Please see the "DOs and DON'Ts list" in the current Phase I solicitation, section V for guidance.

41. **If the System for Award Management (SAM) indicates that it will take several weeks for a proposing business's registration to be complete, what should the business do?**

    As of March 2018, an active registration in SAM is required to create a new account in Fastlane. A Fastlane account is required to submit a proposal to NSF. If the SAM registration for a company has not been created before the end of the NSF SBIR/STTR Phase I submission window, the proposer will not be able to submit a proposal during that window. The proposer should just submit his/her proposal in the next solicitation window. **We highly encourage any small business considering applying to the program to register in SAM.gov as early as possible!** Read the SAM Quick Start Guide for guidance.

42. **How does a proposer know that he or she has successfully submitted an NSF SBIR/STTR Phase I proposal?**

    When a proposal has been received by NSF, the proposer will receive a proposal number that is seven digits long and starts with the last two digits of the current Federal government fiscal year. For example, proposal numbers for proposals submitted between October 1, 2019 and September 30, 2020 should be seven digits long and begin with "20".

    If the final proposal number has not been assigned via email, it is likely that the PI submitted the proposal but has not yet performed the final step, which is to forward the proposal to the small business's Authorized Organizational Representative (AOR)/Sponsored Projects Officer (SPO), who signs and submits the proposal through FastLane. Instructions for this step can be found in the FastLane Step-by-Step Guide: https://seedfund.nsf.gov/fastlane/.

43. **How can proposers check on the status of a Phase I SBIR/STTR proposal after it has been submitted?**

    The listed Principal Investigator (PI) on a given proposal can log in to FastLane, (http://www.fastlane.nsf.gov/jsp/homepage/proposals.jsp) and click "Proposal Functions", then "Proposal Status." Each proposal and its status will be listed. Navigating to an individual proposal will enable proposers to view reviewer comments when available.

BUDGET PREPARATION

44. **What is a reasonable salary for the PI and other personnel on the project?**

    The best way to ensure that salary requests are appropriate is to propose salaries that do not exceed the median levels based on Bureau of Labor Statistics (BLS) Wage Data for the same geography and job title. More information on using BLS Wage Data can be found here: https://www.bls.gov/bls/blswage.htm.

45. **Can I list a co-PI on an NSF SBIR/STTR proposal?**

    NSF SBIR proposals may NOT have co-PIs. Proposals may include subawardees but should not list a co-PI. NSF STTR proposals MUST have a subawardee research institution with an associated co-PI listed on the Cover Sheet and on the subaward budget.

46. **How should indirect costs be structured for a Phase I SBIR/STTR project if the proposing small business does not have an established indirect cost rate?**

    Small businesses without an established indirect cost rate should create an estimate based on itemizing specific indirect costs expected during the Phase I project. Common indirect costs are rent, utilities, some types of insurance, and other company expenses that are not directly required by the NSF project but are necessary for the overall business operation. It is recommended that small businesses without an established indirect cost rate request indirect costs and fringe benefits at or below the "safe rate" (i.e., total budgeted indirect costs plus budgeted fringe benefits should not exceed 50 percent of total direct salaries and wages) or 10% de minimis on MODIFIED total direct costs on the project. See the solicitation for details.

47. **Can a person be listed on the budget as a subawardee (or consultant) and also on the main budget?**

    In general, no person should request funds or otherwise financially benefit through more than one institutional affiliation for a single NSF SBIR/STTR project. Therefore, individuals with a financial interest in the proposing small business (including company equity holders or anticipated employees) may not request funds through a subaward budget or as a consultant. In rare cases, this requirement might prove unusually onerous; therefore, it is possible for NSF to grant an exception, if recommended by the Program Director and approved by the Division Director for the Division of Industrial Innovation and Partnerships.

48. **May I budget a subaward to a Federal lab or Federally-Funded Research and Development Center (FFRDC)?**

    Yes, FFRDCs and Federal labs are eligible to be subawardees on an NSF SBIR/STTR

proposal. A list of FFRDCs is located at: https://www.nsf.gov/statistics/ffrdclist/.

49. **What types of costs can be requested on a subaward budget?**

    A subaward budget may request funds on the same lines as permitted for the main project budget, but with two main exceptions. First, if the subaward is to a research institution, the subaward budget may contain a request for funds for Postdoctoral Scholar(s) in Line B.1, Other Personnel (whereas the main budget may not). Second, subaward budgets may NOT contain funds on Line K, which is used for a fee that may only be requested by the proposing small business in the main budget.

50. **May proposers submit a proposal with more than one subaward?**

    Proposers may request funds for multiple subawards if the requirements regarding total budget allocations are met (see the solicitation). For each requested subaward, a full subaward budget must be prepared with an accompanying justification at the same level of detail as the main project budget.

51. **How does NSF define a project participant as a consultant (line G.3 of the budget)?**

    Consultants (also referred to as "contractors") are persons who will work on the project but are not company employees. Consultants typically do not receive a W-2 tax form from the small business and are often used to provide a specific service or skill based on hourly or daily compensation. Consultant services include specialized work performed by professionals who are not employees of the proposing small business. Purchases of analytical services, other services, or fabricated components from commercial sources should not be listed under consultant services and should instead be reported in the budget under Other Direct Costs/Other (Line G.6). No person who is a shareholder, employee, or officer of the proposing small business may be paid as a consultant unless an exception is recommended by the Program Director and approved by the Division Director for the Division of Industrial Innovation and Partnerships. All research on an SBIR project, including that conducted by consultants, must be conducted in the U.S.

52. **What are the budget requirements for consultants?**

    Each consultant included in the budget should provide a signed commitment letter, to be included in the budget justification, stating a) his/her specific tasks; b) the number of hours or days that s/he is committing to the project; and c) the agreed-upon level of compensation, not to exceed the NSF maximum of $1,000 per day (NSF defines a day as 8 hours). The budget justification must address how the consultant effort will contribute to the project. Each consultant should submit a "biographical sketch" with the

proposal. A company wishing to compensate a consultant at a higher rate must supply the incremental funding from sources outside the NSF grant (and should explicitly state this in the budget justification).

53. **If other R&D will be performed by the proposing small business, in parallel to the NSF SBIR/STTR-funded research, should those efforts be described in the proposal?**

    The funds provided by an NSF SBIR/STTR Phase I award are rarely sufficient to bring a new product to market. The NSF SBIR/STTR project focuses on meeting specific technical goals to ensure the commercial success of the anticipated product or service. Therefore, an NSF SBIR/STTR proposal should primarily address only the R&D activities funded by the NSF award. Other R&D to be performed with or funded by partners may be mentioned briefly, but the R&D plan should concentrate only on NSF-funded work.

    Any resources available to or volunteered by the small business but not to be procured with Phase I award funds may be listed in the Facilities, Equipment, and other Resources section of the proposal.

54. **How much of the NSF-funded research and development must be performed by the awardee? (In Phase I and Phase II)?**

    These requirements differ for SBIR and STTR awards. For Phase I SBIR awards, a minimum of **two-thirds (66 percent)** of the R&D, as stated in the budget, must be performed by the awardee. The rest would be performed by a subawardee. For Phase II SBIR projects, a minimum of **one-half (50 percent)** of the R&D must be performed by the awardee. Again, the rest would be performed by a subawardee. For Phase I and Phase II STTR projects, a minimum of 40 percent of the R&D, as stated in the budget, must be performed by the small business, and a minimum of 30 percent of the R&D, as stated in the budget, must be performed by the partner research institution.

PROPOSAL REVIEW

55. **What criteria are used to evaluate NSF SBIR/STTR proposals?**

    All NSF proposals are reviewed for Intellectual Merit and Broader Impact. In addition, SBIR/STTR proposals have a set of additional criteria describing Commercial Impact. For more information on these criteria in the context of SBIR/STTR proposals, please see: https://seedfund.nsf.gov/resources/review/peer-review/. The merit review criteria are also listed in the solicitation documents.

56. **Who evaluates NSF SBIR/STTR full proposals? What does the review process entail?**

In Phase I, technical reviewers with expertise in the field of the proposed research and/or the target market area proposed are asked to confidentially review the proposals. These technical reviewers have technical training and expertise in relevant areas of science, engineering, or technology. The Phase I review process relies heavily on input from these technical reviewers, with some reviewers offering both commercial and technical expertise. Dedicated commercial reviewers are often asked to participate on Phase I panels. SBIR/STTR Program Directors with relevant technical and commercial expertise lead the entire review process and directly help evaluate the technical and commercialization details of each proposal.

In many cases, similar proposals are typically placed into groups of four to eighteen proposals called a "panel." A group of three to ten external reviewers is assigned to a panel, with each proposal reviewed by at least three of these experts. After the reviewers read the proposals and provide feedback, they meet in person at NSF or via video conference or conference call to discuss the entire set of proposals in the panel. Alternatively, occasionally external reviewers submit reviews by mail (so-called "ad hoc reviews").

In many cases, proposers still in consideration for an award will be contacted directly by NSF staff following this external review, with additional questions or concerns for the proposer to address.

The Phase II process is similar, but a greater amount of time and effort is dedicated to the evaluation and discussion of each proposal. Additionally, each Phase II proposal generally is assigned to more reviewers; in addition to technical reviewers, a minimum of two commercial reviewers review each proposal, paying particular attention to the commercialization plan.

57. **How does NSF manage confidentiality and conflicts of interest during the peer review process? What can proposers do to ensure that their proprietary information is kept safe?**

    NSF proposals are confidential. They are not made public and are not considered a public disclosure. Proposals are kept confidential by NSF staff and the external reviewers, who certify that no conflicts of interest exist and that they will keep the proposal documents and review contents confidential (see the Conflict of Interest form on the peer review page: https://seedfund.nsf.gov/resources/review/peer-review/).

    SBIR/STTR data are protected from disclosure by the participating agencies for a period of not less than four years from end of the relevant Phase II award (or the relevant Phase I award, if no follow-on Phase II award is granted). The protection period is extended with each subsequent related award or supplement to avoid potentially

harmful disclosure. The SBA has a full set of FAQs addressing data rights: http://www.sbir.gov/faq/data-rights.

Even when SBIR/STTR data are no longer under the mandatory protection, NSF still does not generally release proposal information publicly, with the rare exception of a Freedom of Information Act (FOIA) request. Sections of the proposal marked as "proprietary" will not be made available to a FOIA requestor, so it is important to clearly mark sensitive sections of the proposal as "proprietary". In the event of a FOIA request, if the NSF is still able to contact the SBIR/STTR small business, there is a second opportunity for the business to redact proprietary information from the proposal. However, it is not appropriate to mark the entire proposal as proprietary.

58. **How important are letters of support? What does a strong letter of support contain?**

    Letters of support are extremely important for both Phase I and Phase II proposals. Letters of support may show the reviewers that the proposed innovation, if developed, would solve a real market need. More generally, letters of support help validate claims in the proposal regarding commercial impacts. Therefore, letters from potential end users of the technology (customers) and corporate partners/collaborators are appropriate. Letters from actual or potential investors may also be appropriate. Proposers should start early in obtaining these letters.

59. **Some NSF SBIR/STTR companies build on basic research previously funded by the NSF. Are companies proposing projects that are NOT related to NSF or any Federal funding at a disadvantage?**

    No. All proposals are evaluated according to the merit review criteria, and only the best proposals are funded. NSF seeks basic research, and in particular NSF-funded research, that may lead to technological innovation and potential commercialization. Therefore, proposers are encouraged to provide information about the scientific research that led to the proposed innovation. For both SBIR and STTR, proposals based on NSF-funded basic research are welcomed. A solid base in fundamental research lends credibility to the intellectual merit of the proposal. An NSF "lineage", or past funding legacy, alone (or lack of it) should not dramatically alter the fate of a proposal.

60. **When does NSF release proposal decisions? What feedback is provided?**

    The schedule and pace of NSF SBIR/STTR Phase I peer review is affected by many factors. However, several general guidelines are listed below for proposals undergoing peer review. Proposers whose proposals did not progress past administrative review and therefore do not advance to the panel review stage may learn of this decision

earlier in the process (this decision is called "return without review").

Not later than 2-4 months after full proposal submission - Proposers, especially those in consideration for funding, may be contacted by the Program Director any time after the panel if the panel or Program Director need further information for the proposal to be fairly and completely evaluated. This process of interaction with the Program Director is called "due diligence".

Not later than 4-6 months after full proposal submission - All proposals undergoing full merit review process will be notified of the decision, whether awarded or declined, and will receive anonymous written reviews with helpful information to improve the proposal. If the reviews are unclear or the proposer seeks more information to resubmit in a future cycle, s/he may contact the Program Director managing the review process to ask for clarification and guidance.

Not later than 6-7 months after full proposal submission - Phase I awards begin. Awards of a given submission window will have a start date (first funds disbursed) no later than seven months after the window closing, and usually sooner.

61. **What happens if the company's R&D goals, business model, team, or vision change while the proposal is under review?**

    Our hope is that applying to NSF SBIR/STTR will not change the strategy of a small business or slow down its progress. During the Phase I review process, if a small business makes progress on some of the technical objectives or challenges described in a Phase I proposal that is recommended for award, the Program Director will typically work with the proposer to update the work plan and objectives for the Phase I project. It is rare for a Phase I award to be jeopardized simply because a proposing small business has continued to conduct R&D during the Phase I review process. However, proposers should update NSF staff of significant changes in company status, team, or technology, especially if contacted by an NSF Program Director with a request for additional information during the review process.

62. **How does the NSF weigh the three major SBIR/STTR review criteria - Intellectual Merit, Broader Impact, and Commercial Impact - during the review process?**

    Intellectual Merit, Broader Impacts, and Commercial Impacts are equally important for the purposes of making award recommendations.

PHASE I AWARD

63. **What are my obligations to the government in terms of the intellectual property developed from NSF SBIR/STTR funding?**

As a recipient of a Federal research grant, you are obligated to report all patents, patent applications and invention disclosures that are a direct result of NSF support. This reporting is done via the iEdison system and needs to be completed within a certain timeframe (typically 60 days).

Guidelines for using iEdison are at: https://era.nih.gov/iedison/iEdison_Inventor_userguide.pdf.

Instructions for the timing of registration of your invention are at: https://era.nih.gov/iedison/invention_timeline.htm.

64. **Does the government have the right to use my invention developed under my Federal grant?**

    The Bayh-Dole Act, 35 U.S.C. 200 et seq, provides that a small business may retain the entire right, title, and interest throughout the world to each subject invention (as defined in 35 U.S.C. 201) subject to the provisions of 35 U.S.C. 202 and 35 U.S.C. 203.

    With respect to any subject invention in which the awardee retains title, 35 U.S.C. 202(c)(4) gives the Federal government "a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the subject invention throughout the world."

    Section 203 of the Bayh-Dole Act gives the U.S. government the ability to exercise "march-in rights" on inventions created by Federally funded research projects. However, these rights are designed to be used only in the case of a national emergency (defined in the Act) and to date, they have never been exercised by the Federal government. Information regarding these rights and the government's ability to exercise them is located at: https://fas.org/sgp/crs/misc/R44597.pdf.

    Regulations implementing the Bayh-Dole Act can be found at: https://era.nih.gov/iedison/bayh-dole.htm.

65. **What are the terms and conditions associated with a Phase I SBIR/STTR award?**

    NSF SBIR/STTR award conditions can be found at: https://www.nsf.gov/awards/managing/special_conditions.jsp (in the section at the bottom of the page). The headings at the top of the award conditions show topics of interest including Patent Rights, Payments, and Project Reporting Requirements.

66. **What if there are changes to the business model or R&D strategy of a small business during the Phase I NSF SBIR/STTR project?**

    NSF SBIR/STTR understands that small businesses, especially those in the earliest

stages of development, may undergo business model changes, such as identifying a different niche market, a changed product format, etc. During Phase I, NSF SBIR/STTR works with grantees to adjust (within reason) the Phase I project objectives, work plan, and budget to reflect changes in the market understanding and business model. However, changes to a Phase I project that completely shift the focus of the project away from the initially proposed core innovation are generally not permitted. Additionally, NSF SBIR/STTR will not support alternative R&D if the work no longer meets the Phase I program standards for high technical risk.

67. **How and when does NSF release Phase I funding to my small business?**

    Typically, the awardee small business has access to all of the Phase I funds, less $25,000, at the beginning of the award. These funds may be drawn down in any amount, at any time, from NSF's Awardee Cash Management System (ACM$). Award funds cannot be "put back" once withdrawn from ACM$ and awardees should understand tax implications before withdrawing funds.

68. **What other support do Phase I awardees receive?**

    NSF offers a number of helpful programs for Phase I awardees, such as the Commercialization Assistance Program (CAP). This program, offered free of charge to the grantee, provides additional resources and significant one-on-one guidance from seasoned advisors in the development of the business strategy associated with the Phase I research. The program also provides a wealth of information to assist Phase I grantees in preparing Phase II proposals.

    In addition, NSF offers Beat-The-Odds Boot Camp (BTOBC) to all Phase I awardees. This activity, modeled on the NSF's Innovation Corps (I-Corps™) program and led by experienced NSF I-Corps instructors, teaches the fundamentals of customer discovery and allows Phase I companies to refine their understanding of customers, markets, and competition.

BEYOND PHASE I

69. **Does NSF have a Phase III SBIR/STTR program?**

    Some agencies that run acquisition-based SBIR/STTR programs, such as the Department of Defense, feature Phase III. In this Phase, the agency enters into another agreement with the company to continue R&D related to the project. This project must be supported by non-SBIR/STTR funds.

    Because NSF does not acquire technologies developed under the SBIR/STTR program, it therefore does not offer a Phase III.

However, NSF does offer Phase II grantees several supplemental opportunities, including the possibility of obtaining up to $500,000 in additional funding under the Phase IIB program, based on third-party investment or product/ service revenues derived from NSF-supported project(s). See information on these opportunities at: https://seedfund.nsf.gov/resources/awardees/supplement/overview/.

70. **When and how do I apply for a Phase II award?**

The eligibility to submit a Phase II proposal is based on the start date of the corresponding NSF Phase I SBIR/STTR award. Phase II submissions are permitted between six months and twenty-four months after the start date of the relevant NSF SBIR/STTR Phase I award. Please reference your Phase I award notice or contact your Phase I NSF Program Director for details on Phase II submission deadline options or for the exact start date of your Phase I award. You may submit ONLY ONE Phase II proposal following a given Phase I award. Details on the Phase II application process can be found at: https://seedfund.nsf.gov/resources/awardees/phase-2/apply/.

71. **What are some significant outcomes or success stories that can be traced to NSF SBIR/STTR funding?**

We are proud to have supported thousands of innovative start-ups and small businesses over the past 40 years. Well-known firms, such as Qualcomm and Symantec, received early support from the NSF program. Between 2014 and 2019 firms funded (or previously funded) by our program raised more than $7 billion in follow-on private capital and reported over 97 successful exits (IPOs, mergers, and acquisitions). See more success stories on seedfund.nsf.gov.