

## Proposal Compliance Matrix - NSF Phase I

**Solicitation Name:** NSF SBIR Phase I

**Solicitation Number:** NSF 23-515

**Proposal Manager:** [Fill in]

**Submission Date:** 5 PM submitter's time on March 1, 2023; July 5, 2023; November 1, 2023

**Last Updated:** March 2023

**Legend:** Forms, Formatting

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
---------	--------------------------------	------------------------------	---	---------------------	----------------------------	----------	--------

### Project Pitch

Potential proposers must receive an invitation to submit a full NSF SBIR/STTR Phase I proposal. Project Pitches may be submitted and will be reviewed on an ongoing basis (even if there is no Phase I solicitation currently open at NSF). To start this process, proposers must first create a log in and submit a [Project Pitch](#) 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 Objectives.

- Proposers are encouraged to submit a Project Pitch at any time, regardless of the SBIR/STTR Phase I solicitation windows.
- Proposers can submit one Project Pitch per submission window.
- The small business will be asked to describe the technology innovation, key technical objectives and challenges, the market opportunity, and the company and team in the Project Pitch.
- The cognizant NSF SBIR/STTR Program Director will review the submitted Project Pitch and officially respond via email. They may ask for more information before making a final decision.
- If the proposed project is determined to be a good fit for the Program Objectives (stated above), the small business representative who submitted the Project Pitch will receive an invitation via email to submit a full proposal. This invitation entitles the recipient to submit a full proposal to the open Phase I SBIR or STTR solicitation and is valid for 12 months from the date of the invitation. The invitation email must be uploaded in the Supplementary Documents of the full proposal.
- If the proposed project is determined not to be responsive to the SBIR/STTR Phase I Program solicitation (please refer to the "**Project Activities Not Responsive to the Solicitation**" section of this document as well as the listed eligibility criteria), the potential proposer will receive a notice stating that the small business is not invited to submit a proposal.
- Project Pitches that are not invited to submit a full proposal may resubmit a Project Pitch (with revisions to address any deficiencies) in the next quarterly submission window.
- A small business with a pending Project Pitch must wait to receive a response before submitting another Project Pitch. Additional Project Pitches submitted by a small business with a pending Project Pitch will not be reviewed nor invited.

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
<ul style="list-style-type: none"> <li>• A small business that has received an invitation to submit a full proposal must wait for that proposal to be submitted and resolved before submitting another Project Pitch. If the small business decides not to pursue that project and wishes to submit another, different Project Pitch, they should reach out to <a href="mailto:sbir@nsf.gov">sbir@nsf.gov</a> to request that their existing invitation be withdrawn.</li> <li>• Potential proposers who do not receive an invitation to submit a proposal are not eligible to apply for Phase I funding. <b>Proposals submitted without a Project Pitch invitation will be Returned without Review.</b></li> </ul>							
<b>Contact Information</b>	Provide all relevant information for the business and the relevant company officer or technical lead who is submitting the Project Pitch.						
<b>SBIR/STTR Topic</b>	From the drop-down list, pick the SBIR/STTR topic that best fits your project's technology area. See their list of topic areas and explanations of innovation under that area at the following <a href="#">link</a> .						
<b>Research and Development (or Technological Innovation)</b>	Up to 500 words describing the <b>Research and Development (or Technological Innovation)</b> that would be the focus of a Phase I project, including a brief discussion of the origins of the innovation as well as an explanation as to why it meets the program's mandate to focus on supporting R&D of unproven, high-impact innovations. (See definition of R&D above.)						
<b>Technical Objectives and Challenges</b>	Up to 500 words describing the <b>Technical Objectives and Challenges</b> to be done in a Phase I project, including a discussion of how and why the proposed work will help prove that the product or service is technically feasible and/or how the proposed scope of work will significantly reduce technical risk using techniques drawn from fundamental science and engineering research. Discuss how this work could contribute to making the new product, service, or process commercially viable and impactful. This section should also convey that the proposed work meets the NSF SBIR/STTR definition of R&D above, rather than straightforward engineering or incremental product development tasks.						

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
<b>Commercial Focus</b>	Up to 250 words describing the customer profile and unmet needs that will be the near-term <b>Commercial Focus</b> related to this technical project.						
<b>Company and Team</b>	Up to 250 words describing the <b>Company and Team</b> , that is, the background and current status of the applicant small business, including key team members who will lead the technical and/or commercial efforts discussed in the Project Pitch						
<p><b>1. Cover Sheet</b></p> <p><i>Invited proposers must select either SBIR Phase I or STTR Phase I on the Cover Sheet. Do not select both. Complete topic and subtopic fields should also be included on the Cover Sheet. Designate one, and only one, topic and subtopic. If a proposer fails to disclose on the proposal Cover Sheet whether another Federal Agency has received this proposal (or an equivalent or overlapping proposal), the proposer could be liable for administrative, civil or criminal sanctions. NSF will not make awards that duplicate research funded or expected to be funded by other agencies, although in some cases NSF may fund portions of work described in an overlapping proposal, provided that the budgets are appropriately reduced and allocated among the various sponsors. NOTE: To save your data, be sure to click the "OK" button at the bottom of the screen prior to navigating away from the Cover Sheet. If you receive any error messages when you click "OK", you must clear all errors and re-click "OK" to save the data.</i></p>							
<b>Title</b>	Enter the Title of Your Proposed Project						
<b>Budget and Duration</b>	Enter the Requested Amount, Proposal Duration in months, and Starting Date in D:M:Y format.						
<b>Announcement and Consideration</b>	Choose the Deadline/Target Date from the drop down. All other information is auto generated.						
<b>Awardee Organization</b>	Check all boxes that are applicable to the business.						
<b>Other Information</b>	Check all boxes that are applicable to the submission. Also select the type of proposal from the dropdown and the collaborative status (if any) from the radio buttons.						

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
<b>Small Business Innovation Research</b>	Select the applicable topic area from the dropdown menu. Also fill out all other information that describes the Small Business Concern and the relevant contact information requested.						
<p><b>2. Project Summary [One (1) page MAXIMUM]</b></p> <p>The Project Summary should be written in the third person, informative to other persons working in the same or related fields, and, insofar as possible, understandable to a scientifically or technically literate lay reader. It should not be an abstract of the proposal. Do not include proprietary information in the summary.</p> <p>Proposals lacking a complete Project Summary will not be accepted by <a href="http://research.gov/">http://research.gov/</a> or will be Returned Without Review. The Project Summary is completed in <a href="http://research.gov/">http://research.gov/</a> by entering information into the three text boxes in the Project Summary module. <b>Information MUST be entered into all three text boxes, or the proposal will not be accepted. Do not upload your Project Summary as a PDF file.</b></p>							
<b>Box 1: Overview, Key Words, and Subtopic Name</b>	Describe the potential outcome(s) of the proposed activity in terms of a product, process, or service. Provide a list of key words or phrases that identify the areas of technical expertise to be invoked in reviewing the proposal; and the areas of application that are the initial target of the technology. Provide the subtopic name.						
<b>Box 2: Intellectual Merit</b>	<p>This section MUST begin with "This Small Business Innovation Research Phase I project..." Address the intellectual merits of the proposed activity. Do not include proprietary information in the summary. Briefly describe the technical hurdle(s) that will be addressed by the proposed R&amp;D (which should be crucial to successful commercialization of the innovation), the goals of the proposed R&amp;D, and a high-level summary of the plan to reach those goals.</p> <p>Intellectual Merit definition can be found at <a href="https://www.nsf.gov/pubs/policydocs/pappguide/nsf13001/gpg_3.jsp">https://www.nsf.gov/pubs/policydocs/pappguide/nsf13001/gpg_3.jsp</a></p>						

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
<b>Box 3: Broader Impacts and Commercial Potential</b>	Discuss the expected outcomes in terms of how the proposed project will bring the innovation closer to commercialization under a sustainable business model. In this box, also describe the potential commercial and market impacts that such a commercialization effort would have, if successful. Also discuss potential broader societal and economic impacts of the innovation (e.g. educational, environmental, scientific, societal, or other impacts on the nation and the world).						

**3. Project Description. [Fifteen (15) pages MAXIMUM, Ten (10) MINIMUM]**

The project description is the core of the proposal document, where the PI convinces the expert reviewers/panelists and SBIR Program Director that your proposed R&D project meets NSF's criteria for intellectual merit, broader impacts, and commercial opportunity (please refer to Section II. Program Description of the solicitation for details regarding these criteria). Present evidence that the proposed technology is innovative, that development of it entails high technical risk, and that you have a credible plan to establish technical feasibility during Phase I. Convince the reviewers that the company and the project team have the necessary expertise, resources, and support to carry out the project and that they are committed to building a viable business around the product/service being developed. Finally, present a compelling case that the project will significantly advance the readiness of the technology and strengthen its commercial position. The format below is strongly suggested for the Project Description.

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
<b>Elevator Pitch</b>	<p><b>(no more than one page)</b></p> <p>The Elevator Pitch should cover the following three aspects:</p> <ol style="list-style-type: none"> <li>1. The Motivation. Describe the company's motivation for pursuing this project and the expected impact from the proposed technology, if successful.</li> <li>2. The Customer. Describe the expected customer for the innovation. What customer needs or market pain points are you addressing?</li> <li>3. The Value Proposition. What are the benefits to the customer of your proposed innovation? What is the key differentiator of your company or technology? What is the potential societal value of your innovation?</li> <li>4. The Innovation: Succinctly describe your innovation. Which aspects are original and transformative compared to the current state of the art? How is the innovation differentiated from any work done by others in the field? (This section may contain information excluded from the Project Summary because of the proprietary nature.)</li> </ol>						
<b>The Commercial Opportunity</b>	<p><b>(recommended length: 1-3 pages)</b></p> <p>The Commercial Opportunity should cover the following eight aspects:</p> <ol style="list-style-type: none"> <li>1. Describe the market and addressable market for the innovation.</li> <li>2. Discuss the business economics and market drivers in the target industry.</li> </ol>						

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
	<ol style="list-style-type: none"> <li>3. How has the market opportunity been validated? Describe your customers and your basic business model. Describe the competition. How do you expect the competitive landscape may change by the time your product/service enters the market?</li> <li>4. What are the key commercial risks in bringing your innovation to market?</li> <li>5. Describe your commercialization approach. Discuss the potential economic benefits associated with your innovation and provide estimates of the revenue potential, detailing your underlying assumptions.</li> <li>6. Describe the resources needed to implement your commercialization approach.</li> <li>7. Describe your plan and expected timeline to secure these resources.</li> </ol>						
<b>The Technical Solution</b>	<p><b>(recommended length: 2-4 pages)</b></p> <p>The Technical Solution should cover the following three aspects:</p> <ol style="list-style-type: none"> <li>1. Briefly describe the innovation. At what stage of technical development is the innovation? (A more detailed description can be provided in the Technical Discussion and R&amp;D Plan, as described below).</li> <li>2. Describe the key technical challenges and risks in bringing the innovation to market. Which of these will be your focus in the proposed Phase I project?</li> <li>3. Describe the status of the intellectual property associated with this project and how you plan to protect it.</li> <li>4. NSF Lineage (not required for eligibility): Does your project have roots in non-SBIR/STTR NSF funding,</li> </ol>						

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
	<p>either to the company or other organizations/institutions? If applicable, list the NSF funding division(s) and award number(s) as follows: "This project is based on the following NSF lineage: funded by."</p> <p>5. I-Corps Lineage (not required for eligibility): If the project team has participated in an I-Corps cohort (regional or national), please identify the host organization as follows: "This team has participated in an I-Corps activity hosted by with award number". Please contact the host organization for the relevant award number.</p>						
<b>The Company/Team</b>	<p><b>(recommended length: 1-3 pages)</b></p> <p>The Company/Team should cover the following four aspects:</p> <ol style="list-style-type: none"> <li>1. Describe the company founders or key participants in this proposed project. What level of effort will these persons devote to the proposed Phase I activities? How does the background and experience of the team enhance the credibility of the effort; have they previously taken similar products/services to market?</li> <li>2. Describe your vision for the company and the company's expected impact over the next five years.</li> <li>3. If the company has existing operations, describe how the proposed effort would fit into these activities.</li> <li>4. Describe the revenue history, if any, for the past three years. Include government funding and private investment in this discussion.</li> </ol>						



**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
	<p>5. Will you have consultants or subawardees working on this project? If so, what is their expertise, affiliation, and contribution to the project?</p>						
<p><b>Technical Discussion and R&amp;D Plan</b></p>	<p><b>(minimum length: 5 pages)</b>  <b>(recommended length: 5-6 pages)</b></p> <p>The Technical Discussion and R&amp;D Plan should cover the following four aspects:</p> <ol style="list-style-type: none"> <li>1. The Intellectual Merits section should begin with the header “Intellectual Merits” on its own line.</li> <li>2. Describe the innovation in sufficient technical depth for a knowledgeable reviewer to understand why it is innovative and how it can provide benefits in the target applications. Supplement this description with any necessary background information.</li> <li>3. Describe the key objectives to be accomplished during the Phase I research, including the questions that must be answered to determine the technical AND commercial feasibility of the proposed concept.</li> <li>4. Describe the critical technical milestones that must be met to get the product or service to market.</li> <li>5. Present an R&amp;D plan, with timeline. What are the objectives, and what experiments, computations, etc. are planned to reach those objectives? The R&amp;D plan must leverage fundamental science or engineering research and techniques.</li> </ol>						

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
<b>Broader Impacts</b>	<p><b>(recommended length: 1-2 pages)</b></p> <p>The Broader Impacts section should begin with the header “Broader Impacts” on its own line. Describe how the proposed product or service offers the potential for broader societal and economic benefit (through commercialization under a sustainable business model) as outlined in the <a href="#">NSF Merit Review Broader Impacts Criteria</a>. The NSF SBIR/STTR programs fund the development of new, high-risk technology innovations intended to generate positive societal outcomes. Examples of such outcomes include (but are not limited to) those found in the American Innovation and Competitiveness Act (P.L. 114-329, Section 102) Broader Impacts Review Criterion update:</p> <ol style="list-style-type: none"> <li>1. <i>Increasing the economic competitiveness of the United States.</i></li> <li>2. <i>Advancing of the health and welfare of the American public.</i></li> <li>3. <i>Supporting the national defense of the United States.</i></li> <li>4. <i>Enhancing partnerships between academia and industry in the United States.</i></li> <li>5. <i>Developing an American STEM workforce that is globally competitive through improved pre-kindergarten through grade 12 STEM education and teacher development and improved undergraduate STEM education and instruction.</i></li> <li>6. <i>Improving public scientific literacy and engagement with science and technology in the United States.</i></li> <li>7. <i>Expanding participation of women and individuals from underrepresented groups in STEM.</i></li> </ol>						

**Proposal Compliance Matrix - NSF Phase I**

Field #	RFP Requirement (Text Extract)	RFP Page, Section, Paragraph	Proposal Volume/ Section, Page, Paragraph	Writing Assigned To	Notes Regarding Compliance	Due Date	Status
	<p>As you consider this section of the proposal, please keep in mind that enabling commercialization of a deep technology addresses the first bullet above. You are encouraged to discuss this and other elements of the broader impacts that might motivate the company and be relevant to the project.</p> <p>The NSF SBIR/STTR programs seek plans to generate these outcomes as well as related societal benefits. Discuss the envisioned broader impacts and the specific implementation plan, including: the relevant metrics and measurement plan; potential partners to enhance the likelihood of success (including an assessment of the value proposition to the partner, their reasons for engaging in this project, and a summary of the engagement to date); potential risks and associated mitigation strategies; and additional anticipated needs for resources and the plan to secure them.</p>						

**4. References Cited.**

Provide a comprehensive listing of relevant references, including patent numbers and other relevant intellectual property citations. A list of References Cited must be uploaded into the system. If there are no references cited in the proposal, please indicate this by putting the statement "No References Cited" into this module.

\*Note: There is no specific guidance for formatting references/citations (e.g. MLA, APA, etc.)

**5. Biographical Sketches.**

All SBIR/STTR proposals submitted to NSF are required to include Biographical Sketches for each PI, co-PI (if STTR), and Senior Personnel (individuals with critical expertise who will be working on the project and are employed at the proposing company or at a subaward organization) using the format provided [here](#). Step-by-step guidance can also be found [here](#). Biographical sketches are limited to three pages per person.

**6. Budget and Subaward Budgets.**

found here. Biographical sketches are limited to three pages per person.

Budget and Subaward Budgets. Proposers are required to submit budgets with their proposals, including specific dollar amounts by budget category. Proposers must submit a written justification explaining these amounts in detail. NSF SBIR/STTR Program Directors review these proposed budgets and rely on them in determining the final amount awarded for a given SBIR/STTR project. Detailed documentation of all budget line items is required and MUST be documented in detail on the Budget Justification page (see next section). The proposed budget should reflect the needs of the proposed R&D project. Line numbers below refer to the required

**Proposal Compliance Matrix - NSF Phase I**

budget format in <http://research.gov/>, NSF's proposal submission system. The total budget shall not exceed \$275,000 for the Phase I proposal.. **NOTE:** <http://research.gov/> **does not accept symbols or commas in the budget lines.**

<p><b>Line A: Senior Personnel</b></p>	<p>List the PI, co-PI (if STTR), and Senior Personnel by name, their time commitments (in calendar months), and the dollar amount requested. The PI must be budgeted for a minimum of one calendar month of effort per six months of performance to the NSF SBIR/STTR Phase I proposed project. The best source in determining an appropriate salary request is the <a href="#">Bureau of Labor Statistics</a>. In the Budget Justification provide the title; annual, monthly, or hourly salary rate; time commitment; a calculation of the total requested salary; and a description of responsibilities for the PI, co-PI (if STTR), and each of the Senior Personnel.</p>					
<p><b>Line B: Other Personnel</b></p>	<p>List the number of additional general personnel (technicians, programmers, etc.) and the total monetary and time commitment for these personnel. These personnel must be employed at the proposing company. The details of the individual commitments, roles, and requested funds should be provided in the Budget Justification. Do NOT list company employees under B.1, B.3, or B.4 in the main budget. Post-doctoral scholars and students (undergraduate and graduate) should be listed on a subaward budget to a research institution, unless they are employees of the company, in which case they may be listed under Lines A, B.2, or B.6, as appropriate.</p>					
<p><b>Line C: Fringe Benefits</b></p>	<p>It is recommended that proposers allot funds for fringe benefits here ONLY if the proposer’s usual (established) accounting practices provide that fringe benefits be treated as direct costs. Otherwise, fringe benefits should be included in Line I, Indirect costs.</p>					
<p><b>Line D: Equipment</b></p>	<p><b>(this section will be ignored for a SBIR Phase I)</b> Equipment may NOT be purchased on an NSF SBIR Phase I grant. Equipment is defined as an item of property that has an acquisition cost of \$5,000 or more (unless the organization has established lower levels) and an expected service life of more than one year.</p>					
<p><b>Line E.1: Travel</b></p>	<p>One domestic travel trip for up to two persons (the PI is required to attend, and we recommend also including an individual who leads the related business/commercial efforts, if not the PI) should be budgeted to attend a two-day Grantee Conference in the DC area.</p>					

**Proposal Compliance Matrix - NSF Phase I**

	<p>The intent of this workshop is to discuss the research program with the cognizant Program Director, learn about preparing a Phase II proposal, and hear from experts on various topics of interest to technical entrepreneurs. An explicit statement acknowledging attendance at the mandatory grantee workshop is required on the Budget Justification page. A reasonable budget estimate is \$2,000 per person to cover the conference registration fees and travel expenses. Outside of this event, all other budgeted travel must be necessary for the successful execution of the Phase I R&amp;D. Travel for purposes other than the project R&amp;D (e.g. marketing, customer engagements) is not permitted in the Phase I budget , EXCEPT as permitted for participation in the Beat-the-Odds Boot Camp, see discussion below for Line G.6.</p>						
<p><b>Line E.2: Foreign travel expenses</b></p>	<p><b>(this section will be ignored for a SBIR Phase I)</b> Foreign travel expenses are NOT permitted.</p>						
<p><b>Line F: Participant Support Costs</b></p>	<p><b>(this section will be ignored for a SBIR Phase I)</b> Participant support costs are NOT permitted on an NSF SBIR/STTR Phase I grant.</p>						
<p><b>Line G.1: Materials and Supplies</b></p>	<p>Materials and supplies are defined as tangible personal property, other than equipment, costing less than \$5,000, or other lower threshold consistent with the policy established by the proposing organization. The proposal Budget Justification should indicate the specifics of the materials and supplies required, including an estimated cost for each item. Items with a total cost exceeding \$5,000 may require pricing documentation (e.g. quote, link to online price list, prior purchase order or invoice) after the proposal is reviewed, as part of the NSF SBIR/STTR Program Director's due diligence efforts. <i>Please see section VI (NSF SBIR/STTR Phase I Award Considerations) for details.</i></p>						
<p><b>Line G.2: Publication Costs/Docu</b></p>	<p><b>(this section will be ignored for a SBIR Phase I)</b> Publication Costs/Documentation costs are NOT permitted on a Phase I proposal.</p>						

**Proposal Compliance Matrix - NSF Phase I**

<b>mentation Costs</b>							
<b>Line G.3: Consultant Services</b>	<p>Consultant services include specialized work that will be performed by professionals that 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 an equity holder, 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 carried out in the U.S. (Place of Performance is defined as: For both Phases I and II, all research must be performed in the United States. "United States" means the 50 states, the territories and possessions of the U.S. Federal Government, the Commonwealth of Puerto Rico, the District of Columbia, the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau). Note these other guidelines around the use of consultants:</p>						
	<p><b>1. Letters of Collaboration</b> Each consultant, whether paid or unpaid, must provide a signed statement that confirms availability, time commitment, role in the project, and the agreed consulting rate (not to exceed \$1,000 per day; see below). Provide this letter as part of the Supplementary Documents. Multiple letters should be combined as a single PDF before uploading.</p>						
	<p><b>2. Consultant Rate</b> The consulting rate under this solicitation can be a maximum of \$1,000 per day (NSF defines a day as 8 hours). Consultant travel should be shown under the domestic travel category, E-1, but counts as an outsourcing expense for the purpose of determining whether the small business concern meets the minimum level of effort for an NSF SBIR/STTR proposal.</p>						
	<p><b>3. Biographical Sketch</b></p>						

**Proposal Compliance Matrix - NSF Phase I**

	Biographical sketches for each consultant may be requested by the NSF SBIR/STTR Program Director after the proposal is reviewed, as part of their due diligence efforts. <i>Please see section VI (NSF SBIR/STTR Phase I Award Considerations) for details.</i>						
<b>Line G.4: Computer Services</b>	Funds may be allocated for computer services. Requested items with a total cost exceeding \$5,000 should be accompanied by pricing documentation (e.g. quote, link to online price list, prior purchase order or invoice), to be included in the budget justification.						
<b>Line G.5: Subawards</b>	Subawards may be utilized when a significant portion of the work will be performed by another organization and when the work to be done is not widely commercially available. Work performed by a university or research laboratory is one example of a common subaward. A subawardee research institution partner is mandatory for STTR proposals. Explicitly list who the research partner will be and provide a brief description of the work they will perform. A minimum of 40% of the research, as measured by the budget, must be performed by the small business concern and a minimum of 30% of the research, as measured by the budget, must be performed by the subawardee research institution, with the balance permitted to be allocated to either of these, or to other subawards or consultants. Purchases of analytical services, other services, or fabricated components from commercial sources should not be listed under subawards and should instead be reported in the budget under Other Direct Costs/Other (Line G.6). No person who is an equity holder, employee, or officer of the proposing small business may be paid under a subaward unless an exception is recommended by the NSF SBIR/STTR Program Director and approved by the TI Division Director. Subawards require a separate subaward budget and subaward budget justification, in the same format as the main budget. Subawardees (the institution, not the individual PI or researcher) should also provide a letter of commitment that confirms the role of the subaward organization in the project and explicitly states the subaward amount. Provide this letter as part of the Supplementary Documents. Multiple letters should be combined as a single PDF before uploading. For NSF SBIR proposals,						

**Proposal Compliance Matrix - NSF Phase I**

	<p>subaward funds do not count as funds spent by the small business The total amount requested for subawards (when added to consultant funds) cannot exceed 1/3 of the total project budget.</p>					
<p><b>Line G.6: Other</b></p>	<p>This line includes the purchase of analytical services, other services, or fabricated components from commercial sources. Requested items with a total cost exceeding \$5,000 should be accompanied by pricing documentation (e.g. quote, link to online price list, prior purchase order or invoice), to be included in the budget justification.</p> <p>In addition to the above, there are two other activities for which NSF permits the inclusion of additional funds on the G.6 budget line. The funds noted below may <b>ONLY</b> be spent on the commercial or business purposes explicitly permitted below.</p> <p>Firstly, the proposer may budget up to \$10,000 as a direct charge on line G.6 to this Phase I award for the following specific purposes related to financials and accounting:</p> <ol style="list-style-type: none"> <li>1. Hiring a certified public accountant (CPA) to prepare audited, compiled, or reviewed financial statements</li> <li>2. Hiring a CPA to perform an initial financial viability assessment based on standard financial ratios so the awardee organization would have time to improve their financial position prior to submitting the Phase II proposal</li> <li>3. Hiring a CPA to review the adequacy of the awardee’s project cost accounting system</li> <li>4. Purchasing a project cost accounting system</li> </ol> <p>If the proposer elects to budget funds for one of the above purposes, the budget justification should include a brief description of the desired use of funds, and the use of funds must be approved by the cognizant Program Director, prior to award.</p> <p>Second, the proposer may budget up to an additional \$20,000 (\$10,000 if there is no subaward) to cover costs related to NSF' "Beat-The-Odds Boot Camp" which is offered to all Phase I</p>					



**Proposal Compliance Matrix - NSF Phase I**

	<p>awardees. This program is based on the NSF's <a href="#">Innovation Corps</a> program, and more information can be found <a href="#">here</a>. All NSF SBIR/STTR Phase I awardees are strongly encouraged to participate in this activity. The PI and research team of a subaward to a research institution or university are strongly encouraged to participate and also should separately allocate \$10,000 in direct costs (and therefore the total budget for the Boot Camp would be \$20,000). Costs that are allowable are limited to travel costs related to customer discovery as part of the Boot Camp (this could include costs associated with registration/attendance at events for the purpose of customer discovery) and salary/wages for team members who participate in the Boot Camp. All costs related to the Boot Camp must be in line with approved salary rates and other relevant Federal guidelines. International travel cannot be reimbursed, nor can any salary/wages for work done while outside of the United States. NSF recommends that, for the purposes of the proposal budget, proposers that plan to participate in this activity simply list this as "Boot Camp" costs in the Budget Justification.</p>					
<p><b>Line I: Indirect Costs</b></p>	<p>Indirect costs are defined as costs that are necessary and appropriate for the operation of the business, but which are not specifically allocated to the NSF SBIR project. Common indirect cost expenses include legal and accounting expenses, employee health insurance, fringe benefits, rent, and utilities. If your small business has a Federally negotiated rate, please provide a copy of the negotiated indirect cost rate agreement. If your organization has no negotiated rate with a federal agency, and no previous experience with Federal indirect cost rate negotiation, you may claim (without requiring a justification) a total amount of indirect costs (inclusive of fringe benefits) equal to either 50% of total budgeted salary and wages on the project or 10% de minimis on MODIFIED total direct costs on the project. <i>Modified Total Direct Cost (MTDC): MTDC means all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition</i></p>					

**Proposal Compliance Matrix - NSF Phase I**

	<i>remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of \$25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.</i>						
<b>Line K: Small Business Fee</b>	Up to seven percent (7%) of the total indirect and direct project costs may be requested as a fee. The fee is intended to be consistent with normal profit margins provided to profit-making firms for R&D work. The fee applies solely to the small business concern receiving the award and not to any other participant in the project. The fee is not a direct or indirect "cost" item and may be used by the small business concern for any purpose, including additional effort under the SBIR award (i.e., the "Prohibited Expenditures" list does not apply).						
<b>Prohibited Expenditures</b>	<b>(including but not limited to Lines D, E.2, F, and G.2)</b> Equipment, patent expenses, and foreign travel are not allowable expenditures as either direct or indirect costs. However, these expenses may be purchased from the small business fee funds (line K).						
<p><b>7. Budget Justification.</b> The Budget Justification is uploaded in the Budget Module of <a href="http://research.gov/">http://research.gov/</a> as a single PDF file. Provide details for each non-zero line item of the budget, including a description and cost estimates. Identify each line item by its letter and number (e.g., G.5 - Subawards). Each non-zero line item should be described in the Budget Justification, but several sections also require more specific information as detailed below. <b>There is a five-page limit each for the Budget and Subaward Budget Justification.</b> Any letters of commitment from institutions proposed as subawardees in the effort, or individuals proposed as consultants in the effort, should be included in the "Supplementary Documents" section of the proposal, not in the Budget Justification. You can find a sample budget and subaward budget, with justifications, here <a href="http://research.gov/">http://research.gov/</a>.</p>							
<b>Lines A and B: Personnel</b>	Provide the names and titles of all personnel and a concise description of their responsibilities on the project, including their budgeted time commitment. Provide the actual annual salary information and calculation that justifies the amounts requested.						
<b>Line C: Fringe Benefits</b>	Describe what is included in fringe benefits and the calculations that were used to arrive at the amount requested. It is recommended that proposers allot funds for fringe benefits here ONLY if the proposer's usual (established) accounting practices provide that fringe benefits be treated as direct costs. Otherwise, fringe benefits should be included in Line I (Indirect Costs).						

**Proposal Compliance Matrix - NSF Phase I**

<b>Line E.1: Domestic Travel</b>	Describe the purpose for domestic travel and acknowledge attendance at the grantee workshop. For trips other than the grantees conference, include the expected number of trips, number of persons travelling, length of each trip, purpose and destination of each trip, and a rough breakdown of the expected cost of each trip.						
<b>Line G.1: Materials and Supplies</b>	Provide an itemized list of the materials and supplies, with the quantity, unit cost, and total cost for each item. Items with a total line item cost over \$5,000 may require quote or pricing documentation after the proposal has been reviewed, as part of the NSF SBIR/STTR Program Director's due diligence efforts. Please see section VI (NSF SBIR/STTR Phase I Award Considerations) for details.						
<b>Line G.3: Consultant Services</b>	Include a copy of the signed Letter of Commitment in the proposal's "Supplementary Documents" section.						
<b>Line G.5: Subawards</b>	Include a few sentences describing the scope and objective of the subaward.						
<b>Line G.6: Other</b>	Any single cost of more than \$5,000 in this line may require pricing documentation (e.g. a quote, past purchase order, link to online price list) after the proposal has been reviewed.						
<b>Line I: Indirect Costs</b>	Provide the calculations that were used to arrive at the amount requested. Please briefly indicate the major cost categories that are included as indirect costs.						
<b>Line K: Small Business Fee</b>	Provide the calculation that was used to arrive at the amount requested.						

**8. Current and Pending Support of Principal Investigator and Senior Personnel**

Information in this module is collected so that reviewers have visibility into the potential availability of company personnel during the period of performance if awarded. All SBIR/STTR proposals submitted to NSF are required to include Current and Pending Support for each PI, co-PI (if STTR), and Senior Personnel using the form found [here](#). Step-by-step guidance can also be found [here](#).

**1. Types of Support / Activities.**

For the PI and each of the senior personnel listed on line A or B of the budget, provide information regarding each of the following that could require effort during the proposed Phase I performance period, regardless of whether the person will receive a salary from the activity:

- All current and pending support for ongoing projects and proposals (from any source, including in kind support or equity investment), including continuing grant and contract funding.

## Proposal Compliance Matrix - NSF Phase I

- Proposals submitted to other agencies. Concurrent submission of a proposal to other organizations will not influence the review of the proposal submitted to NSF.
- Upcoming submissions.
- The Phase I proposal being submitted is considered "pending" and therefore MUST appear in the Current and Pending Support form for each PI and Senior Personnel

### 2. Information Needed.

For each listed item, please include the following information:

- Name of sponsoring organization.
- Total award amount (if already awarded) or expected award amount (if pending) for the entire award period covered (including indirect costs).
- Title and performance period of the proposal or award.
- Annual person-months (calendar months) devoted to the project by the PI or senior personnel.

### 9. Collaborators & Other Affiliations Information

For the PI and each of the senior personnel, list all institutional affiliations (other employers, consulting relationships, officer/director/trustee roles, etc.) and collaborators (co-authors, scientific partners, student/advisor relationships) that have occurred in the last four years, using the using the instructions and spreadsheet template found at <https://nsf.gov/bfa/dias/policy/coa.jsp>. This document will not be viewable by reviewers but will be used by NSF to help identify potential conflicts or bias in the selection of reviewers. Also see guidance in the [PAPPG](#).

### 10. Facilities, Equipment and Other Resources

Specify the availability and location of significant equipment, instrumentation, computers, and physical facilities necessary to complete the portion of the research that is to be carried out by the proposing firm in Phase I. **Purchase of equipment is NOT permitted in a Phase I project.** If the equipment, instrumentation, computers, and facilities for this research are not the property (owned or leased) of the proposing firm, include a statement signed by the owner or lessor which affirms the availability of these facilities for use in the proposed research, reasonable lease or rental costs for their use, and any other associated costs. Upload images of the scanned statements into this section.

### 11. Supplementary Documents

The supplementary documents permitted in a Phase I proposal are limited to the following (if applicable). The Data Management Plan and Mentoring Plan have their own dedicated modules within the "Supplementary Documents" section of <http://research.gov/>. All the other items below, if included, should be uploaded in the "Other Supplementary Docs" section. Please ignore the modules entitled "Project Summary with Special Characters", "GOALI - Industrial PI Confirmation Letter", and "RAISE - Program Officer Concurrence Emails".

<b>S1. Data Management Plan</b>	<p><b>(required)</b> Proposals MUST contain a supplementary document labeled "Data Management Plan (DMP)", which should include the statement, "All data generated in this SBIR Phase I project is considered proprietary." This single sentence is sufficient to fulfill the DMP requirement, but applicants may add more detail about how the resulting data will be managed if they desire.</p>					
---------------------------------	--	--	--	--	--	--

**Proposal Compliance Matrix - NSF Phase I**

<p><b>S2. Mentoring Plan</b></p>	<p><b>(required if the budget includes subawards requesting funds for postdoctoral scholars)</b>                  If a proposal requests funding to support post-doctoral scholars at a research institution (through a subaward), a Postdoctoral Mentoring Plan MUST be uploaded to the system. Describe only the mentoring activities that will be provided to all postdoctoral researchers supported by the project. See more information and instructions on this requirement in the PAPPG <a href="#">here</a>.</p>					
<p><b>S3. Letter(s) of Support</b></p>	<p><b>(strongly recommended; no more than three letters)</b>                  Letters of support act as an indication of market validation for the proposed innovation and add significant credibility to the proposed effort. Letters of support should demonstrate that the company has initiated dialogue with relevant stakeholders (potential customers, strategic partners or investors) for the proposed innovation and that a legitimate business opportunity may exist should the technology prove feasible. The letter(s) must contain affiliation and contact information for the signatory stakeholder. Letters and supporting documents from consultants and subcontractors (or any personnel identified in the preliminary Budget Justification) are NOT considered letters of support and instead should be included in the preliminary Budget Justification section.</p>					
<p><b>S4. Company Commercialization History</b></p>	<p><b>(if applicable)</b>                  A Company Commercialization History is required for all proposers certifying receipt of previous Phase II awards from any Federal agency on the third page of the Cover Page in question # 11. The <a href="#">NSF Commercialization History Template</a> MUST be used. All items must be addressed in the format outlined in this template. Changes to the NSF template, additional narratives and/or commercialization history documents from other agencies are not permitted.</p>					
<p><b>S5. Human Subjects Documentation</b></p>	<p><b>(if applicable)</b>                  Projects involving research with human subjects must ensure that subjects are protected from research risks in conformance with the relevant Federal policy known as the Common Rule (<i>Federal Policy for the Protection of Human Subjects</i>, 45 CFR 690). All projects involving human subjects must either (1) have approval from an</p>					

**Proposal Compliance Matrix - NSF Phase I**

	<p>Institutional Review Board (IRB) before issuance of an NSF award; or, (2) must affirm that the IRB has declared the research exempt from IRB review, in accordance with the applicable subsection, as established in section 101(b) of the Common Rule. If certification of exemption is provided after submission of the proposal and before the award is issued, the exemption number corresponding to one or more of the exemption categories also must be included in the documentation provided to NSF. The small business has three basic options with regard to human subjects review:</p> <ol style="list-style-type: none"> <li>1. Establish your own IRB (see Office of Human Rights Protection (OHRP) at Health and Human Services (HHS). See: <a href="https://www.hhs.gov/ohrp/irbs-and-assurances.html#registernew">https://www.hhs.gov/ohrp/irbs-and-assurances.html#registernew</a>)</li> <li>2. Use the review board of a (usually local) university or research institution, either via consultants to the project, a project subcontract, or directly through its own contacts;</li> <li>3. Use a commercial provider.</li> </ol> <p>For projects lacking definite plans for the use of human subjects, their data or their specimens, pursuant to 45 CFR § 690.118, NSF can accept a determination notice that establishes a limited time period under which the PI may conduct preliminary or conceptual work that does not involve human subjects. See more information and instructions regarding this documentation in the PAPPG <a href="#">here</a>.</p>					
<p><b>S6. Vertebrate Animals Documentation</b></p>	<p><b>(if applicable)</b> Any project proposing use of vertebrate animals for research or education shall comply with the Animal Welfare Act (7 USC 2131, et seq.) and the regulations promulgated thereunder by the Secretary of Agriculture (9 CFR 1.1 -4.11 ) pertaining to the humane care, handling, and treatment of vertebrate animals held or used for research, teaching or other activities supported by Federal awards. In accordance with these requirements, proposed projects involving use of any vertebrate animal for research or education must be approved by the submitting organization's Institutional Animal Care and Use Committee (IACUC) before an award can be made. For this approval to be accepted by NSF, the organization must have a</p>					

## Proposal Compliance Matrix - NSF Phase I

	current Public Health Service (PHS) Approved Assurance. See also <a href="#">Chapter XI.B.3</a> for additional information on the administration of awards that utilize vertebrate animals.						
<b>S7. Letters of Commitment from Subawardees and Consultants</b>	Please refer to section V.A.C "Budget and Subaward Budgets" for details.						
<b>S8. Resubmission on Change Description</b>	<b>(if applicable; no more than one page)</b> A declined proposal may be resubmitted, but only after it has undergone substantial revision. A resubmitted proposal that has not clearly taken into account the major comments or concerns resulting from the prior NSF review may be returned without review. The Foundation will treat the revised proposal as a new proposal, subject to the standard review procedures. If a Phase I proposing company indicates on the Cover Sheet that the proposal is a resubmission, the proposal must include a one-page maximum document in the Other Supplementary Documents module detailing the substantial revisions that have been made to the original submission.						

### 12. Additional Single Copy Documents

In addition to completing the "Collaborators and Other Affiliations" section, proposers must submit a copy of the email invitation from an NSF Program Director – in response to a submitted Project Pitch – inviting the company to submit a full proposal. Please convert this invitation email to a PDF before uploading. Proposers are also welcome to include suggestions of reviewers to include (or not to include) in the "List of Suggested Reviewers" module. Other than these items, no other information or documents should be included in this section.

<sup>i</sup> A given small business is permitted to submit up to two unique Project Pitches per solicitation window (please refer to submission window dates listed at the beginning of this solicitation document). However, a second Project Pitch can be submitted in a given window only if the first did not lead to a full proposal invite. Additional Project Pitch documents submitted during the same solicitation window will not be reviewed. Any small business with a pending Project Pitch must wait for a response before submitting another Project Pitch. Any small business that has received an invitation to submit a full proposal must wait for a resolution of the full proposal before submitting a new (or revised) Project Pitch. Proposers are encouraged to submit the Project Pitch document as early as possible. The sooner a Project Pitch is received, the sooner an invited proposal may be submitted and considered for possible funding. Please note that potential proposers who do not receive an invitation to submit a proposal are not eligible to apply for Phase I funding. Proposals submitted without an invitation will be returned without review. Please note that responsiveness of NSF SBIR/STTR Program Directors will be limited as the full proposal submission

## Proposal Compliance Matrix - NSF Phase I

---

window closing date approaches. Proposers are encouraged to submit the Project Pitch document well in advance of the end of a submission window. A Project Pitch submission within six weeks of the full proposal submission window closing date (see top of this document for exact dates) may not allow enough time for a final decision, required registrations, and sufficient time to prepare/submit a high-quality full proposal. Small Businesses that submit a Project Pitch within six weeks of the full proposal submission window closing date may not, even if invited to submit, have sufficient time to prepare a full proposal by the end of that same submission window. Submitting to the next submission window is permitted, but may adversely impact the full proposal review timeline.