**DARPA Small Business Innovation Research (SBIR) and**

**Small Business Technology Transfer (STTR)**

**PHASE I TEMPLATE – VOLUME 2: TECHNICAL VOLUME**

These instructions and template apply to the Defense Advanced Research Projects Agency (DARPA) Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) Phase I Opportunities announced under the DoD SBIR 2024.4 and STTR 2024.D BAAs.

The template (beginning on the following page) is the format model that may be used to prepare the Phase I Technical Volume. Do not include the instructions provided on this page or any bracketed [ ] guidance in the template.

**Disclosure**

Offerors that include in their proposals data which they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, must:

(1) Mark the first page of each Volume of the Submission with the following legend:

"This proposal includes data that must not be disclosed outside the Government and must not be duplicated, used, or disclosed-in whole or in part-for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of-or in connection with-the submission of this data, the Government has the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in pages [insert numbers or other identification of sheets]"; and

(2) Mark each sheet of data it wishes to restrict with the following legend:

"Use or disclosure of data contained on this page is subject to the restriction on the first page of this volume."

**I. STANDARD FORMAT (25 pages)**

**Format**

The Technical Volume shall meet the following requirements:

* Not to exceed page count specified in the corresponding DARPA SBIR/STTR Instructions, regardless of page content
* Single column format, single-spaced typed lines
* Standard 8 ½” x 11” paper format
* Page margins must be one-inch on all sides. A header and footer may be included in the one-inch margin.
* Font style of Times New Roman
* No font smaller than 10-point\*

\*For headers, footers, imbedded tables, figures, images, or graphics that include text, a font size of smaller than 10-point is allowable, though proposers are cautioned that the text may be unreadable by evaluators.

Unless otherwise noted, any and all content in the Technical Volume will count toward the limit.

The DoD Submission Web site includes a section labeled Volume 5: Supporting Documents. Volume 5 is provided for small businesses to submit additional documentation to support the Technical Volume (Volume 2) and the Cost Volume (Volume 3). Each topic will outline any Volume 5 allowances or requirements.

***Delete this instruction page and begin the Technical Volume starting with the following page.***

**[Title]**

**Volume 2: Technical Volume**

[Note: Remove the disclosure statement below if not applicable to your proposal. Refer to Instructions.]

This proposal includes data that must not be disclosed outside the Government and must not be duplicated, used, or disclosed – in whole or in part – for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of – or in connection with – the submission of this data, the Government has the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in pages <insert numbers or other identification of sheets>.

1. **Identification and Significance of the Problem or Opportunity.**

[Define the specific technical problem or opportunity addressed and its importance.]

1. **Phase I Technical Objectives.**

[Enumerate the specific objectives of the Phase I work, including the questions the research and development effort will try to answer to determine the feasibility of the proposed approach.]

1. **Phase I Statement of Work (include Subcontractors and/or Research Institutions).**
2. [Provide an explicit, detailed description of the Phase I approach. The Statement of Work should indicate what tasks are planned, how and where the work will be conducted, a schedule of major events, and the final product(s) to be delivered. The Phase I effort should attempt to determine the technical feasibility of the proposed concept. The methods planned to achieve each objective or task should be discussed explicitly and in detail. This section should be a substantial portion of the Technical Volume.
3. The topic may have been identified by the Program Manager as research or activities involving Human/Animal Subjects and/or Recombinant DNA. In the event that Phase I performance includes performance of these kinds of research or activities, please identify the applicable protocols and how those protocols will be followed during Phase I. Please note that funds cannot be released or used on any portion of the project involving human/animal subjects or recombinant DNA research or activities until all of the proper approvals have been obtained (see DoD SBIR 2024.4 and STTR 2024.D BAAs for more information).]
4. **Related Work.**

[Describe significant activities directly related to the proposed effort, including any conducted by the principal investigator, the proposing firm, consultants, or others. Describe how these activities interface with the proposed project and discuss any planned coordination with outside sources. The Technical Volume must persuade evaluators of the proposer's awareness of the state of the art in the topic. Describe any previous work not directly related but similar to the proposed effort. Provide the following: (1) a short description, (2) the client for which work was performed (including the Government Point of Contact to be contacted including e-mail address and phone number), and (3) date of performance including project completion.]

1. **Relationship with Future Research or Research and Development.**
2. [State the anticipated results of the proposed approach if the project is successful.
3. Discuss the significance of the Phase I effort in providing a foundation for a Phase II research or research and development effort.
4. Identify the applicable clearances, certifications and approvals required to conduct Phase II testing. Outline the plan for ensuring timely completion of stated authorizations in support of a Phase II research or research and development effort.]
5. **Key Personnel.**

[Identify key personnel who will be involved in the Phase I effort including information on directly related education and experience. A concise technical resume of the principal investigator, including a list of relevant publications (if any), must be included (Please do not include Privacy Act Information). All resumes will count toward the page limit for Volume 2, as specified in the DARPA Instructions.]

**[Principal Investigator Name]**

**[School, Degree, Year]**

**Relevant Experience**

[A concise description of the principal investigator’s relevant technical experience and its application to this topic.]

**Relevant Awards or Patents**

[List any awards received or patents granted or applications submitted for work related to this topic.]

**Relevant Publications**

[List any publications relevant to this topic.]

[Repeat this format as necessary to address the qualifications of all key personnel.]

1. **Foreign Citizens.**

[Identify any foreign citizens or individuals holding dual citizenship expected to be involved on this project as a direct employee, subcontractor, or consultant. For these individuals, please specify their country of origin, the type of visa or work permit under which they are performing and an explanation of their anticipated level of involvement on this project. Refer to the DoD SBIR 2024.4 and STTR 2024.D BAAs for more information. Supplemental information provided in response to this paragraph will be protected in accordance with the Privacy Act (5 U.S.C. 552a), if applicable, and the Freedom of Information Act (5 U.S.C. 552(b)(6)). Note: If no foreign nationals will be involved in proposed work, the word “None” can be substituted for the table.]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name[include direct employees, subcontractors, and consultants] | Foreign National (Yes/No) | Country of Origin | Type of Visa or Work Permit | Level of Involvement (Role) |
|  |  |  |  |  |
|  |  |  |  |  |

1. **Facilities/Equipment.**

[Describe available instrumentation and physical facilities necessary to carry out the Phase I effort. Justify equipment purchases in this section and include detailed pricing information in the Cost Volume. State whether or not the facilities where the proposed work will be performed meet environmental laws and regulations of federal, state (name), and local Governments for, but not limited to, the following groupings: airborne emissions, waterborne effluents, external radiation levels, outdoor noise, solid and bulk waste disposal practices, and handling and storage of toxic and hazardous materials.]

1. **Subcontractors/Consultants.**

[Propose efforts as applicable to either SBIR or STTR as follows:

**SBIR**. Involvement of a university or other subcontractors or consultants in the project may be appropriate. If such involvement is intended, it should be identified and described according to the Cost Breakdown Guidance offered in the DoD SBIR 2024.4 BAA. A minimum of two-thirds of the research and/or analytical work in Phase I, as measured by direct and indirect costs, must be carried out by the proposing small business firm, unless otherwise approved in writing by the Contracting Officer. SBIR efforts may include subcontracts with Federal Laboratories and Federally Funded Research and Development Centers (FFRDCs). A waiver is not required for the use of Federal Laboratories and FFRDCs; however, proposers must certify their use of such facilities in Volume 1: Proposal Cover Sheet. Subcontracts with other Federal organizations are not permitted. Note that universities cannot publicly release information related to Export Controlled/ITAR restricted topics. (See the DoD SBIR 2024.4 BAA for detailed eligibility requirements as it pertains to the use of subcontractors/consultants.)

**STTR**. Involvement of a Research Institution in the project is required and the Research Institution should be identified and described according to the Cost Breakdown Guidance offered in the DoD STTR 2024.D BAA. A minimum of 40% of the research and/or analytical work in Phase I, as measured by direct and indirect costs, must be conducted by the proposing small business firm, and a minimum of 30% of the research and/or tasks in Phase I, as measured by direct and indirect costs, must be conducted by a single Research Institution. STTR efforts may include subcontracts with Federally Funded Research and Development Centers (FFRDCs). A waiver is no longer required for the use of Federal Laboratories but they do not qualify as a Research Partner; proposers may only subcontract to Federal Laboratories within the remaining 30% and must certify their use of such facilities in Volume 1: Proposal Cover Sheet. Subcontracts with other Federal organizations are not permitted. Note that universities cannot publicly release information related to Export Controlled/ITAR restricted topics. (See the DoD STTR 2024.D BAA for detailed eligibility requirements as it pertains to the use of subcontractors/consultants.)]

1. **Prior, Current or Pending Support of Similar Proposals or Awards.**

[If a proposal submitted in response to a corresponding topic is substantially the same as another proposal that was funded, is now being funded, or is pending with another Federal Agency, or another DoD Component or DARPA, you must reveal this on Volume 1: Proposal Cover Sheet and provide the following information:

* 1. Name and address of the Federal Agency(s) or DoD Component to which a proposal was submitted, will be submitted, or from which an award is expected or has been received.
	2. Date of proposal submission or date of award.
	3. Title of proposal.
	4. Name and title of principal investigator for each proposal submitted or award received.
	5. Title, number, and date of BAA(s) or solicitation(s) under which the proposal was submitted, will be submitted, or under which award is expected or has been received.
	6. If award was received, provide contract number.
	7. Specify the applicable topics for each proposal submitted or award received.

Note: If this does not apply, state in the proposal "No prior, current, or pending support has been provided for proposed work."]

1. **Technical Data Rights.**

**SBIR**. [Rights in technical data, including software, developed under the terms of any contract resulting from proposals submitted in response to the DoD SBIR 2024.4 BAA generally remain with the contractor, except that the Government obtains a royalty-free license to use such technical data only for Government purposes during the period commencing with contract award and ending twenty years after completion of the project under which the data were generated. This data must be marked with the restrictive legend specified in Class Deviation 2020-O0007. Upon expiration of the twenty-year restrictive license, the Government has unlimited rights in the SBIR data. During the license period, the Government may not release or disclose SBIR data to any person other than its support services contractors except: (1) For evaluation purposes; (2) As expressly permitted by the contractor; or (3) For use, release, or disclosure that is necessary for emergency repair or overhaul of items operated by the Government. See Class Deviation 2020-O0007 – Protection of Technical Data and Software Under Small Business Innovation Research Program Contracts.

If a proposer plans to submit assertions in accordance with Class Deviation 2020-O0007, those assertions must be identified and assertion of use, release, or disclosure restriction must be included with your proposal submission. The contract cannot be awarded until assertions have been approved. Please note that only the table is included in the page limitation; any supporting data concerning the contract/grant number and awarding agency, as well as planned use or need of the data asserted, can be provided in Volume 5, Supporting Documents.

**STTR.** [Rights in technical data, including software, developed under the terms of any contract resulting from proposals submitted in response to the DoD STTR 2024.D BAA generally remain with the contractor, except that the Government obtains a royalty-free license to use such technical data only for Government purposes during the period commencing with contract award and ending five years after completion of the project under which the data were generated. This data must be marked with the restrictive legend specified in DFARS 252.227-7018. Upon expiration of the five-year restrictive license, the Government has unlimited rights in the STTR data. During the license period, the Government may not release or disclose STTR data to any person other than its support services contractors except: (1) For evaluation purposes; (2) As expressly permitted by the contractor; or (3) For use, release, or disclosure that is necessary for emergency repair or overhaul of items operated by the Government. See DFARS clause 252.227-7018, "Rights in Noncommercial Technical Data and Computer Software – Small Business Innovation Research (SBIR) Program."

If a proposer plans to submit assertions in accordance with DFARS 252.227-7017 or Class Deviation 2020-O0007, those assertions must be identified and assertion of use, release, or disclosure restriction must be included with your proposal submission. The contract cannot be awarded until assertions have been approved. Please note that only the table is included in the page limitation; any supporting data concerning the contract/grant number and awarding agency, as well as planned use or need of the data asserted, can be provided in Volume 5, Supporting Documents.

The following instructions apply to the fields in the table below (Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software).

1. For technical data (other than computer software documentation) pertaining to items, components, or processes developed at private expense, identify both the deliverable technical data and each such item, component, or process. For computer software or computer software documentation identify the software or documentation.
2. Generally, development at private expense, either exclusively or partially, is the only basis for asserting restrictions. For technical data, other than computer software documentation, development refers to development of the item, component, or process to which the data pertain. The Government's rights in computer software documentation generally may not be restricted. For computer software, development refers to the software. Indicate whether development was accomplished exclusively or partially at private expense. If development was not accomplished at private expense, or for computer software documentation, enter the specific basis for asserting restrictions.
3. Enter asserted rights category (e.g., Government purpose license rights from a prior contract, rights in SBIR/STTR data generated under another contract, limited, restricted, or government purpose rights under this or a prior contract, or specially negotiated licenses).
4. Corporation, individual, or other person, as appropriate.

Enter “none” when all data or software will be submitted without restrictions.]

1. **Identification and Assertion of Restrictions on the Government's Use, Release, or Disclosure of Technical Data or Computer Software.**

*The Offeror asserts for itself, or the persons identified below, that the Government's rights to use, release, or disclose the following technical data or computer software should be restricted:*

|  |  |  |  |
| --- | --- | --- | --- |
| Technical Data or Computer Software to be Furnished with Restrictions | Basis for Assertion | Asserted Rights Category | Name of Person or Organization Asserting Restrictions |
| [(LIST)]  | [(LIST)] | [(LIST)] | [(LIST)] |

 [Completion of this table and submission of the proposal constitutes signature for the information listed in the table above.]

1. **Commercialization Strategy.**

[DARPA is equally interested in dual use commercialization of SBIR/STTR project results to the U.S. military, the private sector market, or both, and expects explicit discussion of key activities to achieve this result in the transition and commercialization strategy part of the proposal. Phase I is the time to plan for and begin transition and commercialization activities. The small business must convey an understanding of the market, competitive landscape, potential stakeholders and end-users, and preliminary transition path or paths to be established during the Phase I project.

The Phase I transition and commercialization strategy shall not exceed 5 pages and will NOT count against the proposal page limit. It should be the last section of the technical volume and include the following elements:

1. **A summary of transition and commercialization activities conducted during prior SBIR/STTR efforts if applicable, and the Technology Readiness Level (TRL) achieved.**
2. **Problem or Need Statement.** Briefly describe the problem, need, or requirement, and its significance relevant to a Department of Defense application and/or a private sector application that the SBIR/STTR project results would address. Is there a broader societal need you are trying to address? Please describe.
3. **Description of Product(s) and/or System Application(s).** Identify the commercial product(s) and/or DoD system(s), or system(s) under development, or potential new system(s). Identify the potential DoD end- users, Federal customers, and/or private sector customers who would likely use the technology.
4. **Business Model(s)/Procurement Mechanism(s).** Discuss your current business model hypothesis for bringing the technology to market. Describe plans to license, partner, or self-produce your product. How do you plan to generate revenue? Describe the resources you expect will be needed to implement your business models. Discuss your plan and expected timeline to secure these resources. Understanding DARPA’s goal of creating and sustaining a U.S. military advantage, describe how you intend to develop your product and supply chains to enable this differentiation.
5. **Target Market.** Describe the market and addressable market for the innovation. Describe the customer sets you propose to target, their size, their growth rate, and their key reasons they would consider procuring the technology. Discuss the business economics and market drivers in the target industry. Describe competing technologies existent today on the market as well as those being developed in the lab. How has the market opportunity been validated? Describe the competition. How do you expect the competitive landscape may change by the time your product/service enters the market?
6. **Funding Requirements.** Describe your company’s funding history. How much external financing have you raised? Describe your plans for future funding sources (internal, loan, angel, venture capital, etc.).
7. **Transition and Commercialization Risks.** Describe the major technology, market and team risks associated with achieving successful transition and commercialization of the DARPA funded technology. DARPA is not afraid to take risks but we want to ensure that our awardees clearly understand the risks in front of them. What are the key risks in bringing your innovation to market? What are actions you plan to undertake to mitigate these risks?
8. **Expertise/Qualifications of Team/Company Readiness.** Describe the expertise and qualifications of your management, marketing/business development and technical team that will support the transition of the technology from the prototype to the commercial market and into government operational environments. Has this team previously taken similar products/services to market? If the present team does not have this needed expertise, how do you intend to obtain it? What is the financial history and health of your company (e.g., availability of cash, profitability, revenue growth, etc.)?
9. **Anticipated Transition and Commercialization Results.** Include a schedule showing the anticipated quantitative transition and commercialization results from the Phase II project at one year after the start of Phase II, at the completion of Phase II, and after the completion of Phase II (i.e., amount of additional investment, sales revenue, etc.). After Phase II award, the company is required to report actual sales and investment data in its Company Commercialization Report at least annually.

**Advocacy Letters (OPTIONAL)\*** Feedback received from potential Commercial and/or DoD customers and other end-users regarding their interest in the technology to support their capability gaps. Advocacy letters that are faxed or e-mailed separately will NOT be accepted.

**Letters of Intent/Commitment (OPTIONAL)\*** Relationships established, feedback received, support and commitment for the technology with one or more of the following: Commercial customer, DoD PM/PEO, a Defense Prime, or vendor/supplier to the Primes and/or other vendors/suppliers identified as having a potential role in the integration of the technology into fielded systems/products or those under development. Letters of Intent/Commitment that are faxed or e-mailed separately will NOT be accepted.

\*Advocacy Letters and Letters of Intent/Commitment are optional, and should ONLY be submitted to substantiate any transition or commercialization claims made in the commercialization strategy. Please DO NOT submit these letters just for the sake of including them in your proposal. These letters DO NOT count against any page limit.

In accordance with section 3-209 of DOD 5500.7-R, Joint Ethics Regulation, letters from government personnel will NOT be considered during the evaluation process.]

**II. WHITE PAPER & SLIDE DECK FORMAT**

**Format**

The Technical Volume must include two parts. Part one should be a white paper and part two should be a slide deck. These deliverables should be combined as a single Portable Document Format (PDF) for upload to DSIP:

* Type of file: The Technical Volume must be a single PDF file, including graphics. Perform a virus check before uploading the Technical Volume file. If a virus is detected, it may cause rejection of the proposal. Do not lock or encrypt the uploaded file. Do not include or embed active graphics such as videos, moving pictures, or other similar media in the document.
* Length: The length of the white paper shall not exceed 10 pages, and the slide deck shall not exceed 5 pages/slides. The Government will not consider pages in excess of the page count limitations.
* Layout: Number all pages of your proposal consecutively. Font size should not be smaller than 10-point on standard 8-1/2" x 11" paper with one-inch margins. The header on each page of the Technical Volume should contain your company name, topic number, and proposal number assigned by DSIP when the Cover Sheet was created. The header may be included in the one-inch margin.

**PART ONE: White Paper (not to exceed 10 pages)**

Provide the following:

1. Goals and Impact: Clearly describe what is being proposed and what difference it will make (qualitatively and quantitatively), including a brief discussion on how this directly relates to the topic.
2. Technical Plan: Provide an explicit, detailed description of the Phase I approach. The Statement of Work should indicate what tasks are planned, how and where the work will be conducted, a schedule of major events, and the final product(s) to be delivered. The Phase I effort should attempt to determine the technical feasibility of the proposed concept. The methods planned to achieve each objective or task should be discussed explicitly and in detail.
3. Management and Capabilities: Designate key personnel who will be involved in the Phase I effort. Provide a brief summary of expertise of the team, including subcontractors and key personnel. Describe the organizational experience in this technology area, previous work not directly related to the proposed effort but similar, existing intellectual property (IP) required to complete the project, and any specialized facilities to be used as part of the project. List Government-furnished materials or data assumed to be available. Describe any specialized facilities to be used as part of the project, the extent of access to these facilities, and any biological containment, biosafety, and certification requirements.
4. Transition and Commercialization Plan (not to exceed 5 pages):
5. Describe the commercial product or DoD system to be developed.
6. Discuss the potential end users – DoD, Federal, and/or private sector customers. Discuss your business model for this technology (i.e., how to you anticipate generating revenue with this technology?). Who are you selling to directly or indirectly, a supplier, an integrator, or an end user?
7. Describe your company’s funding history. Discuss how much additional funding above this proposed effort (include additional required technology development, staffing requirements, infrastructure requirements, IP strategy costs, etc.) that will be required to bring this technology to market and how you anticipate going about getting that funding (e.g., Govt S&T contracts, investment).
8. Describe the timeline to maturity for sales or transition to an end user. Describe your IP strategy.
9. Describe the technology, market, team and business risks associated with this proposed effort and your plan to mitigate these risks.

**PART TWO: Slide Deck (not to exceed 5 pages)**

Provide the following information (convert the completed deck to a pdf and attach it to the white paper):

1. What are you trying to do and how does this directly relate to the topic?
2. Technology and commercial product: Specifically, what are you proposing to produce – software, system, application? Be specific on what your proposed technology development is targeting as an end state.
3. How is the technology approached today? Who is doing the research, development and delivering products/services? What are the current limitations in the technology and commercial marketplaces?
4. Management: Overview of team, facilities and qualifications.
5. Technical summary quad chart: Use template provided at <https://www.darpa.mil/work-with-us/for-small-businesses/participate-sbir-sttr-program>.

NOTE: All letters of recommendation and CVs can be loaded in Volume 5: Supporting Documents.