

UNITED STATES SPECIAL OPERATIONS COMMAND
23.4 Small Business Innovation Research (SBIR)
Phase I Proposal Submission Instructions
Release 4

August 22, 2023: Topic issued for pre-release

September 6, 2023: USSOCOM begins accepting proposals via DSIP

September 21, 2023: DSIP Topic Q&A closes to new questions at 12:00 p.m. ET

October 5, 2023: Deadline for receipt of proposals no later than 12:00 p.m. ET

Join us for a virtual Q&A with our Technical Point of Contact
September 7, 2023 from 1200 - 1400 EST

INTRODUCTION

The United States Special Operations Command (USSOCOM) seeks small businesses with strong research and development capabilities to pursue and commercialize technologies needed by Special Operations Forces through the Department of Defense (DoD) SBIR 23.4 Program Broad Agency Announcement (BAA).

Offerors responding to a topic in this BAA must follow all general instructions provided in the Department of Defense (DoD) SBIR Program BAA. USSOCOM requirements in addition to or deviating from the DoD Program BAA are provided in the instructions below.

Proposers are encouraged to thoroughly review the DoD Program BAA and register for the DSIP Listserv to remain apprised of important programmatic and contractual changes.

- The DoD Program BAA is located at: <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/#announcements>. Be sure to select the tab for the appropriate BAA cycle.
- Register for the DSIP Listserv at: <https://www.dodsbirsttr.mil/submissions/login>.

The Offeror is responsible for ensuring that their proposal complies with the requirements in the most current version of these instructions. Prior to submitting your proposal, please review the latest version of these instructions as they are subject to change before the submission deadline.

The Government may withdraw from negotiations at any time for any reason to include matters of national security (foreign persons, foreign influence or ownership, inability to clear the firm or personnel for security clearances, or other related issues).

The USSOCOM SBIR/STTR Program Office will be hosting a virtual USSOCOM Industry Day on September 7, 2023 to further specify requirements and stimulate small business/research institute partnership-building. Please visit <https://events.sofwerx.org/sbir23-4r4/> for additional information and to sign up.

PHASE I PROPOSAL GUIDELINES

The Defense SBIR/STTR Innovation Portal (DSIP) is the official portal for DoD SBIR/STTR proposal submission. Offerors are required to submit proposals via DSIP; proposals submitted by any other means will be disregarded. Detailed instructions regarding registration and proposal submission via DSIP are provided in the DoD SBIR Program BAA.

Proposal Volumes are key in the qualification of the proposal. Offerors shall complete each of the following volumes: (1) Cover Sheet, (2) Technical Volume, (3) Cost Volume, (4) Company Commercialization Report, (5) Pitch Day Presentation, and (6) Fraud, Waste and Abuse Training.

Please Note:

1. It is the Offeror's responsibility to make sure all DoD and USSOCOM instructions are followed, and all required documents are submitted. The DSIP (DoD's SBIR/STTR proposal submission website) will NOT be able to ensure your submission is in accordance with both DoD and USSOCOM instructions. The DSIP notice "100% submitted" means that the upload process is complete; it does NOT mean the proposal submission complies with the stated instructions and that all required documentation is successfully uploaded.
2. USSOCOM does not assist Offerors with proposal preparation nor does USSOCOM review proposals for completeness. We recommend you use your local and state resources for assistance. (See DoD Instructions for resources information.)
3. Due to lengthy file names USSOCOM has encountered issues while downloading proposals, Offerors shall not use more than 20 characters (to include spaces) in any of the proposal documents titles.
4. **USSOCOM prohibits a Government Letter of Support (LoS). Any Government LoS provided will deem the proposal to be non-responsive (Disqualified).**
5. The identification of foreign national involvement in a USSOCOM SBIR topic is needed to determine if a firm is ineligible for award on a USSOCOM topic that falls within the parameters of the United States Munitions List, Part 121 in the International Traffic in Arms Regulation (ITAR). A firm employing a foreign national(s) (as defined section titled "Foreign Nationals" of the DoD SBIR Program BAA) to work on a USSOCOM ITAR topic must possess an export license to receive a SBIR Phase I contract.

Cover Page (Volume 1)

Volume 1 is created as part of the DoD Proposal Submissions process. Follow all instructions provided in the DoD SBIR Program BAA and DSIP.

Technical Volume (Volume 2)

The technical volume is not to exceed five (5) pages and must follow the formatting requirements provided in the "SBIR 23.4 Annual Program BAA – Amendment 2", "Format of Technical Volume" and "Content of Technical Volume". USSOCOM will only evaluate the first (5) pages of the Technical Volume, additional pages will not be considered or evaluated.

Content of the Technical Volume

Required items are specified in the DoD SBIR Program BAA Phase I Format of Technical Volume instructions, reference <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/> then scroll to the bottom of the page and click on the tab titled "Supporting Documents and Attachments". At the bottom of the list, select the document titled "Phase I Technical (Vol 2) Sample Template".

Contract Data Requirement Lists (CDRLs): CDRLs identifies which data products must be delivered by the contractor to the Government. Please make sure you read all required CDRLs requirements (each using a DD Form 1423-1) prior to developing your proposal. All five of the required Phase I CDRLs are available on <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>.

Cost Volume (Volume 3)

The Phase I Base amount must not exceed \$175,000.00 Costs must be identified on the Proposal Cover Sheet (Volume 1) and in Volume 3. Once the proposal is initiated in DSIP the Offeror will have access to the required USSOCOM specific Cost Volume instructions and template.

A minimum of 67% of the research and/or analytical work in Phase I must be conducted by the proposing firm. The percentage of work is measured by both direct and indirect costs as a percentage of the total contract cost.

Please review the updated Percentage of Work (POW) calculation details included in section 5.3 of the DoD Program BAA. USSOCOM will not accept any deviation to the POW requirements on these Phase I topics.

The cost volume template (volume 3 template) is located on DSIP during proposal submission and <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>.

Company Commercialization Report (CCR) (Volume 4)

Completion of the CCR Volume 4 of the proposal submission in DSIP is required. Please refer to the DoD SBIR Program BAA for full details on this requirement. Information contained in the CCR will be considered by USSOCOM during proposal evaluations.

Supporting Documents (Volume 5)

All proposing small business concerns are REQUIRED to submit the following documents to Volume 5:

1. Contractor Certification Regarding Provision of Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (BAA Attachment 1)
2. Disclosures of Foreign Affiliations or Relationships to Foreign Countries (BAA Attachment 2)
3. Disclosure of Funding Sources (BAA Attachment 4)
4. The Verification of Eligibility of Small Business Joint Ventures (BAA Attachment 3), is required if applicable to the proposing small business.

In addition to the documents listed above, the following USSOCOM documents are REQUIRED:

5. PowerPoint Presentation: Potential Offerors must submit a slide deck **not to exceed 15 PowerPoint slides** (inclusive of the cover sheet). The presentation shall not have any videos or links to videos. There is no set format for this document. It is recommended (but not required) that more detailed information is included in the technical volume and higher-level information be included in the slide deck, suitable for a possible presentation. Refer to the "Phase I Evaluations" Section of this instruction for more details. The optimal place to add this is under the "Other" section of DSIP.
6. Section K - Titled "Representations, Certifications, and other statements of Offerors": If Section K is not submitted with the proposal, the proposal will still be considered responsive, but the completed Section K shall be required at the time of award. Section K is available at <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>.
7. Resumes: Include resumes.

A completed proposal submission in DSIP does NOT indicate that the mandatory supporting documents have been uploaded. It is the responsibility of the proposing small business concern to ensure that the mandatory documents listed above have been uploaded and included with the proposal submission.

Fraud, Waste and Abuse Training (Volume 6)

Fraud, Waste and Abuse (FWA) training is required for Phase I proposals. Please refer to the DoD SBIR Program BAA instructions for full details.

DISCRETIONARY TECHNICAL AND BUSINESS ASSISTANCE (TABA): USSOCOM does not provide Discretionary Technical and Business Assistance for Phase I awards.

INQUIRIES: USSOCOM does not allow direct communication with the topic authors (differs from the DoD SBIR Program BAA instructions).

During the Pre-Release and Open Periods of the DoD SBIR Program BAA, only and all technical questions that enhance the Offerors understanding of the topic's requirements must be submitted to the online Defense SBIR/STTR Innovation Portal (DSIP) Topic Q&A. All questions and answers submitted to DSIP Topic Q&A will be released to the general public.

USSOCOM does NOT allow inquirers to communicate directly in any manner to the topic authors (differs from the DoD STTR Program BAA instructions). Only questions pertaining to the proposal preparation instructions should be directed to: sbir@socom.mil. All inquiries must include the topic number in the subject line of the e-mail.

Consistent with DoD SBIR instructions, USSOCOM will not answer programmatic questions, such as who the technical point of contact is, the number of contracts to be awarded, the source of funding, transition strategy.

Physical site visits will not be permitted during the Pre-release and Open Periods of the DoD SBIR Program BAA.

EVALUATION AND SELECTION

All proposals will be evaluated in accordance with the evaluation criteria listed in the DoD SBIR Program BAA, with the following exceptions:

1. Proposals missing any of the six stated volumes, or those that do not comply with the requirement of the percentage of work (67%) to be executed by the proposing firm, or those proposals that exceed the maximum price allowed as per Table 1 of these instructions, will be considered non-responsive. Non-responsive proposals will not be evaluated.
2. The technical evaluation will utilize the Evaluation Criteria provided in DoD SBIR Program BAA instructions. The Technical Volume and PowerPoint Presentation slide deck will be reviewed holistically.

The technical evaluation is performed in two parts:

Part I: The evaluation of the Technical Volume will utilize the Evaluation Criteria provided in the DoD SBIR Program BAA. Once the evaluations are complete, all Offerors will be notified in a timely manner.

Part II: Selected offerors **may** receive an invitation to present their slide deck (30-minute presentation time/30-minute Government question and answer period) to the USSOCOM technical evaluation team, using virtual teleconference. This will be a technical presentation of the proposed solution **ONLY**. The key personnel listed in the proposal should represent the presentation and responding to the questions of the evaluation

team. This presentation is NOT intended for business development personnel, it is purely technical. Selected offerors shall restrict their Pitch Day presentations to the 15-page PowerPoint presentation submitted with the respective proposals. There will be no changes or updates to the presentations from what was proposed. This presentation will complete the evaluation of the proposal against the criteria listed in the DoD SBIR Program BAA.

3. The Cost Volume (Volume 3) evaluation:
For this Phase I, the award amount is set at a not to exceed (NTE) amount and a technical evaluation of the proposal cost will be completed to assess price fair and reasonableness. The team will assess the technical approach presented for the effort based on the number of labor hours by labor categories, the key personnel level of involvement, materials, subcontractors, and consultants (scope of work, expertise, participation, and proposed effort), and other direct cost as proposed.
4. As stated in the DoD Program BAA and in accordance with the SBIR and STTR Extension Act of 2022 (Pub. L. 117-183) , USSOCOM will conduct a security due diligence on cybersecurity practices, patent analysis, employee analysis, foreign ownership of offerors, and financial ties and obligations for every offeror. Please refer to the DoD Program BAA for additional information.

Additionally, input on technical aspects of the proposals may be solicited by USSOCOM from non-Government consultants and advisors who are bound by appropriate non-disclosure requirements. When appropriate, non-government advisors may have access to Offeror's proposals and may be utilized to objectively review a proposal in a particular functional area and provide comments and recommendations to the Government's decision makers. They may not establish final assessments of risk, or rate or rank Offerors' proposals. All advisors shall comply with procurement Integrity Laws and shall sign Non-Disclosure and Rules of Conduct/ Conflict of Interest statements. The Government shall take into consideration requirements for avoiding conflicts of interest. Submission of a proposal in response to this request constitutes approval to release the proposal to Government support contractors.

Offerors will be notified of selection or non-selection status for a Phase I award within 90 calendar days of the closing date of the BAA by the USSOCOM Contracting Office. This notification will come by e-mail to the Corporate Official identified by the Offeror during proposal submission. The Government will also notify the Offerors if their proposal is considered non-responsive (disqualified).

A non-selected Offeror can make a written request to the Contracting Officer, within 30 calendar days of receipt of notification of non-selection, for informal feedback. The Contracting Officer will provide informal feedback after receipt of an Offeror's written request rather than a debriefing as specified in the DoD SBIR Program BAA instructions.

Refer to the DoD SBIR Program BAA for procedures to protest the Announcement.

As further prescribed in FAR 33.106(b), FAR 52.233-3, Protests after Award should be submitted to: sbir@socom.mil.

PATH TO PHASE II

If awarded a Phase I, the Small Business will automatically be invited to propose a Phase II proposal, unless otherwise informed by USSOCOM. To obtain the Phase II requirements, refer to the Contract Data Requirements List (CDRL) A004. The Final Report will be due on or before 6 months of the start of the

Period of Performance (PoP) In Accordance With (IAW) CDRL A003. Your Phase II proposal will be due on or before the 195th day of the start of the PoP IAW CDRL A005.

All CDRLs are available on <https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx>. There are two different attachments for CDRL 5. Please refer to the section titled “Award and Contract Information” for the contracting path pertaining to the topic.

The Government reserves the right to issue any of the following type of awards for Phase II:

1. FAR type contract
2. Non-FAR based fixed price (level of effort type):
 - a. Other Transactions Agreements (OTA). Successful completion of the prototype under an OTA may result in a follow-on production OTA or contract. Successful completion of the prototype is defined as meeting one or more threshold requirements.
 - b. USSOCOM may use a partnership intermediary to award SBIR/STTR contracts and agreements to small business concerns. This may be done through USSOCOM’s intermediary partner, SOFWERX (www.SOFWERX.org) resulting in a commercial contract between the firm and DEFENSEWERX. The is authorized by the National Defense Authorization Act (NDAA) for Fiscal Year 2022, Section 852, MODIFICATION OF PILOT PROGRAM FOR DEVELOPMENT OF TECHNOLOGY- ENHANCED CAPABILITIES WITH PARTNERSHIP INTERMEDIARIES. The Government will conduct the evaluation and select the proposals to be funded for award.

AWARD AND CONTRACT INFORMATION

Table 1: Consolidated SBIR Topic Information

Topic	Technical Volume (Vol 2)	Additional Info. (Vol 5)	Period of Performance	Award Amount	Contract Type
<i>Phase I</i> SOCOM234-004	Not to exceed 5 pages	15 page PowerPoint	Not to exceed 7 months	NTE \$175,000	Firm-Fixed- Price
<i>Phase I</i> SOCOM234-005	Not to exceed 5 pages	15 page PowerPoint	Not to exceed 7 months	NTE \$175,000	Firm-Fixed- Price

The Government will conduct evaluations and selections for SBIR Phase I topic award(s) listed in this BAA.

Awards for SOCOM234-004 and SOCOM234-005 may be made under the authority of National Defense Authorization Act (NDAA) for Fiscal Year 2022, Section 852, MODIFICATION OF PILOT PROGRAM FOR DEVELOPMENT OF TECHNOLOGY- ENHANCED CAPABILITIES WITH PARTNERSHIP INTERMEDIARIES. USSOCOM may use a partnership intermediary to award SBIR/STTR contracts and agreements to small business concerns. The stated topics SBIR contract awards may be done through SOFWERX and result in a commercial contract between the firm and DEFENSEWERX.

ADDITIONAL INFORMATION

Phase I proposals shall NOT include:

- 1) Any travel for Government meetings. All meetings with the Government will be conducted via electronic media.
- 2) Government furnished property or equipment.
- 3) Priced or Unpriced Options.

- 4) "Basic Research" (or "Fundamental Research") defined as a "Systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and/or observable facts without specific applications toward processes or products in mind."
- 5) Human or animal studies.
- 6) Discretionary Technical and Business Assistance (TABA)

SOCOM SBIR 23.4 Topic Index
Release 4

SOCOM234-004	Out-of-Band GNSS Tracker
SOCOM234-005	Slim Form Cargo Loader/Unloader

SOCOM234-004

TITLE: Out-of-Band GNSS Tracker

OUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Advanced Computing and Software; Microelectronics; Human-Machine Interfaces

OBJECTIVE: The objective of this topic is to develop applied research toward an innovative capability to conduct the research, development, and assessment of a Global Navigation Satellite System (GNSS) based tracking system that consists of a transmitter attached to a target that broadcasts its location to a ground-based receiver. Even though this technology currently exists and is available commercially there is a need to develop a government specific version that transmits on currently unsupported frequencies.

IMPORTANT: For SOCOM instructions: please visit: <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/>. Go to the bottom of the page and click the tab for "DoD SBIR 23.4 Annual". Once there, go to "SOCOM SBIR 23.4 – Release 4".

DESCRIPTION: The primary use case is to mount the transmitter on a small Unmanned Aerial System (UAS) (group 1-3) to provide time, space, position information (TSPI) truth data, real time, to a ground-based receiver. An important feature of the requested system, that sets it apart from commercially available systems, is the ability to transmit on currently unsupported frequencies or the ability to adjust the transmitter frequency. Other important design considerations include size, weight, power, and cost (SWaP-C), transmitter battery life, and transmitter range. As a part of this feasibility study, the proposers shall propose system designs based on the following minimum key system attributes:

- Transmitter to broadcast GNSS based location messages to a ground based receiver.
- Weight:
 - Transmitter less than 200 grams inclusive of antenna.
 - Receiver less than 5 pounds.
- Obtain location data using any combination of GNSS L1 constellations (i.e. Global Positioning System (GPS), Globalnaya Navigazionnaya Sputnikovaya Sistema (GLONASS), BeiDou, and Galileo).
- Range of more than 20kilometers
- Transmitter to operate in Ultra High Frequency band.
- The receiver shall output location data to another device in real time via a wired or wireless connection using non-proprietary connectors/cables or protocols.
- Present output location via cable with latitude/longitude Decimal Degrees format.

PHASE I: Conduct a feasibility study to assess what is in the art of the possible that satisfies the requirements specified in the above paragraphs entitled "Objective" and "Description."

The objective of this USSOCOM Phase I Small Business Innovation Research (SBIR) effort is to conduct and document the results of a thorough feasibility study ("Technology Readiness Level 3") to investigate what is in the art of the possible within the given trade space that will satisfy a needed technology. The feasibility study should investigate all options that meet or exceed the minimum performance parameters specified in this write up. It should also address the risks and potential payoffs of the innovative technology options that are investigated and recommend the option that best achieves the objective of this technology pursuit. The funds obligated on the resulting Phase I SBIR contracts are to be used for the sole purpose of conducting a thorough feasibility study using scientific experiments and laboratory studies

as necessary. Operational prototypes will not be developed with USSOCOM SBIR funds during Phase I feasibility studies. Operational prototypes developed with other than SBIR funds that are provided at the end of Phase I feasibility studies will not be considered in deciding what firm(s) will be selected for Phase II.

PHASE II: Develop, install, and demonstrate a prototype system determined to be the most feasible solution during the Phase I feasibility study on an Out-of-Band GNSS Tracker.

PHASE III DUAL USE APPLICATIONS: This system could be used in a broad range of military applications where real time tracking is required. Specific use cases include Test and Evaluation (T&E) of Counter UAS systems; T&E of blue force UAS; and any application that can benefit from real time tracking outside of typical frequencies and potential interferers.

REFERENCES:

“A GNSS-GSM Integrated Location Tracking System”, Research Gate – Feb 2014

https://www.researchgate.net/profile/Anindya-Bose-4/publication/260157882_A_GNSS-GSM_Integrated_Location_Tracking_System/links/0f31752fcb649a5c5f000000/A-GNSS-GSM-Integrated-Location-Tracking-System.pdf

KEYWORDS: counter unmanned aerial system; counter unmanned aircraft system; counter uncrewed aerial system; counter uncrewed aircraft system; unmanned aerial system; unmanned aircraft system; uncrewed aerial system; uncrewed aircraft system; unmanned air vehicles; uncrewed air vehicle; GNSS; track; tracker; tracking; real time; geolocation; drones; situational awareness; aerial systems; aerial vehicles; autonomous vehicles

SOCOM234-005

TITLE: Slim Form Cargo Loader/Unloader

OUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Trusted AI and Autonomy

OBJECTIVE: The objective of this topic is to develop applied research toward an innovative capability to lift, load, unload, and transport full-sized, fully loaded 463L pallets and containers from Air Force cargo planes in varying environments, with various terrain. Additionally, the system should only occupy one full pallet position on an aircraft.

IMPORTANT: For SOCOM instructions: please visit: <https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/>. Go to the bottom of the page and click the tab for “DoD SBIR 23.4 Annual”. Once there, go to “SOCOM SBIR 23.4 – Release 4”.

DESCRIPTION: As a part of this feasibility study, the proposers shall address all viable overall system design options with respect to the system being able to conduct all necessary cargo loading and unloading activities. Semi-autonomous interface and interaction is desired. This includes, but is not limited to:

- Lifting a fully loaded 463L pallet from the ground, moving it a distance of approximately 450 - 500m,
- Loading 463L pallet into the back of a C-130
- Unloading a fully loaded 463L pallet
- Moving it a distance of approximately 450 - 500m, and
- Setting the pallet down on the ground.

Additionally, maximum specifications of the system need to be identified including, but not limited to, length, width, gross vehicle weight, tare weight, and lift capacity.

PHASE I: Conduct a feasibility study to assess what is in the art of the possible that satisfies the requirements specified in the above paragraphs entitled “Objective” and “Description.”

The objective of this USSOCOM Phase I SBIR effort is to conduct and document the results of a thorough feasibility study (“Technology Readiness Level 3”) to investigate what is in the art of the possible within the given trade space that will satisfy a needed technology. The feasibility study should investigate all options that meet or exceed the minimum performance parameters specified in this write up. It should also address the risks and potential payoffs of the innovative technology options that are investigated and recommend the option that best achieves the objective of this technology pursuit. The funds obligated on the resulting Phase I SBIR contracts are to be used for the sole purpose of conducting a thorough feasibility study using scientific experiments and laboratory studies as necessary. Operational prototypes will not be developed with USSOCOM SBIR funds during Phase I feasibility studies. Operational prototypes developed with other than SBIR funds that are provided at the end of Phase I feasibility studies will not be considered in deciding what firm(s) will be selected for Phase II.

PHASE II: Develop, install, and demonstrate a prototype system determined to be the most feasible solution during the Phase I feasibility study on a real-world exercise that demonstrates the full capabilities of the system to lift, move, load, and unload a full-sized 463L on and off a C-130 aircraft.

PHASE III DUAL USE APPLICATIONS: This system could be used in a broad range of military and commercial applications where movement of loads from home base operations to an austere environment is required. The loader would be able to move full sized pallets across various terrains, including traditional hard surfaces. These applications apply to the civilian sector, as well since similar pallets are utilized in the civil cargo transportation industry.

REFERENCES:

1. US Air Force fact sheet on the C-130: <https://www.af.mil/About-Us/Fact-Sheets/Display/Article/1555054/c-130-hercules/>
2. Airmen loading cargo onto C-130 from the back of a truck: <https://www.defense.gov/Multimedia/Photos/igphoto/2001458195/>
3. US TRANSCOM load planning and documentation: https://www.ustranscom.mil/dtr/part-iii/dtr_part_iii_app_v.pdf
4. Personnel loading a HMMWV into a C-130: <https://www.youtube.com/watch?v=6AzWvidtAtQ>
5. Air Force Air Transportation Operations policy (references to 463L pallet will yield dimensions, weight, and restrictions): https://static.e-publishing.af.mil/production/1/af_a4/publication/afi24-605v2/afi24-605v2.pdf

KEYWORDS: cargo; loader; unloader; transport; 463L; pallet