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

**April 4, 2023**: Topic issued for pre-release
**April 19, 2023**: USSOCOM begins accepting proposals via DSIP
**May 4, 2023**: DSIP Topic Q&A closes to new questions at 12:00 p.m. ET
**May 18, 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

**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 DoD SBIR Program BAA. USSOCOM requirements in addition to or deviating from the DoD Program BAA are provided in the instructions below. A thorough reading of the DoD SBIR 23.4 Annual Program BAA, located at https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/ prior to reading these USSOCOM instructions is highly recommended. 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 to further specify requirements and stimulate small business/research institute partnership-building. Please visit** https://events.sofwerx.org/sbir23-4r2/ **for date and time information.**

This release contains an open topic. As outlined in section 7 of the SBIR and STTR Extension Act of 2022, innovation open topic activities—

(A) Increase the transition of commercial technology to the Department of Defense;
(B) Expand the small business nontraditional industrial base;
(C) Increase commercialization derived from investments of the Department of Defense; and
(D) Expand the ability for qualifying small business concerns to propose technology solutions to meet the needs of the Department of Defense.

Unlike conventional topics, which specify the desired technical objective and output, open topics can use generalized mission requirements or specific technology areas to adapt commercial products or solutions to close capability gaps, improve performance, or provide technological advancements in existing capabilities.

**A small business concern may only submit one (1) proposal to each open topic.** If more than one proposal from a small business concern is received for a single open topic, only the most recent proposal to be certified and submitted prior to the submission deadline will receive an evaluation. All prior proposals

submitted by the small business concern for the same open topic will be marked as nonresponsive and will not receive an evaluation.

**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) PowerPoint Quad Chart, 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 proper documentations is 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 documents are successfully uploaded.
2. USSOCOM doesn't assist Offerors with proposal preparation nor does USSOCOM review of proposals for completeness. We recommend you use your local and state resources for assistance. (See DoD Program BAA for resources information.)
3. USSOCOM has encountered issues while downloading proposals due to lengthy file names. The Offeror 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).**

**Cover Sheet (Volume 1)**
Volume 1 is created as part of the DoD proposal submission process in DSIP. Follow all instructions provided in the DoD SBIR Program BAA and DSIP. Offerors are advised that a URL and UEI must be provided in the Firm Information section of the Firm Registration in DSIP.

**Technical Volume (Volume 2)**
The Technical Volume is not to exceed 5 pages and must follow the formatting requirements provided in the DoD SBIR Program BAA titled "Format of Technical Volume (Volume 2)". USSOCOM will only evaluate the first five (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 Technical Volume instructions section titled "Content of the Technical Volume 2". To access the template, please go to https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/ then scroll to the bottom of the page and click on the third 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.

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 of the International Traffic in Arms Regulation (ITAR). A firm employing a foreign national(s) (as defined in 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.

**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 and https://www.socom.mil/SOF-ATL/Pages/SBIR.aspx.

**Company Commercialization Report (CCR) (Volume 4)**
Completion of the CCR in 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)**
In addition to the documentation outlined in the DoD SBIR Annual BAA, the following documents must also be included with Volume 5: (1) Power Point Quad Chart, (2) Section K, and (3) Resumes.
Note: If you can't find a proper "volume" or "selection" in DSIP, please attach under "Other".

1. PowerPoint Quad Chart: Potential Offerors shall submit a one slide Power Point quad chart**.** The Quad Chart is intended to describe a preliminary assessment of the SBIR Phase I feasibility proposal. The quad chart shall follow the below requirements:
    a. Number of pages – 1
    b. Font – Times New Roman, 11 Point (or in size relevance to)
    c. Page orientation – landscape
    d. Paper size – 8.5 x 11 inch
    e. Upper left quad – Pictorial data or representation and topic number and description.
    f. Upper right quad – Description of effort and perceived benefits
    g. Lower left quad – Summary cost data; labor, materials, and subcontracting
    h. Lower right quad – Project schedule and milestones
2. Section K: 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.

3. Resumes: Include resumes.

**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/STTR 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/STTR Program BAA instructions).**

During the Pre-Release and Open Periods of the DoD SBIR Program BAA, all questions 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 SBIR 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 Offerors 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 use the Evaluation Criteria provided in DoD SBIR Program BAA instructions for this topic. The Technical Volume and Power Point quad chart will be reviewed holistically. Once the evaluations are complete, all Offerors will be notified in a timely manner.
3. In addition to the price evaluation the Government evaluation team will assess the elements of cost on those proposals recommended for funding.

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 days of the closing date of this BAA topic 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 Annual 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**

Phase II proposals may only be submitted by Phase I awardees. In the event that the Phase II of a topic is cancelled, Phase I awardees will be informed by USSOCOM and Phase II proposals will not be accepted. 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 195$^{th}$ 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 |
|---|---|---|---|---|---|
| *Phase I* SOCOM234-P002 | Not to exceed 5 pages | Quad Chart – 1 Page | Not to exceed 7 months | NTE $175,000.00 | Firm-Fixed-Price |

The Government will conduct evaluations and selections for SBIR Phase I topic award(s) listed in this BAA. SOCOM234-P002 awards will be made by USSOCOM SBIR Contracting Officer.

**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) Discretionary Technical and Business Assistance (TABA)

**SOCOM SBIR 23.4 Topic Index**
**Release 2**

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|---|---|
| SOCOM234-P002 | Open Topic for Family of Special Operations Vehicles |

SOCOM234-P002 TITLE: Open Topic for Family of Special Operations Vehicles

The technologies within these topics that are restricted under the International Traffic in Arms Regulation (ITAR), which controls the export and import of defense-related material and services, require Offerors to disclose any proposed use of foreign nationals, their country of origin, and what tasks each would accomplish in the statement of work in accordance with the solicitation. Additionally, Offerors will describe compliance mechanisms, offerors have in place or will put in place, to address any ITAR issues that arise during the course of agreement administration.

**OBJECTIVE:** The objective of this SBIR Open Topic is to develop **applied research** toward an innovative capability within USSOCOM Program Offices. The following are the **Program Offices** and their areas of interest.

**DESCRIPTION:**
The objective of this SBIR Open Topic is to develop **applied research** toward an innovative capability within USSOCOM Family of Special Operations Vehicles (FOSOV) Program Offices.

Computer dependency is becoming a foundation of vehicle development. In 2015, Digital Trends Magazine posted an article stating that the Ford GT has close to 3 million more lines of code than a Boeing 787 Airliner. These additional lines of code translate to additional overhead in physical space, programming, sustainment, safety and security. With vehicle trends moving more towards electric vehicles, to include military vehicles, industry is introducing new attack vectors for highly motivated and resourced enemies. This increases the demand for military vehicles to address the growing cyber threat within all environments. The technology areas of interest aim at addressing these attack vectors and exploring options to seamlessly integrate applicable technologies into Team Awareness Kit.

**PROGRAM OFFICE: Family of Special Operations Vehicles (FOSOV)**
The technology areas of interests are:

1. Navigation and Team Awareness Kit Integration: Inertial navigation systems within vehicles, vehicle positioning based on vehicle speed, steering and internal CANbus data, processing data from the Onboard Diagnostics II port, Global Positioning System integration, Artificial Intelligence/Machine Learning (AI/ML), Team Awareness Kit, telematics and cybersecurity.
2. Force Protection: Onboard Diagnostics II port, CANbus, Global Positioning System, Wi-Fi, on-board entertainment (infotainment) and information, facial recognition prevention, license place obfuscation, smart city data protection, residual and stored data from previous users, Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR), Fly Away Kits, Special Operation Forces (SOF) peculiar devices and cybersecurity. Platforms may include indigenous operating vehicles (IOVs) of Special Operations modified Commercial Vehicles (Non-Standard Commercial Vehicles or NSCV).
3. Open Architecture Electronic Control Unit: The technology areas of interest are original equipment manufacturer (OEM) electronic control unit (ECU), Government owned ECU, onboard vehicle systems. (Traction control, GPS transmission, onboard telematics, prognostics, vehicle skid control, antilock brakes, airbag operation, fuel shutoff, limp home mode, exterior light output). vehicle type, make and model independence and cybersecurity.

    i) Navigation and Team Awareness Kit Integration: Internal navigation system to navigate in Compromised, unreliable, and denied environment, deciphering vehicle position such as

based on input of a known location, calculating movement and positioning based on vehicle speed, steering and direction, AI/ML to identify patterns of errors in vehicle data and correct errors to increase accuracy of location; detect and alert the user in real time of Global Positioning System jamming and/or interference. Navigation system data will be formatted and passed to integrate seamlessly with the on-board vehicle Team Awareness Kit to provide feedback for all occupants. The innovative research should focus beyond analyzing Global Positioning System -like data to discover other capabilities and opportunities to utilize onboard vehicle data for future capabilities and includes all viable system design options with respective specifications provided.

ii) Force Protection: The sensor should plug into the Onboard Diagnostics II port, read data on the CANbus, ensure data and mission integrity, and communicate cyber risk to the operator while allowing them to manually disable telematics, such as Global Positioning System, Wi-Fi, on-board information and entertainment ("infotainment" systems") on the fly. The sensor should include options to prevent facial recognition through the windshield, prevent recording data from the license plate and provide protections in an urban operating environment to include smart cities. The result of this topic should describe mechanisms disallowing a vehicle operator the ability to pull a previous operator's data that has been recorded and stored onboard the vehicle. the Phase I report must present the integration of carry-on and carry-off Command, Control, Computers, Communications, Cyber, Intelligence, Surveillance and Reconnaissance (C5ISR) equipment to include radios, and amplifiers with vehicle systems.

iii) Open Architecture Electronic Control Unit: Implement SOCOM's unique requirements to selectively enable and/or disable standard vehicle features (traction control, GPS transmission, onboard telematics, prognostics, vehicle skid control, antilock brakes, airbag operation, fuel shutoff, limp home mode, exterior light output). Develop open architecture ECU that replaces the restrictive OEM ECUs. This will replace the process of "hacking" OEM ECUs in order to meet Non-Standard Commercial Vehicle requirements. This topic includes all viable system design options with respective specifications provided.

Note: Please make sure to read the USSOCOM Instructions in full detail at https://www.defensesbirsttr.mil/SBIR-STTR/Opportunities/ at the bottom of the page under the tab titled "DoD SBIR 23.4 Annual"

**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 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.

A Phase II proposal is expected at the conclusion of the Phase I effort.

**PHASE II:** Develop, install, and demonstrate a prototype system determined to be the most feasible solution during the Phase I feasibility study.

**PHASE III DUAL USE APPLICATIONS:** This system could be used in a broad range of military and commercial applications.

REFERENCES:


1. Modernization Strategy: Investing in the Future from *https://www.army.mil/e2/downloads/rv7/2019_army_modernization_strategy_final.pdf* (Army, 2019)
2. Department of Defense National Defense Strategy of 2022 found at *https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF* (Department of Defense, 2022)
3. National Cybersecurity Strategy from https://www.whitehouse.gov/wp-content/uploads/2023/03/National-Cybersecurity-Strategy-2023.pdf (White House, 2023)



**KEYWORDS:** Ground Combat Vehicles (GCV), Non Standard Commercial Vehicles (NSCV), electronics, On Board Diagnostics II, Global Positioning System, vehicle data, telematics, maintenance predictions, cybersecurity, Team Awareness Kit, Fly-Away Kits, Wi-Fi, infotainment, smart city, urban mission profile, Indigenous operating vehicle, Electronic Control Unit (ECU)