

DEPARTMENT OF THE ARMY
DoD 24.4 Small Business Innovation Research (SBIR) Annual BAA
Release 5
Proposal Submission Instructions

December 12, 2023: Topic issued for pre-release

January 9, 2024: Army begins accepting proposals via DSIP

January 16, 2024: DSIP Topic Q&A closes to new questions at 12:00 p.m. ET

January 30, 2024: Deadline for receipt of proposals no later than 12:00 p.m. ET

INTRODUCTION

Where big ideas come to life. The Army SBIR and STTR programs align innovative small businesses with critical U.S. Army priorities to turn over game-changing solutions to our most critical customer – the Soldier.

Proposers responding to a topic in this BAA must follow all general instructions provided in the Department of Defense (DoD) SBIR 24.4 Program BAA. Army 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.defensesbirstr.mil/SBIR-STTR/Opportunities/#announcements>. Be sure to select the tab for the appropriate BAA cycle.
- Register for the DSIP Listserv at: <https://www.dodsbirstr.mil/submissions/login>.

Specific questions pertaining to the administration of the Army SBIR Program and these proposal preparation instructions should be directed to: Dr. Zach Harrell at zach.harrell.civ@aal.army.

From **December 12, 2023 to January 8, 2024**, this topic is issued for pre-release with the names of the topic authors. During the pre-release period, proposing firms have an opportunity to contact topic authors/Technical Points of Contact (TPOCs) through <https://calendly.com/zach-harrell-aal/medical-payloads-tpoc-calls> to schedule a time to ask technical questions about the topic. Questions should be limited to specific information related to improving the understanding of the topic's requirements. Proposing firms may not ask for advice or guidance on solution approach and you may not submit additional material to the topic author. If information provided during an exchange with the topic author is deemed necessary for proposal preparation, that information will be made available to all parties through the DSIP Topic Q&A module.

Once the Army begins accepting proposals on **January 9, 2024**, no further direct contact between proposers and topic authors is allowed unless the Topic Author is responding to a question submitted during the pre-release period. However, proposers may submit written questions through the DSIP Topic Q&A module at <https://www.dodsbirstr.mil/submissions/login>. The DSIP Topic Q&A for this topic opens on **December 12, 2023**, and closes to new questions on **January 16, 2024, at 12:00PM ET**. Once the BAA closes to proposal submission, no communication of any kind with the topic author or through Topic Q&A regarding your submitted proposal is allowed.

Deadline for Receipt: Proposals must be **completely** submitted no later than **12:00 p.m.** ET, on **January 30, 2024**. Proposals submitted after 12:00 p.m. ET will not be evaluated. The final proposal submission includes successful completion of all firm level forms, all required volumes, and electronic corporate official certification.

DIRECT TO PHASE II PROPOSAL GUIDELINES

The Defense SBIR/STTR Innovation Portal (DSIP) is the official portal for DoD SBIR/STTR proposal submission. Proposers 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.

Technical Volume (Volume 2)

The technical volume is not to exceed 15 pages and an optional 10-slide deck and must follow the formatting requirements provided in the DoD SBIR Program BAA.

Content of the Technical Volume

Detailed Phase II proposal instructions can be found at: <https://aal.army/assets/files/pdf/sbir-direct-phase-2-template.pdf>

Cost Volume (Volume 3)

The Direct to Phase II amount must not exceed \$1.65 million for a 12-month period of performance (PoP). Costs must be clearly identified on the Proposal Cover Sheet (Volume 1) and in Volume 3.

Company Commercialization Report (CCR) (Volume 4)

Completion of the CCR as 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 during proposal evaluations.

Supporting Documents (Volume 5)

All proposing small businesses 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
2. Disclosures of Foreign Affiliations or Relationships to Foreign Countries
3. Disclosure of Funding Sources

Please refer to the DoD Program BAA for more information.

Proposers can submit an optional 10-slide deck in Volume 5: Supporting Documents. The slide deck can contain information on the technical approach, the team, commercialization plans, or relevant technology/research the proposers have developed, and it should contain additional/complementary information to the technical volume. If a proposer elects to submit a slide deck, its information will be used in the evaluation process. A sample slide deck template is located here: <http://aal.army/assets/files/pdf/sbir-optional-slide-template.pdf>.

DISCRETIONARY TECHNICAL AND BUSINESS ASSISTANCE (TABA)

Discretionary Technical and Business Assistance (TABA) will not be offered for this Army topic.

EVALUATION AND SELECTION

The Army will conduct an evaluation of each responsive, timely, eligible proposal in accordance with the evaluation criteria listed in the DoD Program BAA. It is the policy of the Army to ensure equitable and comprehensive proposal evaluations based on the evaluation criteria and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals.

As previously stated herein, timeliness, responsiveness, and eligibility will be assessed upon initial screening, during evaluation, and after selection. Proposals that do not comply with the instructions and

requirements detailed in this document, the DoD Program BAA, or the corresponding Topic posting (including the research objective(s)), will be considered ineligible, nonresponsive, untimely, or non-conforming and therefore will not be evaluated or considered for award.

Using the evaluation criteria, the Government will evaluate each responsive, timely, eligible proposal in its entirety, documenting the strengths and weaknesses relative to each evaluation criterion. Proposals will not be evaluated against each other during the evaluation process, but rather evaluated on their own individual merit to determine how well the proposal meets the criteria stated in this BAA and the corresponding opportunity.

Selected proposals are those determined to be the most advantageous to the Government, consistent with instructions and evaluation criteria specified in the DoD Program BAA, the component-specific instructions herein, the corresponding topic posting, and availability of funding.

Proposing firms will be notified via email of selection or non-selection status for a Direct to Phase II award within 90 days of the closing date of the topic. The notification will be sent to the Corporate Official listed on the proposal cover sheet from the Army SBIR Program Office mailbox. The Army promotes transparency regarding the technical evaluation for all Army SBIR proposals. The Army will provide a technical evaluation narrative to the proposer in accordance with the SBA Policy Directive, Appendix I, paragraph 4. The selection decision notice contains instructions for retrieving the technical evaluation narrative.

Proposers must not regard the notification email (selection decision notice) as an authorization to commit or expend funds. After the Army SBIR Office has recommended a proposal for award, a Government Contracting Officer may contact the proposer to discuss and request additional information required for award. This may include representations and certifications, certified or other than certified cost data, subcontracting plan for small businesses, and/or other information as applicable to the proposed award. Proposers must not regard these communications as an authorization to commit or expend funds. Unless a Government Contracting Officer signs the award document (i.e. contract), no obligations to provide funding are made. The Government may reject the proposal or cancel the contract action at any time.

If signed by the Government Contracting Officer, the award document is the official and authorizing instrument (i.e. contract). The anticipated period of performance start date will be determined at time of award. The Contracting Officer will email the signed, authorizing award instrument to the principal investigator (PI) and/or an authorized organization representative.

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

AWARD AND CONTRACT INFORMATION

Please refer to the DoD Program BAA for detailed information regarding SBIR/STTR phase structure and flexibility.

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Release 5

A244-005 Medical Payloads for Army Robotic Platforms

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

The technology within this topic is restricted under the International Traffic in Arms Regulation (ITAR), 22 CFR Parts 120 – 130, which controls the export and import of defense-related material and services, including export of sensitive technical data, or the Export Administration Regulation (EAR), 15 CFR Parts 730 – 774, which controls dual use items. Offerors must disclose any proposed use of foreign nationals (FNs), their country(ies) of origin, the type of visa or work permit possessed, and the statement of work (SOW) tasks intended for accomplishment by the FN(s) in accordance with the announcement. Offerors are advised that foreign nationals proposed to perform on this topic may be restricted due to the technical data under US Export Control Laws.

OBJECTIVE:

Develop a modular medical mission payload that can carry heavy, climate-controlled containers to resupply blood. The payload also must perform casualty evacuation (CASEVAC) with attachability to ground and air robotic/autonomous platforms.

DESCRIPTION:

Currently, blood delivery, medical resupply, and CASEVAC are conducted by convoys of crewed vehicles. If transportation cannot reach the front line, units are unable to receive a blood/medical products or remove casualties for treatment for potentially life-threatening injuries. None of the Army's current systems offer a heavy-lift, modular mission payload that can autonomously resupply blood and perform CASEVAC.

The ability for blood resupply and transport of casualties is critical to the survival of Soldiers who sustain life-threatening injuries. Modular medical mission payloads will provide lifesaving capabilities to forward units by using robotic platforms.

The goal of this effort is the development of a medical multi-mission, modular payload that can be employed by robotic ground and air platforms.

These payloads should:

- Comply with Safe Ride Standards for casualty evacuation using unmanned aerial vehicles (UAV)
- Comply with Robotics and Autonomous Systems, Ground (RAS-G)
- Comply with modular payload design standards (Mod Payload)
- Be climate-controlled and/or fit a climate-controlled container
- Be collapsible
- Keep blood temperature between one and 10 degrees centigrade
- Be able to warm blood supply temperature to 35 degrees centigrade and keep temperature between 34 and 36 degrees centigrade

* SEE REFERENCES SECTION FOR LINKS TO THESE RESOURCES *

Cost should be considered in the SBIR proposals.

PHASE I:

Only Direct to Phase II (DP2) proposals will be accepted for this topic. DP2 proposals must provide documentation to substantiate that the scientific and technical merit and feasibility (listed in the following paragraph) are met, and the proposals must describe potential commercial applications of the solution.

The provided documentation should contain all relevant information including, but not limited to, technical reports, test data, prototype designs/models, and performance goals/results.

DP2 proposals should build on the design formulated according to Phase I requirements: Design a preliminary modular medical mission payload for employment via autonomous ground and air platform. Preliminary design should describe the physical payload, consist of a concept for storing climate-controlled blood products, and include a concept for integrating a casualty evacuation capability with remote patient monitoring.

PHASE II:

Refine the preliminary design developed from Phase I equivalent and create a Technology Readiness Level (TRL) 5-6 modular medical mission payload. System refinement should include integration of the payload into both ground and air autonomous platforms. Required Phase II deliverables include the TRL 5-6 system and the components (hardware and software) necessary to integrate the payload into the platforms. The payload will be demonstrated at a vendor-provided, government-approved location to evaluate performance. The performer will have the option to provide the ground and air platform necessary to conduct the demonstration but is not required to deliver either platform to the government. Additionally, the performer will deliver monthly progress reports describing technical challenges, risk, and progress against the schedule. At the end of the period of performance, the performer will submit a final technical report.

PHASE III:

The objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives through the effort. Companies may develop a manufacturing-ready product design, capable of integration with the existing or future systems, and demonstrate technology integration. Low-rate production will occur as required. Companies will engage in laboratory or operational testing as required. Phase III deliverables include system-level integration technical data package, installation documentation, and system-level prototype for demonstration and government-sponsored testing.

KEYWORDS:

UAS, Unmanned Aerial Systems, UAV, Unmanned Aerial Vehicles, Medical Payloads, Resupply, CASEVAC, UGV, Unmanned Ground Vehicles, HVTOL

REFERENCES:

1. Safe Ride Standards for Casualty Evacuation using Unmanned Aerial Vehicles, <https://apps.dtic.mil/sti/pdfs/ADA593136.pdf>
2. Robotics and Autonomous Systems, Ground (RAS-G), <https://www.namconsortium.org/article/news/just-released-ras-g-iop-v5-v6-wipts>
3. Mod Payload, <https://apps.dtic.mil/sti/pdfs/AD1167779.pdf>