

**Department of the Army**  
**23.4 Small Business Innovation Research (SBIR)**  
**xTechPrime Competition Finalists**  
**Component-Specific Proposal Instructions**  
**Release 10**

**April 25, 2023:** Topics issued for pre-release

**January 2, 2024:** Army begins accepting proposals via DSIP

**January 16, 2024:** Deadline for receipt of proposals no later than 12:00 p.m. ET

**IMPORTANT: A prize competition, xTechPrime Competition, will be used to identify small business concerns that meet the criteria for award. Winners selected from the xTechPrime prize competition will be the only firms eligible to submit a proposal under this topic. All other proposals will not be evaluated. See the full xTechPrime prize competition RFI here:**

**<https://www.xtech.army.mil/competitions/>**

### **INTRODUCTION**

The future Army must be capable of conducting Multi-Domain Operations (MDO) as part of an integrated Joint Force across an array of situations in multiple theaters by 2035. The MDO concept describes how the Army will support the Joint Force in the rapid and continuous integration of all domains of warfare – land, sea, air, and cyberspace – to deter and prevail as we compete short of conflict, and fight and win if deterrence fail. The Army must provide game-changing capabilities to our Soldiers. To capitalize on small business innovation, the Army has implemented an approach to advertise SBIR funding opportunities through the Department of Defense (DoD) Annual BAA process, outside of the three pre-determined BAA cycles. This approach also strives to create a more rapid award time from solicitation to closing.

### **CONTACT INFORMATION**

Direct Specific questions pertaining to the administration of the Department of the Army SBIR Program and proposal preparation instructions to the Point of Contact identified in the Topic announcement.

General questions can be directed to the following:

Email: [usarmy.pentagon.hqda-asa-alt.mbx.army-applied-sbir-program@army.mil](mailto:usarmy.pentagon.hqda-asa-alt.mbx.army-applied-sbir-program@army.mil)

Website: <https://www.armysbir.army.mil/>

Mailing Address:

Army Applied SBIR Office 2530 Crystal Dr; Ste 11192

Arlington, VA 22202

### **RESPONSIVENESS AND TIMELINESS**

All proposals will be evaluated and judged on a competitive basis. Proposals will only be evaluated in response to an active, corresponding Army topic. Proposals will be initially screened to determine responsiveness and timeliness. Proposals passing this initial screening will be technically evaluated by engineers or scientists to determine the most promising technical and scientific approaches. Assessment of responsiveness may continue during technical evaluation and after selection. If at any point the proposal is deemed untimely, unresponsive, ineligible, or non-responsible, the proposal will be rejected / the contract action will be cancelled.

Interested firms shall follow the DoD Program BAA instructions as well as the Army's component-specific proposal instructions herein, when preparing and submitting proposals.

**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>.

### **SYSTEM FOR AWARD MANAGEMENT (SAM)**

Interested firms are required to be registered in SAM ([www.sam.gov](http://www.sam.gov)) before submitting a proposal and shall continue to be registered until time of award, during performance, and through final payment of any contract.

### **ELIGIBILITY**

The eligibility requirements for the SBIR/STTR programs are unique and do not correspond to those of other small business programs. Please refer to Section 3.1, Eligible Applicants, of BAA 23.4 for full eligibility requirements.

A prize competition, xTechSBIR Pacific Competition, will be used to identify small business concerns that meet the criteria for award of a Phase I SBIR contract under 10 U.S.C. §2374a. Winners selected from the xTechSBIR Pacific prize competition will be the only firms eligible to submit a Phase I proposal under this announcement. The xTechSBIR Pacific prize competition announcement can be found at: <https://www.xtech.army.mil/competitions/>

### **Anticipated Structure/Award Information**

For this topic, Department of the Army will accept Direct to Phase II proposals for the cost of up to \$1,900,000 for up to 18-month period of performance. Eligible firms will be notified to submit a Direct to Phase II proposal following completion of the xTechPrime prize competition, executed in accordance with 10 U.S.C. Section 2374a.

Proposals that do not comply with the requirements detailed in BAA 23.4 and the research objectives of these Component Instructions are considered non-conforming and therefore are not evaluated nor considered for award.

Direct to Phase II proposals in response to this BAA include the following:

- Volume 1: Proposal Cover Sheet
- Volume 2: Technical Volume
  - Part 1: Justification Documentation (1 page maximum) that will be provided by the Army Applied SBIR Office after selection as a winner of the xTechPrime prize competition
  - Part 2: Technical Objectives and Approach (15 slides maximum) that will be provided by the Army Applied SBIR Office and Army xTech Program after selection as a winner of the xTechPrime prize competition
- Volume 3: Cost Volume
- Volume 4: Company Commercialization Report (REQUIRED)
- Volume 5: Supporting Documents (Requirements outlined in the DoD Program BAA)
- Volume 6: Fraud, Waste and Abuse Training (REQUIRED)

## **DIRECT TO PHASE II PROPOSAL GUIDELINES**

Proposers interested in submitting a DP2 proposal in response to this particular topic must provide documentation to substantiate that the scientific and technical merit and feasibility described in the Phase I section of the topic has been met and describes the potential commercial applications. Documentation should include all relevant information including, but not limited to: technical reports, test data, prototype designs/models, and performance goals/results. Work submitted within the feasibility documentation must have been substantially performed by the proposer and/or the Principal Investigator.

The Army will not evaluate the proposer's related Phase II proposal if it determines that the proposer has failed to demonstrate that technical merit and feasibility has been established or the proposer has failed to demonstrate that work submitted in the feasibility documentation was substantially performed by the proposer and/or the PI.

Feasibility documentation cannot be based upon any prior or ongoing federally funded SBIR or STTR work and DP2 proposals MUST NOT logically extend from any prior or ongoing federally funded SBIR or STTR work.

### **Format of Technical Volume (Volume 2)**

The Technical Volume must include two parts, the Justification Documentation and the Technical Proposal.

The Technical Volume must be a single Portable Document Format (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.

The length of the Justification Documentation is not to exceed 1 page and the length of the Technical Proposal is not to exceed 15 pages. A commercialization plan must also accompany the technical proposal and should be no more than 10 slides. Any proposals submitted in a different format, or exceed the page count limits will not be reviewed.

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.

### **Content of the Justification Documentation (Volume 2a)**

The content of the Justification Documentation Proposers should substantiate that the scientific and technical merit and feasibility described in the Phase I section of the topic has been met and describes the potential commercial applications. Documentation should include all relevant information including, but not limited to: technical reports, test data, prototype designs/models, and performance goals/results. Work submitted within the feasibility documentation must have been substantially performed by the proposer and/or the Principal Investigator.

### **Content of the Technical Proposal (Volume 2b)**

The content of the Technical Volume should address three key areas: the technical approach, the team carrying out the work (and the accompanied resources), and the commercialization strategy. The commercialization plan should include:

- Company information: Focused objectives/core competencies; specialization area(s); products with significant sales; and history of previous Federal and non-Federal funding, regulatory experience, and subsequent commercialization successes.
- Customer and Competition: Clear description of key technology objectives, current competition, and advantages compared to competing products or services; description of hurdles to acceptance of the innovation.
- Market: Milestones, target dates, analyses of market size, and estimated market share after first year sales and after 5 years; explanation of plan to obtain market share.
- Intellectual Property: Patent status, technology lead, trade secrets or other demonstration of a plan to achieve sufficient protection to realize the commercialization stage and attain at least a temporal competitive advantage.
- Financing: Plans for securing necessary non-SBIR funding.
- Assistance and mentoring: Plans for securing needed technical or business assistance through mentoring, partnering, or through arrangements with government sponsored (e.g., State assistance programs, Federally-funded research laboratories, Manufacturing Extension Partnership centers), not-for-profits (e.g., SBDC), commercial accelerators, DOD Prime Contractors, or other assistance provider.

Proposers are free to structure each section as they like, so long as it provides sufficient detail for evaluators to understand the proposed work, who will carry it out, and how the business plans to commercialize results.

### **Cost Volume (Volume 3)**

Unless otherwise noted in the topic, the Army will accept Direct to Phase II proposals for a cost up to \$1,900,000 for an 18-month period of performance. Proposers are required to use the Cost Proposal method as provided on the DSIP submission site. The Cost Volume (and supporting documentation) DOES NOT count toward the page limit of the Technical Volume.

For pricing purposes, offerors should assume a contract or agreement start date of approximately ninety (90) days after submission of the proposal. For this BAA, adequate price competition (APC), as defined in FAR 15.403-1(c), is anticipated. In the event that adequate price competition is not realized (i.e. only one proposal is received for a given topic), the Government may choose to conduct additional proposal analysis, in accordance with the techniques identified at FAR 15.404-1. Additionally, offerors are to provide any current Forward Pricing Rate Agreements (FPRA) in effect at time of proposal submission.

### **Content of the Cost Volume (Volume 3)**

ALL proposed costs should be accompanied by documentation to substantiate how the cost was derived. For example, if you proposed travel costs to attend a project-related meeting or conference, and used a travel website to compare flight costs, include a screenshot of the comparison. Similarly, if you proposed to purchase materials or equipment, and used the internet to search for the best source, include your market research for those items. You do not necessarily have to propose the cheapest item or supplier, but you should explain your decision to choose one item or supplier over another. It's important to provide enough information to allow contracting personnel to understand how the proposer plans to use the requested funds.

Some items in the cost breakdown may not apply to the proposed project. If that is the case, there is no need to provide information on each and every item.

#### Cost Breakdown Guidance:

- List all key personnel by name as well as by number of hours dedicated to the project as direct labor.
- Special tooling and test equipment and material cost may be included. The inclusion of equipment and material will be carefully reviewed relative to need and appropriateness for the work proposed. The purchase of special tooling and test equipment must, in the opinion of the Contracting Officer, be advantageous to the Government and should be related directly to the specific topic. These may include such items as innovative instrumentation and/or automatic test equipment. Title to property furnished by the Government or acquired with Government funds will be vested with the Army; unless it is determined that transfer of title to the contractor would be more cost effective than recovery of the equipment by the Army.
- Cost for travel funds must be justified and related to the needs of the project.
- Cost sharing is permitted for proposals under this announcement; however, cost sharing is not required, nor will it be an evaluation factor in the consideration of a proposal.
- All subcontractor costs and consultant costs must be detailed at the same level as prime contractor costs in regard to labor, travel, equipment, etc. Provide detailed substantiation of subcontractor costs in your cost proposal. Enter this information in the Explanatory Material section of the on-line cost proposal form. The Supporting Documents Volume (Volume 5) may be used if additional space is needed.

If a DCAA Audit has been conducted within the last five (5) years, include the audit compliance documentation in the cost proposal documents. The documentation should also include the offeror's DCAA Point of Contact (if applicable).

If selected for award, failure to include the documentation with your proposal will delay contract negotiation, and the proposer will be asked to submit the necessary documentation to the Contracting Officer to substantiate costs (e.g., cost estimates for equipment, materials, and consultants or subcontractors). It is important to respond as quickly as possible to the Contracting Officer's request for documentation.

For more information about cost proposals and accounting standards, see the DCAA publication titled "Audit Process Overview – Information for Contractors" available at: <http://www.dcaa.mil>.

#### **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 by the Department of the Army during proposal evaluations.

#### **Supporting Documents (Volume 5)**

Volume 5 is provided for proposers to submit additional documentation to support the Cover Sheet (Volume 1), Technical Volume (Volume 2), and the Cost Volume (Volume 3). In addition to the Volume 5 requirements outlined in the DoD Program BAA, the Department of the Army will accept the following documents in Volume 5:

- Additional Cost Information
- Funding Agreement Certification
- Technical Data Rights (Assertions)
- Lifecycle Certification
- Allocation of Rights
- Other (only as specified in the topic)

Please only submit documents that are identified in the topic instructions. All other submissions will be disregarded.

## **PHASE II PROPOSAL INSTRUCTIONS**

Follow-on Phase II proposals may only be submitted by Direct to Phase II awardees. Follow-on Phase II proposal submission window, notification process, expected budget/duration structure and additional instructions will be provided in the Direct to Phase II contract or by subsequent notification.

## **DISCRETIONARY TECHNICAL AND BUSINESS ASSISTANCE (TAB A)**

The Army, at its discretion, may provide Technical and Business Assistance (TAB A). The Army will select a preferred vendor(s) for the Army SBIR TAB A program through a competitive process.

Alternately, a small business concern may, by contract or otherwise, select one or more vendors to assist the firm in meeting the TAB A goals. The Applicant must request the authority to select its own TAB A provider in its Army SBIR proposal and must demonstrate that the vendor is uniquely postured to provide the specific technical and business services required. TAB A funding will be denied if the offeror fails to include the cost and detailed explanation in its proposal.

Participation in the Army SBIR TAB A program is voluntary for each Army SBIR awardee. Services provided to Army SBIR firms under the auspices of the TAB A program may include, but are not limited to:

1. Access to a network of scientists, engineers, and technologists focused on commercialization and transition considerations such as protected supply chain management, advanced manufacturing, process/product/production scaling, etc;
2. Assistance with intellectual property protections, such as legal considerations, intellectual property rights, patent filing, patent fees, licensing considerations, etc;
3. Commercialization and technology transition support such as market research, market validation, development of regulatory or manufacturing plans, brand development;
4. Regulatory support such as product domain regulatory considerations, regulatory planning, and regulatory strategy development.

The Army SBIR program sponsors participation in the TAB A program. The resource limitation for each firm is as follows:

- Phase I Firms:
  - Army-Preferred Vendor: If approved, the contractor may receive up to \$6,500 worth of assistance services per project per year (in addition to the base SBIR award amount).
  - Firm-Selected Vendor: If approved, the contractor may receive up to \$6,500 in contract obligation (in addition to the base SBIR award amount) per project per year.
- Phase II Firms:
  - Army-Preferred Vendor: If approved, the contractor may receive up to \$50,000 worth of assistance services per project per year (in addition to the base SBIR award amount).
  - Firm-Selected Vendor: If approved, the contractor may receive up to \$50,000 in contract obligation (in addition to the base SBIR award amount) per project per year.

## **EVALUATION AND SELECTION**

All proposals will be evaluated during the xTechPrime competition Finals in accordance with the evaluation criteria that has been provided to the xTechPrime Competition. It is the policy of the Army to ensure equitable and comprehensive proposal evaluations based on the evaluation criteria provided to the

finalists and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals.

All proposal evaluations will be based solely on the above evaluation criteria. The Army will conduct an evaluation of each conforming proposal. Proposals that do not comply with the requirements detailed in this BAA and the research objective(s) of the corresponding opportunity are considered non-conforming and therefore will not be evaluated nor considered for award.

During the xTechPrime Competition finals, the Government will evaluate each proposal in its entirety, documenting the strengths and weaknesses relative to each evaluation criterion, and based on these identified strengths and weaknesses, make a determination of the proposal's overall qualifications. 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 the xTechPrime prize competition.

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. 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 Phase I or 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 in order 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.

## **PROTESTS**

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 shall be submitted to the Point of Contract identified in the topic solicitation:

**Email:** [usarmy.pentagon.hqda-asa-alt.mbx.army-applied-sbir-program@mail.mil](mailto:usarmy.pentagon.hqda-asa-alt.mbx.army-applied-sbir-program@mail.mil)

**Mailing Address:**

Army Applied SBIR Office  
2530 Crystal Dr; Ste 11192  
Arlington, VA 22202

## **AWARD AND CONTRACT INFORMATION**

Only proposers who are winners in xTechPrime Competition Finals and follow the evaluation criteria provided to them will be during their pitch will considered for this topic. If you are NOT a winner as a result of the xTechPrime Competition finals, please do not submit proposals for this topic as they will be automatically disqualified.



**Army SBIR 23.4 Topic Index  
Release 10**

A234-P015    xTechPrime Finalist Open Topic Competition

OUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Trusted AI and Autonomy; Advanced Computing and Software; Integrated Sensing and Cyber; Microelectronics; Integrated Network Systems-of-Systems; Renewable Energy Generation and Storage; Advanced Materials; Human-Machine Interfaces

**OBJECTIVE:**

xTechPrime is seeking novel, disruptive concepts and technology solutions with dual-use capabilities that can assist in tackling the Army's current needs and apply to current Army concepts. The intent is to provide the Army with transformative technology solutions while enabling cost savings throughout the Army systems' life cycle. Critical technology focus areas include Artificial Intelligence/Machine Learning (AI/ML); Autonomy; Climate and Clean Technologies; Immersive/Wearables; and Sensors. See attached document on the Valid Eval registration page for a list of the top Army SBIR Transition Broker Team topic areas.

**DESCRIPTION:**

The U.S. Army would like to invite interested entities to participate in the xTechPrime competition, a forum for eligible small businesses and technology integrators to form teams in order to bring forward innovative technology solutions to solve current Army needs.

A **technology integrator** is defined for this competition as "any business outside of the selected small business in Part 1, who has directly worked with the U.S. government. They have experience managing at least one subcontractor and are responsible for ensuring that the work is completed as defined in the contract, this can include but is not limited to, other small businesses, Primes, and sole proprietors."

The xTechPrime competition will challenge small businesses to work together in teams with technology integrators to submit their innovative solutions that contribute to the Army's current modernization goals. xTechPrime will assist in driving innovation, ultimately delivering novel, and often overlooked, technologies to the Army. Through the xTechPrime competition, the Army is encouraging collaboration between small businesses and technology integrators by providing an opportunity to form teams to compete for non-dilutive cash prizes and, for the original small business submitters, the potential for a Direct to Phase II SBIR contract award.

The efforts described in this notice are being pursued under the authorities of 10 U.S.C. § 4025 (formerly 2374a) and 15 U.S.C. § 638 and 10 U.S.C. § 4022 (Prototype Projects) to award cash prizes and SBIRs to only those eligible entities as described in this announcement. The xTechPrime competition will serve as the proof-of-principle that is required to receive a Direct to Phase II SBIR award. While the authority of this program is 10 U.S.C. § 4025, the xTechPrime competition may generate interest by another DOD organization for a funding opportunity outside of this program (*e.g.*, submission of a proposal under a Broad Agency Announcement). The interested DOD organization may contact the participant to provide additional information or ask for a request for proposal in a separate solicitation.

**PHASE I:** This is a Direct to Phase II submission. In order for proposers to submit a Direct to Phase II (DP2) proposal, they must provide the justification documentation to substantiate that the scientific and technical merit and feasibility described above has been met and describes the potential military and/or commercial applications. Documentation should include all relevant information including, but not limited to: technical reports, test data, prototype designs/models, and performance goals/results.

PHASE II: Produce prototype solutions that will be easy to operate by a Soldier. These products will be provided to select Army units for further evaluation by the soldiers. In addition, companies will provide a technology transition and commercialization plan for DOD and commercial markets.

PHASE III DUAL USE APPLICATIONS: Complete the maturation of the company's technology developed in Phase II to TRL 6/7 and produce prototypes to support further development and commercialization. The Army will evaluate each product in a realistic field environment and provide small solutions to stakeholders for further evaluation. Based on soldier evaluations in the field, companies will be requested to update the previously delivered prototypes to meet final design configuration.

REFERENCES: <https://www.xtech.army.mil/competitions/>

KEYWORDS: logistics; supply chain; climate; xTech; xTechPrime; internet of things; information collection; data collection; sensing; communications; autonomy; artificial intelligence; sensors; AI/ML