

DEPARTMENT OF THE NAVY (DoN)
24.4 Small Business Innovation Research (SBIR)
Open Topics - Proposal Submission Instructions

IMPORTANT

- The following dates apply to topic N244-P01 through N244-P03:
 - 13 June 2024: Topics issued for pre-release
 - 1 August 2024: DoN begins accepting proposals
 - 21 August 2024: Topic Q&A closes to new questions
 - 4 September 2024: Full proposals due no later than 12:00 p.m. ET
- Information on virtual Listening Sessions and Ask Me Anything events for the topics in this BAA can be found at https://navysbir.com/open_topic.htm.
- Submitting small business concerns are encouraged to thoroughly review the DoD Program BAA and register for the DSIP Listserv to remain apprised of important programmatic changes.
 - The DoD Program BAA is located at: <https://www.dodsbirsttr.mil/submissions/login>. Select the tab for the appropriate BAA cycle.
 - Review the Attachments of the DoD Program BAA and ensure the correct versions of the following MANDATORY items are uploaded to the Supporting Documents, Volume 5:
 - Contractor Certification Regarding Provision of Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (Attachment 1)
 - Disclosures of Foreign Affiliations or Relationships to Foreign Countries (Attachment 2)
 - Register for the DSIP Listserv at: <https://www.dodsbirsttr.mil/submissions/login>.
- The information provided in the DoN Proposal Submission Instructions document takes precedence over the DoD Instructions posted for this Broad Agency Announcement (BAA).
- A proposing small business concern:
 - is required to submit proposals via the DoD SBIR/STTR Innovation Portal (DSIP) <https://www.dodsbirsttr.mil/submissions/login>.
 - is required to use the Phase I proposal template for Volume 2. This template is specific to DoN to meet Phase I requirements. The Phase I template can be found at https://navysbir.com/links_forms.htm
 - should note that DoN is not seeking or funding proposals for commercial items or non-developmental items (NDIs) for testing and operational evaluation that do not require RDT&E engineering, design or integration effort under this announcement (see Additional Submission Considerations).
 - 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.

- that is more than 50% owned by multiple venture capital operating companies (VCOC), hedge funds (HF), private equity firms (PEF) or any combination of these are eligible to submit proposals in response to DoN topics advertised in this BAA. Information on Majority Ownership in Part and certification requirements at time of submission for these proposing small business concerns are detailed in the section titled ADDITIONAL SUBMISSION CONSIDERATIONS.
- The DoN provides notice that Basic Ordering Agreements (BOAs) may be used for Phase I awards, and BOAs or Other Transaction Agreements (OTAs) may be used for Phase II awards.
- This BAA is issued under regulations set forth in Federal Acquisition Regulation (FAR) 35.016 and awards will be made under “other competitive procedures”. The policies and procedures of FAR Subpart 15.3 shall not apply to this BAA, except as specifically referenced in it. All procedures are at the sole discretion of the Government as set forth in this BAA. Submission of a proposal in response to this BAA constitutes the express acknowledgement to that effect by the proposing small business concern.

INTRODUCTION

The DoN SBIR/STTR Programs are mission-oriented programs that integrate the needs and requirements of the DoN’s Fleet through research and development (R&D) topics that have dual-use potential, but primarily address the needs of the DoN. **Through this BAA, DoN intends to leverage open topics to solicit proposals to adapt commercial products to fill a capability gap, improve performance, or modernize existing capability for the DoN in various mission critical areas.** More information on the programs can be found on the DoN SBIR/STTR website at www.navysbir.com. Additional information on DoN’s mission can be found on the DoN website at www.navy.mil.

The Acting Director of the DoN SBIR/STTR Programs is Mr. Brian Shipley. For questions regarding this BAA, use the information in Table 1 to determine who to contact for what types of questions.

TABLE 1: POINTS OF CONTACT FOR QUESTIONS REGARDING THIS BAA

Type of Question	When	Contact Information
Program and administrative	Always	Navy SBIR/STTR Program Management Office usn.pentagon.cnr-arlington-va.mbx.navy-sbir-sttr@us.navy.mil or appropriate Program Manager listed in Table 2 (below)
Topic-specific technical questions	BAA Pre-release	Technical Point of Contact (TPOC) listed in each topic. Refer to the Proposal Fundamentals section of the DoD SBIR/STTR Program BAA for details.
	BAA Open	DoD SBIR/STTR Topic Q&A platform (https://www.dodsbirsttr.mil/submissions) Refer to the Proposal Fundamentals section of the DoD SBIR/STTR Program BAA for details.

Electronic submission to the DoD SBIR/STTR Innovation Portal (DSIP)	Always	DSIP Support via email at dodsbirsupport@reisystems.com
Navy-specific BAA instructions and forms	Always	DoN SBIR/STTR Program Management Office usn.pentagon.cnr-arlington-va.mbx.navy-sbir-sttr@us.navy.mil

TABLE 2: DoN SYSTEMS COMMANDS (SYSCOM) SBIR PROGRAM MANAGERS

<u>Topic Numbers</u>	<u>Point of Contact</u>	<u>SYSCOM</u>	<u>Email</u>
N244-P01	Ms. Kristi DePriest	Naval Air Systems Command (NAVAIR)	navair-sbir@us.navy.mil
N244-P02	Mr. Jason Schroepfer	Naval Sea Systems Command (NAVSEA)	NSSC_SBIR.fct@navy.mil
N244-P03	Mr. Shadi Azoum	Naval Information Warfare Systems Command (NAVWAR)	info@navwarsbir.com

PHASE I SUBMISSION INSTRUCTIONS

The following section details requirements for submitting a compliant Phase I proposal to the DoD SBIR/STTR Programs.

(NOTE: Proposing small business concerns are advised that support contract personnel will be used to carry out administrative functions and may have access to proposals, contract award documents, contract deliverables, and reports. All support contract personnel are bound by appropriate non-disclosure agreements.)

DoD SBIR/STTR Innovation Portal (DSIP). Proposing small business concerns are required to submit proposals via the DoD SBIR/STTR Innovation Portal (DSIP); follow proposal submission instructions in the DoD SBIR/STTR Program BAA on the DSIP at <https://www.dodsbirsttr.mil/submissions>. Proposals submitted by any other means will be disregarded. Proposing small business concerns submitting through DSIP for the first time will be asked to register. It is recommended that small business concerns register as soon as possible upon identification of a proposal opportunity to avoid delays in the proposal submission process. Proposals that are not successfully certified electronically in DSIP by the Corporate Official prior to BAA Close will NOT be considered submitted and will not be evaluated by DoN. Proposals that are encrypted, password protected, or otherwise locked in any portion of the submission will be REJECTED unless specifically directed within the text of the topic to which you are submitting. Please refer to the DoD SBIR/STTR Program BAA for further information.

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 in DSIP 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.

Proposal Volumes. The following six volumes are required.

- **Proposal Cover Sheet (Volume 1).** As specified in DoD SBIR/STTR Program BAA.
- **Technical Proposal (Volume 2)**
 - Technical Proposal (Volume 2) must meet the following requirements or the proposal will be REJECTED:
 - Not to exceed ten (10) pages, regardless of page content
 - Single column format, single-spaced typed lines
 - Standard 8 ½” x 11” paper
 - Page margins one inch on all sides. A header and footer may be included in the one-inch margin.
 - No font size smaller than 10-point
 - Include, within the ten-page limit of Volume 2, an Option that furthers the effort in preparation for Phase II and will bridge the funding gap between the end of Phase I and the start of Phase II. Tasks for both the Phase I Base and the Phase I Option must be clearly identified. Phase I Options are exercised upon selection for Phase II.
 - Work proposed for the Phase I Base must be exactly four (4) months.
 - Work proposed for the Phase I Option must be exactly six (6) months.
 - Additional information:
 - A Phase I proposal template specific to DoN to meet Phase I requirements is available at https://navysbir.com/links_forms.htm
 - A font size smaller than 10-point is allowable for headers, footers, imbedded tables, figures, images, or graphics that include text. However, proposing small business concerns are cautioned that if the text is too small to be legible it will not be evaluated.
- **Cost Volume (Volume 3).**
 - Cost Volume (Volume 3) must meet the following requirements or the proposal will be REJECTED:
 - The Phase I Base amount must not exceed \$75,000.
 - Phase I Option amount must not exceed \$100,000.
 - Costs for the Base and Option must be separated and clearly identified on the Proposal Cover Sheet (Volume 1) and in Volume 3.
 - For Phase I, a minimum of two-thirds of the work is performed by the proposing small business concern. The two-thirds percentage of work requirement must be met in the Base costs as well as in the Option costs. DoN will not accept deviations from the minimum percentage of work requirements for Phase I. The percentage of work is measured by both direct and indirect costs. To calculate the minimum percentage of work for the proposing small business concern the sum of all direct and indirect costs attributable to the proposing small business concern represent the numerator and the total cost of the proposal (i.e., Total Cost before Profit Rate is applied) is the denominator. The subcontractor percentage is calculated by taking the sum of all costs attributable to the subcontractor (Total Subcontractor Costs (TSC)) as the numerator and the total cost of the proposal (i.e., Total Cost before Profit Rate is applied) as the denominator.
 - Proposing Small Business Concern Costs (included in numerator for calculation of the small business concern):
 - Total Direct Labor (TDL)
 - Total Direct Material Costs (TDM)
 - Total Direct Supplies Costs (TDS)

- Total Direct Equipment Costs (TDE)
- Total Direct Travel Costs (TDT)
- Total Other Direct Costs (TODC)
- General & Administrative Cost (G&A)

NOTE: G&A, if proposed, will only be attributed to the proposing small business concern.

- ☐ Subcontractor Costs (numerator for subcontractor calculation):
 - Total Subcontractor Costs (TSC)
- ☐ Total Cost (i.e., Total Cost before Profit Rate is applied, denominator for either calculation)

- **Cost Sharing: Cost sharing is not accepted on DoN Phase I proposals. If a value above or below \$0.00 is entered in the Cost Sharing field the proposal will be deemed non-compliant and will be REJECTED by DoN.**

- Additional information:

- Provide sufficient detail for subcontractor, material, and travel costs. Subcontractor costs must be detailed to the same level as the prime contractor. Material costs must include a listing of items and cost per item. Travel costs must include the purpose of the trip, number of trips, location, length of trip, and number of personnel.
- The “Additional Cost Information” of Supporting Documents (Volume 5) may be used to provide supporting cost details for Volume 3. When a proposal is selected for award, be prepared to submit further documentation to the SYSCOM Contracting Officer to substantiate costs (e.g., an explanation of cost estimates for equipment, materials, and consultants or subcontractors).

- **Company Commercialization Report (Volume 4).** DoD collects and uses Volume 4 and DSIP requires Volume 4 for proposal submission. Please refer to the Phase I Proposal section of the DoD SBIR/STTR Program BAA for details to ensure compliance with DSIP Volume 4 requirements.
- **Supporting Documents (Volume 5).** Volume 5 is for the submission of administrative material that DoN may or will require to process a proposal, if selected, for contract award.

All proposing small business concerns must review and submit the following items, as applicable:

- **Telecommunications Equipment Certification.** Required for all proposing small business concerns. The DoD must comply with Section 889(a)(1)(B) of the FY2019 National Defense Authorization Act (NDAA) and is working to reduce or eliminate contracts, or extending or renewing a contract with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As such, all proposing small business concerns must include as a part of their submission a written certification in response to the clauses (DFAR clauses 252.204-7016, 252.204-7018, and subpart 204.21). The written certification can be found in Attachment 1 of the DoD SBIR/STTR Program BAA. This certification must be signed by the authorized company representative and is to be uploaded as a separate PDF file in Volume 5. Failure to submit the required certification as a part of the proposal submission process will be cause for rejection of the proposal submission without evaluation. Please refer to the instructions provided in the Phase I Proposal section of the DoD SBIR/STTR Program BAA.

- **Disclosures of Foreign Affiliations or Relationships to Foreign Countries.** Each proposing small business concern is required to complete Attachment 2 of this BAA, “Disclosures of Foreign Affiliations or Relationships to Foreign Countries” and upload the form to Volume 5, Supporting Documents. Please refer to the following sections of the DoD SBIR/STTR Program BAA for details:
 - ☐ Program Description
 - ☐ Proposal Fundamentals
 - ☐ Phase I Proposal
 - ☐ Attachment 2
- **Majority Ownership in Part.** Proposing small business concerns which are more than 50% owned by multiple venture capital operating companies (VCOC), hedge funds (HF), private equity firms (PEF), or any combination of these as set forth in 13 C.F.R. § 121.702, are eligible to submit proposals in response to DoN topics advertised within this BAA. Complete certification as detailed under ADDITIONAL SUBMISSION CONSIDERATIONS.
- Additional information:
 - Proposing small business concerns may include the following administrative materials in Supporting Documents (Volume 5); a template is available at https://navysbir.com/links_forms.htm to provide guidance on optional material the proposing small business concern may want to include in Volume 5:
 - Additional Cost Information to support the Cost Volume (Volume 3)
 - SBIR/STTR Funding Agreement Certification
 - Data Rights Assertion
 - Allocation of Rights between Prime and Subcontractor
 - Disclosure of Information (DFARS 252.204-7000)
 - Prior, Current, or Pending Support of Similar Proposals or Awards
 - Foreign Citizens
 - Do not include documents or information to substantiate the Technical Volume (Volume 2) in Volume 5 (e.g., resumes, test data, technical reports, or publications). Such documents or information will not be considered.
 - A font size smaller than 10-point is allowable for documents in Volume 5; however, proposing small business concerns are cautioned that the text may be unreadable.
- **Fraud, Waste and Abuse Training Certification (Volume 6).** DoD requires Volume 6 for submission. Please refer to the Phase I Proposal section of the DoD SBIR/STTR Program BAA for details.

PHASE I EVALUATION AND SELECTION

The following section details how the DoN SBIR/STTR Programs will evaluate Phase I proposals.

Proposals meeting DSIP submission requirements will be forwarded to the DoN SBIR/STTR Programs. Prior to evaluation, all proposals will undergo a compliance review to verify compliance with DoD and DoN SBIR/STTR proposal eligibility requirements. Proposals not meeting submission requirements will be REJECTED and not evaluated.

- **Proposal Cover Sheet (Volume 1).** The Proposal Cover Sheet (Volume 1) will undergo a compliance review to verify the proposing small business concern has met eligibility

requirements and followed the instructions for the Proposal Cover Sheet as specified in the DoD SBIR/STTR Program BAA.

- **Technical Volume (Volume 2).** The DoN will evaluate and select Phase I proposals using the evaluation criteria specified in the Phase I Proposal Evaluation Criteria section of the DoD SBIR/STTR Program BAA, with technical merit being most important, followed by qualifications of key personnel and commercialization potential of equal importance. The information considered for this decision will come from Volume 2. This is not a FAR Part 15 evaluation and proposals will not be compared to one another. Cost is not an evaluation criterion and will not be considered during the evaluation process; the DoN will only do a compliance review of Volume 3. Due to limited funding, the DoN reserves the right to limit the number of awards under any topic.

The Technical Volume (Volume 2) will undergo a compliance review (prior to evaluation) to verify the proposing small business concern has met the following requirements or the proposal will be REJECTED:

- Not to exceed ten (10) pages, regardless of page content
 - Single column format, single-spaced typed lines
 - Standard 8 ½" x 11" paper
 - Page margins one inch on all sides. A header and footer may be included in the one-inch margin.
 - No font size smaller than 10-point, except as permitted in the instructions above.
 - Include, within the 10-page limit of Volume 2, an Option that furthers the effort in preparation for Phase II and will bridge the funding gap between the end of Phase I and the start of Phase II. Tasks for both the Phase I Base and the Phase I Option must be clearly identified.
 - Work proposed for the Phase I Base must be exactly four (4) months.
 - Work proposed for the Phase I Option must be exactly six (6) months.
- **Cost Volume (Volume 3).** The Cost Volume (Volume 3) will not be considered in the selection process and will only undergo a compliance review to verify the proposing small business concern has met the following requirements or the proposal will be REJECTED:
 - Must not exceed values for the Base (\$75,000) and Option (\$100,000).
 - Must meet minimum percentage of work; a minimum of two-thirds of the work is performed by the proposing small business concern. The two-thirds percentage of work requirement must be met in the Base costs as well as in the Option costs. DoN will not accept deviations from the minimum percentage of work requirements for Phase I.
 - **Cost Sharing: Cost sharing is not accepted on DoN Phase I proposals. If a value above or below \$0.00 is entered in the Cost Sharing field the proposal will be deemed non-compliant and will be REJECTED by DoN.**
 - **Company Commercialization Report (CCR) (Volume 4).** The CCR (Volume 4) will not be evaluated by the Navy nor will it be considered in the Navy's award decision. However, all proposing small business concerns must refer to the DoD SBIR/STTR Program BAA to ensure compliance with DSIP Volume 4 requirements.
 - **Supporting Documents (Volume 5).** Supporting Documents (Volume 5) will not be considered in the selection process and will only undergo a compliance review to ensure the proposing small business concern has included items in accordance with the PHASE I SUBMISSION INSTRUCTIONS section above.

- **Fraud, Waste, and Abuse Training Certificate (Volume 6).** Not evaluated.

ADDITIONAL SUBMISSION CONSIDERATIONS

This section details additional items for proposing small business concerns to consider during proposal preparation and submission process.

Due Diligence Program to Assess Security Risks. The SBIR and STTR Extension Act of 2022 (Pub. L. 117-183) requires the Department of Defense, in coordination with the Small Business Administration, to establish and implement a due diligence program to assess security risks presented by small business concerns seeking a Federally-funded award. Please review the Program Description section of the DoD SBIR/STTR Program BAA for details on how DoD will assess security risks presented by small business concerns. The Due Diligence Program to Assess Security Risks will be implemented for all Phases.

Discretionary Technical and Business Assistance (TABAs). Due to the shorter period of performance proposed under the Open Topic Phase I TABAs may **NOT** be proposed. Guidance for submitting TABAs in Phase II will be included in Initial Phase II proposal instructions provided to Phase I awardees.

Disclosure of Information (DFARS 252.204-7000). In order to eliminate the requirements for prior approval of public disclosure of information (in accordance with DFARS 252.204-7000) under this award, the proposing small business concern shall identify and describe all fundamental research to be performed under its proposal, including subcontracted work, with sufficient specificity to demonstrate that the work qualifies as fundamental research. Fundamental research means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons (defined by National Security Decision Directive 189). A small business concern whose proposed work will include fundamental research and requests to eliminate the requirement for prior approval of public disclosure of information must complete the DoN Fundamental Research Disclosure and upload as a separate PDF file to the Supporting Documents (Volume 5) in DSIP as part of their proposal submission. The DoN Fundamental Research Disclosure is available on https://navysbir.com/links_forms.htm and includes instructions on how to complete and upload the completed Disclosure. Simply identifying fundamental research in the Disclosure does **NOT** constitute acceptance of the exclusion. All exclusions will be reviewed and, if approved by the government Contracting Officer, noted in the contract.

Majority Ownership in Part. Proposing small business concerns that are more than 50% owned by multiple venture capital operating companies (VCOC), hedge funds (HF), private equity firms (PEF), or any combination of these as set forth in 13 C.F.R. § 121.702, **are eligible** to submit proposals in response to DoN topics advertised within this BAA.

For proposing small business concerns that are a member of this ownership class the following must be satisfied for proposals to be accepted and evaluated:

- a. Prior to submitting a proposal, small business concerns must register with the SBA Company Registry Database.
- b. The proposing small business concern within its submission must submit the Majority-Owned VCOC, HF, and PEF Certification. A copy of the SBIR VC Certification can be found on https://navysbir.com/links_forms.htm. Include the SBIR VC Certification in the Supporting Documents (Volume 5).

- c. Should a proposing small business concern become a member of this ownership class after submitting its proposal and prior to any receipt of a funding agreement, the proposing small business concern must immediately notify the Contracting Officer, register in the appropriate SBA database, and submit the required certification which can be found on https://navysbir.com/links_forms.htm.

System for Award Management (SAM). It is strongly encouraged that proposing small business concerns register in SAM, <https://sam.gov>, by the Close date of this BAA, or verify their registrations are still active and will not expire within 60 days of BAA Close. Additionally, proposing small business concerns should confirm that they are registered to receive contracts (not just grants) and the address in SAM matches the address on the proposal. A small business concern selected for an award MUST have an active SAM registration at the time of award or they will be considered ineligible.

Treatment of Commercial Off-the-Shelf (COTS) and Non-Developmental Items (NDIs) COTS/NDIs. The DoN is not seeking or funding proposals for commercial items or non-developmental items (NDIs) for testing and operational evaluation that do not require RDT&E engineering, design or integration effort under this announcement. If an end item requires design and development to accept the COTS or NDI, funding for design and development effort could be funded by SBIR/STTR funds. If a COTS or NDI is required for RDT&E test purposes, the cost could be funded by SBIR/STTR funds. Items purchased directly from a commercial source that can be utilized without alteration through design and development, or without modification, are classified as COTS or NDI. This includes, for example, ready-to-use products, training services, and software licenses for ready-to-use software to satisfy service needs (including Software as a Service (SaaS)). Purchases of COTS and NDIs for use, including the first article and associated first article acceptance testing and related minor adjustments are not suitable for SBIR/STTR funding.

Modified COTS/Modified NDIs: Commercially available items that must be modified to satisfy user requirements are classified as "modified COTS" or "modified NDI" articles. In this instance, the first article, modification of the first article, and first article testing could be funded by SBIR/STTR funds. Follow-on purchases will not be funded by SBIR/STTR funds. The number of "modified" first articles bought with SBIR/STTR funds will not exceed the quantity needed to conduct the RDT&E acceptance tests. Modification is technology refreshment significantly changing the end item's performance envelope. If the commercially available item is modified and requires testing prior to approval for service use or inventory, it may be funded by SBIR/STTR funds, as all developmental items. In contrast to modification, continuous technology refreshment is the intentional insertion of newer technology to improve reliability, improve maintainability, reduce cost, and/or add minor performance enhancement, typically in conjunction with depot or field level maintenance. The insertion of such technology into end items as part of maintenance is not funded by SBIR/STTR funds.

Notice of NIST SP 800-171 Assessment Database Requirement. The purpose of the National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171 is to protect Controlled Unclassified Information (CUI) in Nonfederal Systems and Organizations. As prescribed by DFARS 252.204-7019, in order to be considered for award, a small business concern is required to implement NIST SP 800-171 and shall have a current assessment uploaded to the Supplier Performance Risk System (SPRS) which provides storage and retrieval capabilities for this assessment. The platform Procurement Integrated Enterprise Environment (PIEE) will be used for secure login and verification to access SPRS. For brief instructions on NIST SP 800-171 assessment, SPRS, and PIEE please visit <https://www.sprs.csd.disa.mil/nistsp.htm>. For in-depth tutorials on these items please visit <https://www.sprs.csd.disa.mil/webtrain.htm>.

Human Subjects, Animal Testing, and Recombinant DNA. Due to the short timeframe associated with Phase I of the SBIR/STTR process, the DoN does **not** recommend the submission of Phase I proposals that require the use of Human Subjects, Animal Testing, or Recombinant DNA. For example, the ability to obtain Institutional Review Board (IRB) approval for proposals that involve human subjects can take 6-12 months, and that lengthy process can be at odds with the Phase I goal for time-to-award. Before the DoN makes any award that involves an IRB or similar approval requirement, the proposing small business concern must demonstrate compliance with relevant regulatory approval requirements that pertain to proposals involving human, animal, or recombinant DNA protocols. It will not impact the DoN's evaluation, but requiring IRB approval may delay the start time of the Phase I award and if approvals are not obtained within two months of notification of selection, the decision to award may be terminated. If the use of human, animal, and recombinant DNA is included under a Phase I or Phase II proposal, please carefully review the requirements at: <https://www.nre.navy.mil/work-with-us/how-to-apply/compliance-and-protections/research-protections>. This webpage provides guidance and lists approvals that may be required before contract/work can begin.

Government Furnished Equipment (GFE). GFE will not be available in Open Topic Phase I. If GFE is proposed, it may be considered a weakness in the technical merit of the proposal.

International Traffic in Arms Regulation (ITAR). For topics indicating ITAR restrictions or the potential for classified work, limitations are generally placed on disclosure of information involving topics of a classified nature or those involving export control restrictions, which may curtail or preclude the involvement of universities and certain non-profit institutions beyond the basic research level. Small businesses must structure their proposals to clearly identify the work that will be performed that is of a basic research nature and how it can be segregated from work that falls under the classification and export control restrictions. As a result, information must also be provided on how efforts can be performed in later phases if the university/research institution is the source of critical knowledge, effort, or infrastructure (facilities and equipment).

SELECTION, AWARD, AND POST-AWARD INFORMATION

Notifications. Email notifications for proposal receipt (approximately one week after the Phase I BAA Close) and selection are sent based on the information received on the proposal Cover Sheet (Volume 1). Consequently, the e-mail address on the proposal Cover Sheet must be correct.

Debriefs. Requests for a debrief must be made within 15 calendar days of select/non-select notification via email as specified in the select/non-select notification. Please note debriefs are typically provided in writing via email to the Corporate Official identified in the proposal of the proposing small business concern within 60 days of receipt of the request. Requests for oral debriefs may not be accommodated. If contact information for the Corporate Official has changed since proposal submission, a notice of the change on company letterhead signed by the Corporate Official must accompany the debrief request.

Protests. Interested parties have the right to protest in accordance with the procedures in FAR Subpart 33.1.

Pre-award agency protests related to the terms of the BAA must be served to: osd.ncr.ousd-r-e.mbx.SBIR-STTR-Protest@mail.mil. A copy of a pre-award Government Accountability Office (GAO) protest must also be filed with the aforementioned email address within one day of filing with the GAO.

Protests related to a selection or award decision should be filed with the appropriate Contracting Officer for an Agency Level Protest or with the GAO. Contracting Officer contact information for specific DoN Topics may be obtained from the DoN SYSCOM Program Managers listed in Table 2 above. For

protests filed with the GAO, a copy of the protest must be submitted to the appropriate DoN SYSCOM Program Manager and the appropriate Contracting Officer within one day of filing with the GAO.

Awards. Due to limited funding, the DoN reserves the right to limit the number of awards under any topic. Any notification received from the DoN that indicates the proposal has been selected does not ultimately guarantee an award will be made. This notification indicates that the proposal has been selected in accordance with the evaluation criteria and has been sent to the Contracting Officer to conduct compliance review of Volume 3 to confirm eligibility of the proposing small business concern, and to take other relevant steps necessary prior to making an award.

Contract Types. The DoN typically awards a Firm Fixed Price (FFP) contract or a small purchase agreement for Phase I. In addition to the negotiated contract award types listed in the section of the DoD SBIR/STTR Program BAA titled Proposal Fundamentals, for Phase II awards the DoN may (under appropriate circumstances) propose the use of an Other Transaction Agreement (OTA) as specified in 10 U.S.C. 4021/10 U.S.C. 4022 and related implementing policies and regulations. The DoN may choose to use a Basic Ordering Agreement (BOA) for Phase I and Phase II awards.

Funding Limitations. In accordance with the SBIR and STTR Policy Directive section 4(b)(5), there is a limit of one sequential Phase II award per small business concern per topic. The maximum Phase I proposal/award amount including all options is \$175,000. The Phase I Base amount must not exceed \$75,000 and the Phase I Option amount must not exceed \$100,000. The maximum Phase II proposal/award amount including all options (including TABA) is \$2,000,000 (unless non-SBIR/STTR funding is being added). Individual SYSCOMs may award amounts, including Base and all Options, of less than \$2,000,000 based on available funding. The structure of the Phase II proposal/award, including maximum amounts as well as breakdown between Base and Option amounts will be provided to all Phase I awardees either in their Phase I award or a minimum of 30 days prior to the due date for submission of their Initial Phase II proposal.

Contract Deliverables. Contract deliverables for Open Topic Phase I Base will be a kick-off brief (due day 15), a final report (due day 120), and a quad chart (due day 120). Contract deliverables for Open Topic Phase I Option, if exercised, will be an Option period kick-off brief, progress reports, and a final report. Required contract deliverables (as stated in the contract) must be uploaded to <https://www.navysbirprogram.com/navydeliverables/>.

Payments. The DoN will make two payments from the start of the Open Topic Phase I Base period, and three payments from the start of the Open Topic Phase I Option period, if exercised. Payment amounts represent a set percentage of the Base or Option value as follows:

Days From Start of Base	Payment Amount
15 Days	50% of Total Base
120 Days	50% of Total Base
Days From Start of Option	Payment Amount
15 Days	50% of Total Option
90 Days	35% of Total Option
180 Days	15% of Total Option

Transfer Between SBIR and STTR Programs. Section 4(b)(1)(i) of the SBIR and STTR Policy Directive provides that, at the agency's discretion, projects awarded a Phase I under a BAA for SBIR may transition in Phase II to STTR and vice versa.

PHASE II GUIDELINES

Evaluation and Selection. All Phase I awardees may submit an **Initial** Phase II proposal for evaluation and selection. The evaluation criteria for Phase II is the same as Phase I (as stated in this BAA). The Phase I Final Report and Initial Phase II Proposal will be used to evaluate the small business concern's potential to adapt commercial products to fill a capability gap, improve performance, or modernize an existing capability for DoN and transition the technology to Phase III. Details on the due date, content, and submission requirements of the Initial Phase II Proposal will be provided by the awarding SYSCOM either in the Phase I contract or by subsequent notification.

NOTE: All SBIR/STTR Phase II awards made on topics from BAAs prior to FY13 will be conducted in accordance with the procedures specified in those BAAs (for all DoN topics, this means by invitation only).

Awards. The DoN typically awards a Cost Plus Fixed Fee contract for Phase II; but, may consider other types of agreement vehicles. Phase II awards can be structured in a way that allows for increased funding levels based on the project's transition potential. To accelerate the transition of SBIR/STTR-funded technologies to Phase III, especially those that lead to Programs of Record and fielded systems, the Commercialization Readiness Program was authorized and created as part of section 5122 of the National Defense Authorization Act of Fiscal Year 2012. The statute set-aside is 1% of the available SBIR/STTR funding to be used for administrative support to accelerate transition of SBIR/STTR-developed technologies and provide non-financial resources for the small business concerns (e.g., the Navy STP).

PHASE III GUIDELINES

A Phase III SBIR/STTR award is any work that derives from, extends, or completes effort(s) performed under prior SBIR/STTR funding agreements, but is funded by sources other than the SBIR/STTR programs. This covers any contract, grant, or agreement issued as a follow-on Phase III award or any contract, grant, or agreement award issued as a result of a competitive process where the awardee was an SBIR/STTR firm that developed the technology as a result of a Phase I or Phase II award. The DoN will give Phase III status to any award that falls within the above-mentioned description. Consequently, DoN will assign SBIR/STTR Data Rights to any noncommercial technical data and noncommercial computer software delivered in Phase III that were developed under SBIR/STTR Phase I/II effort(s). Government prime contractors and their subcontractors must follow the same guidelines as above and ensure that companies operating on behalf of the DoN protect the rights of the SBIR/STTR firm.

Navy SBIR 24.4 Topic Index
Release 2

N244-P01	NAVAIR Open Topic for Advanced Robotic Automation for Fleet Readiness
N244-P02	NAVSEA Open Topic for Sustainment and Obsolescence
N244-P03	NAVWAR Open Topic for Advanced Data Integrity and Control Methods

OUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Trusted AI and Autonomy; Human-Machine Interfaces

OBJECTIVE: The Naval Air Systems Command (NAVAIR) is seeking proposals from small businesses to advance the automation of industrial processes within Fleet Readiness Centers (FRCs). The aim is to enhance efficiency, quality, safety, pollution prevention, and productivity through the integration of advanced robotic technologies.

DESCRIPTION: Fleet Readiness Centers (FRCs) play a critical role in sustaining naval aviation readiness. These centers are responsible for the maintenance, repair, and overhaul of naval aircraft and components. Automation has the potential to streamline these processes, remove workers from hazardous environments, provide new capabilities to overhaul sensitive substrates, improve productivity, reduce turnaround times, and enhance overall readiness. NAVAIR is committed to fostering innovation and enhancing the efficiency of Fleet Readiness Centers through advanced robotic automation, machine learning (ML), computer vision, and artificial intelligence (AI). The automation of industrial processes at Naval Fleet Readiness Centers that overhaul both fixed wing and rotary wing aircraft is imperative to become more competitive and efficient. Automation will also aid to alleviate workers of repetitive or mundane tasks and can provide higher quality and precision only achieved with automation.

Technology areas of interest are below. Proposals should focus on or incorporate one or more of the following areas technology areas of interest. Please indicate the technology area of interest within the Abstract section of the Cover Sheet, Volume 1.

1. Advanced Robotic Systems Integration for Aircraft Maintenance and Repair: This area encompasses the integration of robotic or automated systems for various aircraft maintenance and repair tasks, including disassembly, non-destructive inspection, repair, composite fabrication, metal forming, grinding welding, reassembly, coating removal, surface preparation, and coating application (e.g., organic or inorganic). It involves the development and implementation of robotic solutions that are cost-effective, scalable, and suitable for deployment across diverse FRC environments. Additionally, it may involve the integration of AI, computer vision, or ML for autonomous decision-making to enhance efficiency and productivity.

2. Human-Robot Collaboration and Safety in Aviation MRO: This area focuses on ensuring worker well-being and productivity through effective human-robot collaboration and safety mechanisms in industrial processes. This includes the development of collaborative robots (cobots) to optimize workflow efficiency. Dexterity, versatility, payload capacity, and ease of use by the operator are critical design factors for implementation and safety systems to mitigate risks. It encompasses the development and implementation of ergonomic design considerations, as well as safety features and protocols to facilitate safe interaction between humans and robots for aircraft maintenance and repair operations.

3. Emerging Technologies for Autonomous Aviation Maintenance: This area explores the integration of emerging technologies, such as machine learning, artificial intelligence, and computer vision, for autonomous decision-making in aviation maintenance processes. It involves leveraging AI and ML algorithms to analyze data, optimize maintenance schedules, optimize maintenance, predict equipment failures, and end of life, and automate decision-making processes. This includes but is not limited to the development of intelligent systems capable of autonomously assessing maintenance needs, prioritizing tasks, and optimizing resource allocation to improve overall maintenance efficiency and effectiveness.

PHASE I: The DoN is planning to issue multiple Phase I awards for this topic but reserves the right to issue no awards. Each Phase I proposal must include a Base and Option period of performance. The Phase I Base must have a period of performance of four (4) months at a cost not to exceed \$75,000. The Phase I Option must have a period of performance of six (6) months at a cost not to exceed \$100,000.

Phase I feasibility will describe the existing proposed technology, existing FRC industrial processes to improve, modifications required, anticipated improvements to existing capabilities, impacts to current logistics if any (i.e., transportation, storage, maintenance, safety, etc.) and transition approach to the FRC. Proposed solutions should address key challenges in aircraft maintenance, repair, component fabrication, inspection, and related activities. Features such as the ability to generate a digital twin, capture of process data, monitor machine health and remote operation are also desired. Results of Phase I will be detailed in a final technical report (Final Report).

Phase I deliverables include:

- Kick-Off Briefing, due 15 days from start of Base award
- Final Report, due 120 days from start of Base award
- Quad Chart, due 120 days from start of Base award
- Initial Phase II Proposal, due 120 days from start of Base award

PHASE II: All Phase I awardees may submit an Initial Phase II proposal for evaluation and selection. The evaluation criteria for Phase II are the same as Phase I (as stated in this BAA). The Phase I Final Report and Initial Phase II Proposal will be used to evaluate the small business concern's potential to adapt commercial products to fill a capability gap, improve performance, or modernize an existing capability for DoN and transition the technology to Phase III. Details on the due date, content, and submission requirements of the Initial Phase II Proposal will be provided by the awarding SYSCOM either in the Phase I contract or by subsequent notification.

The scope of the Phase II effort will be specific to each project but is generally expected to harden, ruggedize, and/or marinize the technology for integration into an operational environment. The outcome to be a working prototype that can be tested and/or certified, including a fielding approach (including updated logistics and safety consideration) and further commercialization (non-DoD), if appropriate. They should also provide a simple innovative user interface to be used by a person with average technical skills.

PHASE III DUAL USE APPLICATIONS: Deploy advanced robotic automation solutions tailored to FRC industrial processes and provide logistics support.

REFERENCES:

1. Chiacchio, Ferdinando, et al. "Advanced robotic solutions for assembly in industrial manufacturing: a review." *Robotics* 10.2 (2021): 49.
2. Rathi, Rohit, et al. "Advanced robotic automation in manufacturing: a review." *International Journal of Advanced Manufacturing Technology* 108.5-6 (2020): 1951-1969.
3. Pigni, Federico, et al. "Advanced robotic automation in industrial production: Challenges and opportunities." *Procedia CIRP* 102 (2021): 176-181.
4. Caruso, Francesco, et al. "Robotic automation and industry 4.0: a systematic literature review on adoption, drivers, impacts and future perspectives." *International Journal of Production Research* 58.7 (2020): 2172-2199. \
5. Bini, Enrico, et al. "Advanced robotics in smart manufacturing: A review on industrial 4.0 adoption in Italy." *Journal of Manufacturing Systems* 58 (2021): 405-423.
6. Nof, Shimon Y., and Hongliang Ren. "Advanced industrial automation through automated guided vehicles (AGVs) and industrial robotics." *Industrial Engineering* 2.4 (2018): 160-170.

7. Rosati, Gianluca, et al. "An advanced robotic solution for manufacturing in industry 4.0." *Procedia CIRP* 81 (2019): 729-734.
8. Rajaram, Rajesh, et al. "Advanced robotic automation in manufacturing industry: current trends and future challenges." *Journal of Manufacturing Processes* 67 (2021): 454-469.
9. De Carvalho, Miguel, et al. "Advanced robotics for industrial manufacturing: A review." *Robotics and Computer-Integrated Manufacturing* 69 (2021): 102098.

KEYWORDS: Robotics; Automation; Artificial Intelligence; Manufacturing; Production; Inspection

TPOC-1: NAVAIR SBIR/STTR Program Office

Email: navair-sbir@us.navy.mil

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

OBJECTIVE: NAVSEA is seeking proposals for commercial technology to address Navy needs regarding sustainment and obsolescence.

DESCRIPTION: NAVSEA requests proposals for existing technology demonstration platforms, prototypes, and commercial products that will reliably and safely get Navy assets back in the field as quickly as possible. For Phase I awardees, NAVSEA will provide an operational context which technologies will be assessed against and provide feedback and guidance on enhancements to align with the Fleet's warfighting objectives. The proposing small business concern should have an existing solution, either hardware and/or software, which can be evaluated through operational experimentation with end users.

As stated in the instruction, only one proposal from a single small business concern will be accepted for this topic.

Areas of focus for potential projects include, but are not limited to:

1. Material Quality, Readiness, and Availability
2. AI/ML Generated Work Instructions
3. Additive Manufacturing Tools and Processes Advancements (afloat and ashore applications)
4. Cold Spray Technology Advancements
5. Shipyard and Maintenance Operational Logistics Improvements
6. Rapid Manufacturing to address urgent part obsolescence needs
7. Digital Twins for system lifecycle sustainability and design evolution

PHASE I: The DoN is planning to issue multiple Phase I awards for this topic but reserves the right to issue no awards. Each Phase I proposal must include a Base and Option period of performance. The Phase I Base must have a period of performance of four (4) months at a cost not to exceed \$75,000. The Phase I Option must have a period of performance of six (6) months at a cost not to exceed \$100,000.

Phase I feasibility will describe the existing proposed technology, existing DoN system(s) to improve, modifications required, anticipated improvements to existing capabilities, impacts to current logistics, if any (i.e., transportation, storage, maintenance, safety, etc.), and transition approach to the DON system. Results of Phase I will be detailed in a final technical report (Final Report).

The Phase I Option, if exercised, will include the initial design specifications and capabilities description to build a prototype solution in Phase II.

Phase I deliverables include:

- Kick-Off Briefing, due 15 days from start of Base award
- Final Report, due 120 days from start of Base award
- Quad Chart, due 120 days from start of Base award
- Initial Phase II Proposal, due 120 days from start of Base award

PHASE II: All Phase I awardees may submit an Initial Phase II proposal for evaluation and selection. The evaluation criteria for Phase II are the same as Phase I (as stated in this BAA). The Phase I Final Report and Initial Phase II Proposal will be used to evaluate the small business concern's potential to adapt commercial products to fill a capability gap, improve performance, or modernize an existing capability for DoN and transition the technology to Phase III. Details on the due date, content, and submission

requirements of the Initial Phase II Proposal will be provided by the awarding SYSCOM either in the Phase I contract or by subsequent notification.

The scope of the Phase II effort will be specific to each project but is generally expected to develop a functional prototype to demonstrate the capability, develop transition plan including production and fielding approach (including updated logistics and safety consideration) and further commercialization (non-DoD).

PHASE III DUAL USE APPLICATIONS: Field capability and logistics support. Since the Navy is seeking commercial technologies, these technologies already have commercial applications.

REFERENCES:

1. CSO Serial Four - Sustainable Acquisition and Procurement.
<https://www.secnv.navy.mil/Climate/Shared%20Documents/CSO%20Serial%20Four%20-%20Sustainable%20Acquisition%20and%20Procurement.pdf>
2. Navy's data-driven approach to sustainment finds huge room for improvement in ship maintenance. <https://federalnewsnetwork.com/on-dod/2022/06/navys-data-driven-approach-to-sustainment-finds-huge-room-for-improvement-in-ship-maintenance/>
3. Manufacturing woes could sink US sub fleet. Can 3D printing save it?.
<https://www.defensenews.com/industry/techwatch/2023/11/06/manufacturing-woes-could-sink-us-sub-fleet-can-3d-printing-save-it/>

KEYWORDS: Sustainment; Obsolescence; AI/ML; Additive Manufacturing; Cold Spray; Shipyard Maintenance; Rapid Manufacturing; Digital Twin

TPOC-1: NAVSEA SBIR/STTR Program Office

Email: usn.ncr.comnavseasyscomdc.mbx.nssc-sbir@us.navy.mil

OUSD (R&E) CRITICAL TECHNOLOGY AREA(S): Integrated Network Systems of Systems

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 foreign nationals proposed to perform on this topic may be restricted due to the technical data under US Export Control Laws.

OBJECTIVE: Develop a method to assure integrity, and control access and distribution for information on any device or network.

DESCRIPTION: The DoN requires the ability to securely move information from anywhere to anywhere. Once that information is delivered, the ability to assure integrity, control access, and limit further distribution becomes the critical capability. This topic seeks the development of technology that will provide for these critical capabilities independent from controls provided by networks, applications, platforms, or database technologies.

Traditionally, networks and applications have been the primary control method to assure integrity, control access, and limit distribution of information. The concept of Zero Trust aims to move the focus of protection to data elements, thus allowing much more flexibility and resiliency in the technology needed to connect people and things. Moving the protection boundary to data also frustrates malicious actors' ability to gain access to information by compromising a position on a network and using that position to gain further access. To achieve this vision, concepts and technologies must be developed that can secure the most basic elements of our information in a way that enhances resiliency through distribution rather than centralization.

The current approach to Zero Trust implementation depends on applications and platforms to provide integrity and control of data. The DoN lacks the ability to universally control data independent of an application layer solution. The DoN is exploring methods to provide integrity and control of data, as an object independent of an application or platform. The DoN is aware of data format concepts such as the Intelligence Community Data Format (ICDF), and the Zero Trust Data Format (ZTDF) that embed control mechanisms into the elemental data object as a potential technical solution. The DoN is reviewing blockchain technology as a potential technical solution to maintain control of data independent of an application or platform environment. The DoN will use this NAVWAR Open Topic to explore other approaches we may not be aware of to assure the integrity and preserve access and proliferation control of data as the elemental object.

Proposed solutions must protect data independent of networks, applications, or database technologies, function in disrupted, disconnected, intermittent and low-bandwidth (DDIL) situations, and recover gracefully once connectivity is restored to normal. Solutions must not require the ability to reach a certain application or network to function.

Required Attributes:

- Data controls are independent of any application, platform, network, or database
- Ability to integrate external identity sources (NIS)
- Resiliency to node and/or connectivity failures

- Resiliency to encryption manipulation techniques
- Rapid recovery/reconstitution capability
- Minimal effort to deploy and scale
- Distributed architecture (resiliency increases with scale)

PHASE I: The DoN is planning to issue multiple Phase I awards for this topic but reserves the right to issue no awards. Each Phase I proposal must include a Base and Option period of performance. The Phase I Base must have a period of performance of four (4) months at a cost not to exceed \$75,000. The Phase I Option must have a period of performance of six (6) months at a cost not to exceed \$100,000.

Phase I feasibility will show the Navy a design concept for data integrity and control, demonstrating all the required attributes listed in the description above. This concept will show the Navy how any information can be securely moved from anywhere to anywhere, while maintaining the integrity and control of the information post-delivery. Results of Phase I will be detailed in a final technical report (Final Report).

Phase I deliverables include:

- Kick-Off Briefing, due 15 days from start of Base award
- Final Report, due 120 days from start of Base award
- Quad Chart, due 120 days from start of Base award
- Initial Phase II Proposal, due 120 days from start of Base award

PHASE II: All Phase I awardees may submit an Initial Phase II proposal for evaluation and selection. The evaluation criteria for Phase II is the same as Phase I (as stated in this BAA). The Phase I Final Report and Initial Phase II Proposal will be used to evaluate the small business concern's potential to adapt commercial products to fill a capability gap, improve performance, or modernize an existing capability for DoN and transition the technology to Phase III. Details on the due date, content, and submission requirements of the Initial Phase II Proposal will be provided by the awarding SYSCOM either in the Phase I contract or by subsequent notification.

The scope of the Phase II effort will be a small-scale deployment of the concept proposed in Phase I. Details of the performance goals will be defined in a Statement of Work (SoW) provided by the Navy. Phase II will be evaluated to prove or disprove the ability to control the integrity, access, and distribution of data independent of networks, applications, platforms, or database technology. The solution will aim to prove or disprove that protections are equal or better than current methods.

PHASE III DUAL USE APPLICATIONS: Phase III will be Integrating the capability demonstrated in Phase II with current Naval networks. Working with selected Naval network operators, the capability will be integrated and tested in operational settings. If Phase III efforts produce desirable results, the partner will develop a plan for further release within Naval elements, and to commercial network operators. Providing highly available, highly secure data without the complexity of applications, platforms, or networks is a desirable capability for anyone working with sensitive information. The concept of Zero Trust is applicable far beyond the defense domain, and protection at the data element level is a key outcome of the Zero Trust theory. Commercial operators implementing this solution will allow defense customers to make better use of commercial IT offerings.

REFERENCES:

1. 1. Scott Rose (NIST), Oliver Borchert (NIST), Stu Mitchell (Stu2Labs), Sean Connelly (DHS) "NIST Special Publication 800-207 Zero Trust Architecture" <https://csrc.nist.gov/publications/detail/sp/800-207/final> Retrieved 11 July 2023

2. Loïc Lesavre, Priam Varin, Dylan Yaga “Blockchain Networks: Token Design and Management Overview” <https://nvlpubs.nist.gov/nistpubs/ir/2021/NIST.IR.8301.pdf> Retrieved 11 July 2023
3. Department of the Navy Capstone Design Concept for Information Superiority <https://www.doncio.navy.mil/mobile/ContentView.aspx?ID=15864&TypeID=3> Retrieved 11 July 2023

KEYWORDS: Zero Trust; Data-Centric Security; Web3; Blockchain; Encryption; Network

TPOC-1: Keegan Mills

Email: keegan.mills@usmc.mil