

<DATE>

IRREGULAR WARFARE TECHNICAL SUPPORT DIRECTORATE (IWTSD)

BROAD AGENCY ANNOUNCEMENT (BAA) 25S5000

Due Date for Receipt of Phase 1 Submissions:

No Later Than <DATE>

All submissions are due by 3:00 p.m. U.S. Eastern Time (ET) on the above date

- Advanced Analytics (AA)**
- Advanced Development (AD)**
- Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE)**
- Expeditionary Force Protection (EFP)**
- Explosive Ordnance Disposal and Explosive Operations (EOD-EXO)**
- Human Performance and Training (HPT)**
- Influence and Information Capabilities (I2C)**
- Protection, Survivability, and Recovery (PSR)**
- Surveillance, Collection, and Operations Support (SCOS)**
- Tactical Offensive Support (TOS)**

The Broad Agency Announcement Information Delivery System (BIDS) is the system in which all submissions and communications will flow. Communications outside of BIDS may result in expulsion from the competition.

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1. INTRODUCTION.

This is an Irregular Warfare Technical Support Directorate (IWTSD) Broad Agency Announcement (BAA) issued under the provisions of paragraph 6.102(d)(2)(i) of the Federal Acquisition Regulation (FAR) to provide for the competitive selection of research proposals. Contracts based on responses to this BAA are considered to be the result of full and open competition and in full compliance with the provisions of Public Law (PL) 98-369 Section 2701, "The Competition in Contracting Act." Awards for submissions under this BAA are planned for Fiscal Year (FY) 2026. No contract awards will be made until appropriated funds are available from which payment for contract purposes can be made.

[NOTE: Persons submitting proposals are advised that only the Contracting Officer can obligate the Government to any agreement involving expenditure of Government funds.]

1.1. Approach.

A three-phased proposal selection process will be used for this BAA to minimize cost and effort for prospective offerors:

- Phase 1 will consist of the solicitation, receipt, and evaluation of a one-page Quad Chart and a one-page addendum.
- Phase 2 will consist of the solicitation, receipt, and evaluation of a White Paper and applies to only those submissions that have been accepted in Phase 1.
- Phase 3 will consist of the solicitation, receipt, and evaluation of a Full Proposal and applies to only those submissions that have been accepted in Phase 2. Based on the priority of critical requirements and the availability of funding, Phase 1 submissions can be selected for Phase 3 without a Phase 2 submission.

Clarifications to White Papers and Full Proposals may be requested.

1.1.1 Type of Proposals.

Firm-fixed-price proposals are preferred for all requirements published in this BAA.

1.1.2. Cost Type Contracts.

Offerors interested in cost type contracts (to include Cost Plus Fixed Fee options) must have an accounting system determined adequate by Defense Contract Auditing Agency/ Defense Contract Management Agency (reference FAR 16.301-3(a)(3)). If no determination has been made, please contact BIDSHelp@iwtsd.gov for further guidance.

1.2. Small Business Set Aside.

The Government encourages nonprofit organizations, educational institutions, small businesses, small disadvantaged business (SDB) concerns, Service-Disabled Veteran-Owned Small Businesses (SDVOSBs), Historically Black Colleges and Universities (HBCU), Minority Institutions (MI), women-owned businesses, and Historically Underutilized Business zone enterprises as well as large businesses and Government laboratories to submit research proposals

for consideration and/or to join others in submitting proposals; however, no portion of the BAA will be set aside for these special entities because of the impracticality of reserving discrete or severable areas of research and development (R&D) in any specific requirement area.

1.3. Limitation of Funds.

The Government intends to incrementally fund Cost Reimbursement contracts awarded from this BAA as provided by FAR 52.232-22, "Limitation of Funds." Most contracts awarded are anticipated to be 12 to 24 months in duration and at times may include additional 6 to 12 month option(s). To facilitate incremental funding, submissions shall include the cost and schedule by a task-phased structure with clear exit criteria and shall be inclusive of all work to complete the effort including any options. It is anticipated that the entire effort will be negotiated with the initial contract award.

[NOTE: Based upon the availability of funding, the Government may have to partially fund Fixed Price contracts in accordance with DFARS 252.232-7007, "Limitation of Government's Obligation." In such cases, milestone payments will need to be a part of the full proposal. Applicability of this issue will be stated in the email asking for a Phase 3 proposal.]

1.4. Technical Evaluation Support.

It is the intent of this office to use contractor support personnel in the review, evaluation, and administration of all submissions for this BAA. All contractor support personnel will have access to proprietary data and shall certify that they: (1) will not disclose any information pertaining to this solicitation including any submissions, the identity of any submitters, or any other information relative to this BAA; and (2) have no financial interest in any submissions evaluated, reviewed, and administered. Submissions and information received in response to this BAA constitutes permission to disclose that proposal data to certified evaluators under these conditions.

1.5. BAA Package Download.

This BAA Package can be downloaded electronically in its entirety from IWTSD BAA Information Delivery System (BIDS), <https://bids.iwtsd.gov/>, under Resources. Registration is not required to download the BAA package; however, BIDS registration is required to upload a response to the BAA.

1.6. BAA Contractual and Technical Questions.

All contractual and technical questions regarding this BAA, including the published requirements and instructions, must be posted via either the BAA and Requirement Questions features, accessible from the [BIDS](#) homepage via [Have a Question?](#), or emailed to BIDSHelp@iwtsd.gov. No other office personnel will acknowledge, forward, or respond to any inquiries received in any manner concerning the BAA. All questions must be received no later than 14 days after the release of the final BAA. Contractual questions and answers will be posted periodically under BAA and Requirement Questions. Offerors are encouraged to periodically review BAA Questions, accessible from the [BIDS](#) homepage via [Have a Question?](#)

1.7. BIDS Website Help Requests.

For technical help using BIDS, submit questions to BIDSHelp@iwtsd.gov or by using the button

located under [Have a Question?](#). Include a valid email address, your BIDS username, and a detailed description of the question or concern in the comments block. To assure adequate time to resolve any technical issues encountered, vendors should register and submit early. Technical issues reported to the Help Desk less than 1 hour before the BAA closing date and time will not be considered for extensions. Vendors may revise a submission up to the BAA's closing date and time. [BIDS](#) provides other valuable resources, such as Doing Business with the Government. Reference documents noted in this BAA, such as the Quad Chart Sample and IWTSD Cost Proposal Template, are available for download under Resources on the homepage menu bar.

A list of BIDS FAQs can be found in the [Have a Question?](#) section of [BIDS](#).

2. GENERAL INFORMATION.

This section includes information applicable to all awards under this BAA.

2.1. Eligibility.

To be eligible for contract award, a responsible offeror must meet certain minimum standards pertaining to financial solvency and resources, ability to comply with the performance schedule, prior record of satisfactory performance, integrity, organization, experience, operational controls, technical skills, facilities, and equipment. See FAR 9.104.

- All offerors must be registered in the System for Award Management (SAM) database prior to award at <https://sam.gov/>.

Other helpful information is provided under Doing Business with the Government on the [BIDS](#) homepage.

2.1.1. Who is eligible?

All private companies, educational institutions, non-profit organizations both large and small are able and encouraged to submit to the IWTSD BAA.

2.1.2. Federally Funded Research and Development Centers.

Only DOD-Sponsored Federally Funded Research and Development Centers (FFRDCs) can compete with commercial sector Vendor submissions and will be evaluated using the normal BAA process. For further information, reference DFARS 235.017-1.

2.1.3. Research Development and Engineering Centers (RDECs).

DOD Research Development and Engineering Centers (RDEC)s/Labs, e.g., Naval Research Lab (NRL) may submit to the IWTSD BAA. Submissions from RDECs/DOD Labs will be evaluated only after all commercial sector vendor and DOD-Sponsored FFRDC submissions have been evaluated and determined that such submissions did not meet the BAA requirement.

IWTSD will inform the RDECs through a BIDS notification at the time of submitter registration that RDEC submissions will be reviewed last in the process, i.e., after all

commercial sector vendor and DOD Sponsored FFRDC submissions are reviewed and determined that none meet the BAA requirement. RDECs/DOD Labs will also be informed of this condition during registration in the BIDS system.

If an RDEC's/DOD Lab's submission meets the BAA requirement and all other commercial sector vendor/DOD-Sponsored FFRDC submissions have been exhausted (i.e., post non-select), correspondence with the RDEC will occur directly (Government to Government) to establish a statement of work, deliverables, and MIPR/Work Order to commence the project.

2.2. Procurement Integrity, Standards of Conduct, Ethical Considerations.

Certain post-employment restrictions on former federal officers and employees exist including special Government employees (Section 207 of Title 18, United States Code (U.S.C.)). If a prospective offeror believes that a conflict of interest exists, the offeror should make this known to the Contracting Officer for resolution before time and effort are expended in preparing a proposal.

2.3. Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment.

FAR provision 52.204-24 applies to all BAA requirements. The full text of FAR provision 52.204-24 is below.

52.204-24 Representation Regarding Certain Telecommunications and Video Surveillance Services or Equipment (Nov 2021)

The Offeror shall not complete the representation at paragraph (d)(1) of this provision if the Offeror has represented that it "does not provide covered telecommunications equipment or services as a part of its offered products or services to the Government in the performance of any contract, subcontract, or other contractual instrument" in paragraph (c)(1) in the provision at 52.204-26, Covered Telecommunications Equipment or Services—Representation, or in paragraph (v)(2)(i) of the provision at 52.212-3, Offeror Representations and Certifications-Commercial Products or Commercial Services. The Offeror shall not complete the representation in paragraph (d)(2) of this provision if the Offeror has represented that it "does not use covered telecommunications equipment or services, or any equipment, system, or service that uses covered telecommunications equipment or services" in paragraph (c)(2) of the provision at 52.204-26, or in paragraph (v)(2)(ii) of the provision at 52.212-3.

(a) *Definitions.* As used in this provision—

Backhaul, covered telecommunications equipment or services, critical technology, interconnection arrangements, reasonable inquiry, roaming, and substantial or essential component have the meanings provided in the clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

(b) *Prohibition.* (1) Section 889(a)(1)(A) of the John S. McCain National Defense

Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, 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. Nothing in the prohibition shall be construed to—

(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract 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. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract. Nothing in the prohibition shall be construed to—

(i) Prohibit the head of an executive agency from procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(ii) Cover telecommunications equipment that cannot route or redirect user data traffic or cannot permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(c) *Procedures.* The Offeror shall review the list of excluded parties in the System for Award Management (SAM) (<https://www.sam.gov>) for entities excluded from receiving federal awards for "covered telecommunications equipment or services".

(d) *Representation.* The Offeror represents that—

(1) It will, will not provide covered telecommunications equipment or services to the Government in the performance of any contract, subcontract or other contractual instrument resulting from this solicitation. The Offeror shall provide the additional disclosure information required at paragraph (e)(1) of this section if the Offeror responds "will" in paragraph (d)(1) of this section; and

(2) After conducting a reasonable inquiry, for purposes of this representation, the Offeror represents that—

It does, does not use covered telecommunications equipment or services, or use any equipment, system, or service that uses covered telecommunications equipment or services. The Offeror shall provide the additional disclosure information required at paragraph (e)(2) of this section if the Offeror responds "does" in paragraph (d)(2) of this section.

(e) *Disclosures.* (1) Disclosure for the representation in paragraph (d)(1) of this provision. If the Offeror has responded "will" in the representation in paragraph (d)(1) of this provision, the Offeror shall provide the following information as part of the offer:

(i) For covered equipment—

(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the original equipment manufacturer (OEM) or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

(C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.

(ii) For covered services—

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the Product Service Code (PSC) of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(1) of this provision.

(2) Disclosure for the representation in paragraph (d)(2) of this provision. If the Offeror has responded "does" in the representation in paragraph (d)(2) of this provision, the Offeror shall provide the following information as part of the offer:

(i) For covered equipment—

(A) The entity that produced the covered telecommunications equipment (include entity name, unique entity identifier, CAGE code, and whether the entity was the OEM or a distributor, if known);

(B) A description of all covered telecommunications equipment offered (include brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); and

(C) Explanation of the proposed use of covered telecommunications equipment and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.

(ii) For covered services—

(A) If the service is related to item maintenance: A description of all covered telecommunications services offered (include on the item being maintained: Brand; model number, such as OEM number, manufacturer part number, or wholesaler number; and item description, as applicable); or

(B) If not associated with maintenance, the PSC of the service being provided; and explanation of the proposed use of covered telecommunications services and any factors relevant to determining if such use would be permissible under the prohibition in paragraph (b)(2) of this provision.

(End of provision)

2.4. Restrictive Markings on Proposals.

All proposals should clearly indicate content disclosure limitations. Submissions can be marked as “Proprietary” or words to that effect; however, markings such as “Company Confidential” or other phrases that could be confused with national security classifications shall not be used. All paragraphs that contain proprietary information must be clearly marked. The Contracting Officer may challenge proprietary markings if they are not substantiated.

2.5. Submission Handling/Rights in Technical Data and Computer Software/Patent Rights.

2.5.1. Procurement Integrity.

The Government shall comply with FAR 3.104 in its treatment of information submitted in response to this BAA solicitation and marked with the individual’s or company’s legend.

2.5.2. Submission Information and FOIA.

Records or data bearing a restrictive legend can be included in the proposal. However, the offeror is cautioned that portions of the proposal are subject to release under the terms of the Freedom of Information Act (FOIA), 5 U.S.C. § 552, as amended. In accordance with FOIA regulations, the offeror will be afforded the opportunity to comment on, or object to, the release of proposal information.

2.5.3. Rights in Technical Data and Computer Software.

Rights in technical data and computer software and software documentation provided in the proposal are treated in accordance with the Department of Defense Federal Acquisition Regulation Supplement (DFARS) 252.227-7016, “Rights in Bid and

Proposal Information.” Rights in technical data, and computer software and computer software documentation in the resultant contract shall be in accordance with DFARS 252.227-7013 (regarding technical data) and DFARS Section 252.227-7014 (regarding computer software and software documentation). Both clauses (DFARS sections 252.227-7013 and 252.227-7014) will be included in any non-commercial contract exceeding the simplified acquisition threshold. Table 1 contains these and related clauses that may be included in the contract.

DFARS	Title
252.227-7013	Rights in Technical Data – Noncommercial Items
252.227-7014	Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation
252.227-7016	Rights in Bid and Proposal Information
252.227-7017	Identification and Assertion of Use, Release, or Disclosure Restrictions
252.227-7019	Validation of Asserted Restrictions - Computer Software
252.227-7025	Limitations on the Use or Disclosure of Government-Furnished Information Marked with Restrictive
252.227-7027	Deferred Ordering of Technical Data or Computer
252.227-7028	Technical Data or Computer Software Previously Delivered to the Government
252.227-7030	Technical Data - Withholding of Payment
252.227-7037	Validation of Restrictive Markings on Technical Data

2.5.4. Patents.

Patents in existence and patent applications pending at the time of the proposal, which relate to the proposed effort, shall be identified in the White Paper and Full Proposal in accordance with the clauses above.

2.6. Product and Deliverable Requirements.

All proposal phases shall include the costs for products and data deliverable requirements. Minimum data (report) requirements include Monthly Status Reports (MSRs), meeting minutes and a Final Technical Report even if the research is to be continued under a follow-on contract or contract option. MSRs document program, technical, and financial status. The Final Technical Report summarizes the project and associated tasks at the conclusion of each contract. Include MSRs, the Final Technical Report, and any products and deliverables specific to the performance of the proposed effort (e.g., system specification). The Government will provide the offeror with a full listing of data deliverables (i.e., Contract Data Requirements List) in the request for Phase 3 Full Proposal. Additional products and deliverables could include prototype hardware, software, or systems; test plans; test and technical reports; technical data; specifications; requirements documents; computer programs or software; user manuals; drawings; or other products and data. The number, types, and preparation instructions for products and deliverables will be specified in the contract.

2.7. Distribution/Release Limitations.

The offeror should be aware that all resulting contracts or other awards will contain release limitations for all data resulting from the effort in accordance with DFARS 252.204-7000. This includes products, data, information, and services to be performed. The contractor shall protect all data and information from disclosure, and shall not release any data or information by any method of dissemination without prior Government approval.

2.8. Subcontracting.

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. § 637(d)), it is the policy of the Government to enable small business and small disadvantaged business concerns to be considered fairly as subcontractors to contractors performing work or rendering services as prime contractors or subcontractors under Government contracts, and to assure that prime contractors and subcontractors carry out this policy.

2.9. Animal or Human Testing Compliance.

The contractor shall comply with all laws and regulations governing the use of animals or human subjects in research projects. Information regarding compliance requirements for using humans and animals in testing is also available on BIDS under Resources.

2.9.1. Animal Testing.

Any contract resulting from this BAA that potentially involves the testing of animals shall include the following language:

Any contractor performing research on warm blooded vertebrate animals shall comply with the Laboratory Animal Welfare Act of 1966, as amended, 7 U.S.C. §§ 2131 - 2159, and the regulations promulgated thereunder by the Secretary of Agriculture in 9 C.F.R. Parts 1 through 4, pertaining to the care, handling, and treatment of vertebrate animals held or used for research, teaching, or other activities supported by Federal contract awards. In addition, the contractor shall comply with the provisions of Department of Defense Instruction (DODI) 3216.01, as implemented by SECNAVINST 3900.38C, and DFARS 252.235-7002, "Animal Welfare," which is incorporated into this contract.

2.9.2. Human Subjects Testing.

Any contract resulting from this BAA that potentially involves the use of human subjects in the research or study shall include the following language:

The contractor shall comply with all regulations promulgated by the Office of the Secretary of Defense in 32 C.F.R. Part 219, pertaining to the protection of human subjects. In addition, the contractor shall comply with the provisions of DODI 3216.02 and DFARS clause 252.235-7004. If human subjects are to be used at any time during the project, the contractor shall have a Federal assurance that is acceptable to IWTSD before involving human subjects. Additionally, the protocol shall be approved by a Federally-assured Institutional Review Board (IRB) office named in the institution's assurance. The contractor shall prepare these documents and shall ensure that they are on file with IWTSD prior to the start of research involving human subjects. Collaborators with the contractor, to include IRBs, shall also comply with regulations to protect human subjects

for both classified and unclassified research. The contractor shall report all changes in the protocol or consent form to the IWTSD Contracting Officer's Representative as they occur. Release of initial and follow-up funding will be contingent upon initial and continuing reviews, and to other IRB and component requirements.

2.10. Submission Document Language.

All submission documents must be in English.

2.11. Risk Management Framework.

The DOD requires all solutions that use information technology to follow current best practices for maintaining cybersecurity. Standards and compliance apply even if the solution is a component of a larger system. Information technology systems must be compliant with the DOD Risk Management Framework as described in DOD Instruction 8500.01. Compliance with this instruction ensures all projects account for information security from requirements gathering to implementation, maintenance and continuous monitoring.

3. PROPOSAL PREPARATION.

This section provides information and instructions for the preparation and submission of all phases under this BAA. All submissions must meet these requirements including format, content, and structure, and must include all specified information to avoid disqualification, submission rejection, or delays in evaluation.

3.1. BAA Information Delivery System (BIDS).

BIDS at <https://bids.iwtzd.gov/> is used: (1) to provide public access to the BAA package; (2) to collect all unclassified submissions; and (3) to collect placeholder records for all classified submissions. BIDS also provides submission progress tracking, evaluation comment collection, and results notification back to the submitter.

3.1.1. Submitter Registration.

A BIDS submitter registration is required to respond to this BAA. Registrations should reflect the offeror's contracting or business authority. The username, created by the offeror, must be unique and is used for BIDS log in and submission tracking. Registration acceptance for submitters is automatic, but takes several seconds to be recognized by BIDS. A success email will be sent to indicate that the username and account are accepted.

BIDS now requires the use of Multifactor Authentication (MFA). All accounts require the download and configuration of the Okta Verify application on the cell phone they wish to associate with a given account. Potential submitters are advised to complete this step as soon as possible as Registrations not completed at least 1 hour before the BAA's closing date and time will not be considered for extensions. Directions explaining how to do this are available on the Vendor QuickCard and on the BIDS Resources page. BIDS is email dependent and uses the registration email as the single point of contact (POC) for all notifications associated with the BAA. This email address should be monitored

frequently during the BAA process for the notices. Submitters should periodically check status in their account, not receiving a notification email does not constitute grounds to appeal an evaluation decision. Spam blockers and other email security software may cause a notification email to be rejected; check your account. Email addresses included in the submissions or any other data field in BIDS will not be used for contact and notification purposes.

3.1.2. User Accounts and Password Resets.

Registration account information such as the POC, email, and password can be updated after log in. The “Forgot your password?” link on the BIDS login page allows registered users with a valid username to automatically reset a password. The system will verify the account username and email and then send a new password to that email.

3.1.3. Registration and Account Help.

BIDS help requests can be emailed to BIDS administrators at BIDSHelp@iwtsd.gov or submitted via the button located on the [Have a Question?](#) page.

3.1.4. Document Identifier.

The offeror shall include the document identifier in the header of each submission. Document identifiers must match the BIDS submission record and should be constructed before upload to BIDS.

3.1.4.1. Constructing Document Identifiers.

Document identifiers, auto-generated in part by BIDS, are based on Subgroup, the requirement number, the username, and a Vendor Internal Tracking (VIT) number. The underlined portion of the sample shown in Table 2 depicts the segment automatically formed by BIDS.

Table 2. Sample Document Identifier and Components Definition

<u>CBRNE-1112-ABCCORP-10703JT-QC</u>	
From Sample	Document Identifier Component
CBRNE	subgroup designation - from BAA
1112	requirement number - from BAA
ABCCORP	username - from BIDS registration
10703JT-QC	VIT number - any alphanumeric combination (with no special characters or spaces) created by the submitter for (submitter) tracking purposes along with the document type suffix

3.1.4.2. Creating Vendor Internal Tracking (VIT) Numbers.

VIT numbers are unique identifiers created by submitters and entered in the submission record during the upload process. VIT numbers can be any alphanumeric combination (no special characters or spaces) chosen by the submitter plus a suffix indicating the document type. BIDS enforces unique VIT numbers and will not allow the submission record to be saved if the VIT number has already been used. Table 3 provides sample VIT numbering formats for each

document type.

Table 3. Sample VIT Numbers for an Accepted Submission

Document Type	Auto-generated by BIDS	VIT#
Quad Chart +1-page addendum	CBRNE-1112-ABCORP	10703JT-QC
White Paper	CBRNE-1112-ABCORP	10703JT-WP
Full Proposal	CBRNE-1112-ABCORP	10703JT-FP

Offerors uploading more than one submission to the same requirement shall create unique identifiers by adding a numbered sequence to the document type suffix. Table 4 offers sample VIT number formats for multiple submissions to the same requirement.

Table 4. Sample VIT Numbers for Multiple Submissions to the Same Requirement

Submission #	Auto-generated by BIDS	VIT# Sample 1	VIT# Sample 2*
Submission 1	CBRNE-1112-	10703JT-QC1	QC1
Submission 2	CBRNE-1112-	10703JT-QC2	QC2
Submission 3	CBRNE-1112-	10703JT-QC3	QC3
* NOTE: If the submitter does not require an internal tracking number, use the document type designation.			

3.2. BIDS Security and Access Control.

All data uploaded to BIDS is secure from public view and download. All submissions will be considered proprietary/source selection sensitive and protected accordingly. The documents can only be reviewed by the registrant and authorized Government and contractor representatives with no conflict of interest.

3.3. Submission Changes.

Changes to uploaded submissions are permitted up to the closing date and time. If a modification is required, update the original file in the source application and save. Convert to an acceptable format (detailed below) if applicable. In BIDS, open the submission record under **Previously Uploaded Proposals**. Only submissions with the **Update Proposal** status can be modified. Changes can be made after clicking on the submission link. Click on the trash icon to delete the old file. Use **Choose File** to select the revised document. Click **Save Proposal** to save the changes. Documents cannot be edited online through the BIDS interface. File names must contain no spaces or special characters. Ensure the file size does not exceed the prescribed limits. To completely remove a submission from consideration, select **Delete Proposal**. Changes after the submission due date and time are not permitted.

3.4. Special Handling Procedures for Classified Information.

If a submission contains classified information, the offeror must first create a placeholder record in BIDS with an unclassified cover page attachment. Identify in the placeholder document that the submission cannot be uploaded due to classification and include the method of delivery

(hand-carried, secure mail, etc.) as well as the tracking number, if applicable. The BIDS Document Identifier must be clearly identified on the mailed document(s). Classified responses (up to SECRET) must be appropriately and clearly marked (including all paragraphs and pages containing the subject data), packaged, and shipped in accordance with classified material handling procedures and security regulations pertaining to the level of classification for that document. To obtain mailing instructions for classified submissions, email: BIDSHelp@iwtsd.gov.

Classified submissions must be received by the applicable due date and time. Classification in no way eliminates the offeror's requirement to comply with all BAA instructions.

3.5. Phase 1 Submissions.

Offerors shall prepare and upload a one-page Quad Chart and a one-page addendum in response to Phase 1 of this BAA. All pages shall be 8 ½ by 11 inches. Use Times New Roman font size 10 point or greater. Single spacing is preferred for the addendum. If more than two pages (i.e., the Quad Chart plus the addendum) are submitted, only the first two pages will be evaluated. Phase 1 submissions do not require a cover page.

3.5.1. Phase 1 Due Date and Time.

All unclassified Quad Charts must be received electronically through BIDS no later than 1500 (3:00 p.m.) U.S. Eastern Time on the date specified on the cover of this document. Likewise, classified submissions must be received by the same due date and time. Offerors must create a placeholder record in BIDS with an unclassified cover page attachment. Refer to section 3.4 of this BAA for instructions on classified submissions. BIDS does not allow proposals to be uploaded or placeholders for classified submissions to be created after the closing date and time. Any proposal, regardless of classification, submitted by any other means, or that is late, will not be considered by the Government. Avoid the last minute rush; submit early.

3.5.2. Electronic File Format.

The Quad Chart and addendum shall be submitted in a single file. This file must be in Portable Document Format (.pdf). Adobe Acrobat and MS Word can generate such files. The document must be print-capable, without a password, and no larger than 1024 KB. File names cannot contain spaces or special characters. Apple users must ensure the entire file name and path are free of spaces and special characters. Submissions that cannot be opened, viewed, or printed will not be considered.

[NOTE: ZIP files and other application formats, such as Microsoft Office (.docx or .pptx) are NOT acceptable.]

3.5.3. Quad Chart and Addendum Content.

A Quad Chart conveys the essence of the proposed solution for a single requirement. When preparing a submission, the offeror shall ensure that the specific criteria of the requirement are addressed, the solution is clear, and can be accomplished with the proposed technology, cost, and schedule. The Quad Chart includes a document header and four quadrants. The Quad Chart format and sample are provided on [BIDS](#) under

Resources.

3.5.3.1. Header Information.

Header information shall include the BAA number, the Document Identifier, and the Proposal Title. The date and company name should be included along with the appropriate document markings.

3.5.3.2. Top Left Quadrant, Graphical Depiction.

The top left quadrant is a graphical depiction, photograph, or artist's concept of the proposed solution or prototype. Include labels or brief descriptive text as needed for clarification. Ideally, this will convey the prototype concept, use, capability, and any relevant size or weight relationships based on the published requirement.

3.5.3.3. Top Right Quadrant, Operational and Performance Capabilities.

The top right quadrant contains the operational and performance capabilities summary. Describe any basic, new, or enhanced capabilities the system will provide to meet the published requirement. In bullet form, list key aspects of performance, capability, operational use, relevant software or hardware specifications, and planned interface and/or compatibility.

3.5.3.4. Bottom Left Quadrant, Technical Approach.

The bottom left quadrant contains the proposed technical approach. Specifically, describe the technology involved, how it will be used to solve the problem, actions done to date, and any related ongoing efforts. Briefly describe the tasks to be performed for each phase. A bulleted list is acceptable.

3.5.3.5. Bottom Right Quadrant, Cost, and Schedule.

The bottom right quadrant contains the Rough Order of Magnitude (ROM) and Schedule, Products and Deliverables, and Corporate Contact Information. Vendors shall also note the type of contract proposed (e.g., FFP, CPFF, etc.). ROM and Schedule shall be proposed by phase and include the cost, period of performance (POP), and exit criteria for each phase. A total cost and POP that combines all phases, all applicable data requirements and minimum data report requirements (e.g., MSR, meeting minutes, Final Technical Report, etc.) shall also be included. Products and Deliverables shall include, by phase, a list of all prototype hardware and software along with the required data as described in "Product and Deliverable Requirements" in section 2.6. of this document. Corporate contact information shall include the submitter's company name, POC, phone number, and email address. Include any significant teaming partner (contact information) relevant to the evaluation.

[NOTE: The contact information in the BIDS registration is used for all notices and contact purposes.]

3.5.3.6. Addendum

The offeror shall use the addendum to describe the technical solution in greater detail.

3.5.4. Phase 1 Notification to Offeror.

The Government will notify the offeror when a submission has been accepted or rejected. Notification of acceptance with a request to submit the next phase document will be emailed to the offeror's contracting authority as entered in the BIDS registration and will indicate the next submission type, clarification requests, and due date and time. Likewise, rejection notifications will be emailed to the address provided in the BIDS registration. Debriefings for Phase 1 submissions will not be conducted due to the nature of BAAs.

In general, submissions are not considered for further review when they do not meet the basic requirement, are too costly, or do not fit the mission. All Phase 1 submissions are evaluated in accordance with Section 4, Proposal Evaluation, of this BAA.

3.5.5. Phase 1 Status and Inquiries.

Phase 1 is complete when all submissions have been accepted or rejected in accordance with this BAA. Inquiries outside of the BIDS system (e.g., phone, email, etc.) concerning the status of Phase 1 submissions will not be accepted. After BIDS log on, submitters are able to check the status of their submission(s) under **Previously Uploaded Proposals**.

3.6. Phase 2 White Paper Submissions.

Offerors shall prepare and upload a White Paper with no more than twelve (12) pages plus a cover page in response to Phase 2 of this BAA. The cover page template is provided at the BIDS website under Resources. The cover page is excluded from the White Paper page count. All submission pages shall be 8 ½ by 11 inches, double-spaced with Times New Roman font no smaller than 10 point; all margins shall be one inch. Each page of the submission shall contain the document identifier in the document header. If the White Paper contains more than 12 pages including tables, charts, and figures, only the first 12 pages will be evaluated.

3.6.1. Phase 2 Due Date and Time.

All unclassified White Papers must be received electronically through BIDS no later than the due date and time specified in the Phase 1 Quad Chart acceptance email. Likewise, classified submissions must be received by the same due date and time; offerors must create a placeholder record in BIDS with an unclassified cover page attachment. Refer to section 3.4 of this BAA for instructions on classified submissions. BIDS does not allow proposals to be uploaded or placeholders for classified submissions to be created after the due date and time. Any proposal, regardless of classification, submitted by any other means, or that is late, will not be considered by the Government.

3.6.2. Electronic File Format.

The White Paper shall be submitted in a single file. This file must be in Portable Document Format (.pdf). Adobe Acrobat and MS Word can generate such files. The document must be print-capable, without password, and no larger than 2048 KB. File names cannot contain spaces or special characters. Apple users must ensure the entire file name and path are free of spaces and special characters. Submissions that cannot be

opened, viewed, or printed will not be considered.

[NOTE: ZIP files and other application formats, such as Microsoft Office (.docx or .pptx) are NOT acceptable.]

3.6.3. Phase 2 Document Upload.

To upload a next phase document, use the link back to BIDS provided in the acceptance email, or log in to BIDS and navigate to Requested Proposals to open the accepted record. Review the checklist then click Create Proposal and follow the instructions.

3.6.4. White Paper Content.

White Papers shall provide a description of the technical approach, the specific tasks and deliverables by phase, schedule and cost estimate by phase, intellectual property and government rights, transition planning for production, and a capability statement. The offeror shall incorporate all clarification data requests from the acceptance email into the submission. Indicate clarification entries by footnote and reference the requested item(s) in the footer area. The following White Paper sections and details are required.

3.6.4.1. Cover Page.

A cover page template is provided [BIDS](#) under Resources. The cover page includes necessary contractual information including the offeror's contracting POC (name, telephone number, email address, facsimile number, mailing address) and business information such as your Unique Entity ID issued by the sam.gov website. Include the proposed contract type, total cost, and the duration of all phases/tasks. The cover page is excluded from the page count.

3.6.4.2. Technical Approach.

Describe the proposed solution relative to the requirement. Focus content on operational capabilities required to address the problem, the underlying theory that supports the operational capability, and suggested concept of operations. Identify end users that could be interested in the proposed solution and describe how the solution will be a benefit. Include drawings, diagrams, charts, and tables needed to explain the effort. Describe if, and where, the proposed technology/solution has been, or is being used. Identify sponsoring agency and funding resources; or if none, so state.

3.6.4.3. Tasks and Deliverables.

Identify the proposed tasks by phase in the order of occurrence. A phase must have clear exit criteria to serve as a "go" or "no-go" decision point to proceed to the next phase. Identify work that will be performed by other organizations or agencies. Identify anticipated technical risks along with planned mitigation efforts. Indicate any Government furnished material (GFM), equipment (GFE), or information (GFI) that will be required with the task and need date; or state if none. For each phase include the exit criteria and all products and deliverables as defined in section 2.6 of this BAA. State if a phase is proposed as an option.

3.6.4.4. Schedule.

Develop a master project schedule preferably in Gantt chart format. The schedule shall indicate the planned start and stop point for each phase with top level subordinate tasks, estimated delivery dates, and completion dates. Indicate the total project POP in months using January 30th as a notional start date through the completion date. Please address plan to ensure timely delivery of supplies in a restrictive global supply chain environment.

3.6.4.5. Cost.

Provide the proposed, task-phased budgetary estimate inclusive of any proposed options. At a minimum, this estimate shall detail estimated labor hours and costs, anticipated material costs, product and deliverable costs (see section 2.6. of this BAA), and other costs (e.g., subcontracts, indirect rates, profit or fee rate) for each phase/task. Costs allocated to other organizations (e.g., Government testing) shall be clearly shown; or state if none. Changes in cost from those proposed in the prior submission shall be explained. Address any concerns regarding material that will be needed that may be associated with global supply chain delays and cost control measures to ensure contract remains within negotiated material costs.

3.6.4.6. Intellectual Property, Technical Data, and Software.

Disclose/discuss all intellectual property, technical data, and/or software rights that are intended to be used in connection with this submission. See section 2.5 of this BAA for additional information.

3.6.4.6.1. Patents and Patent Applications.

Identify any existing, applied for, or pending patents that will be used in the conduct of this effort. Provide patent number with date of issue and title or patent application number with filing date and title. Any patent or patent application that resulted from prior government funding should be identified. If no patents or patent applications are relevant, so state. See section 2.5 of this BAA for additional information.

3.6.4.6.2. Rights in Technical Data and Software.

Identify any technical data and/or computer software that will be delivered with less than unlimited rights as prescribed in DFARS 252.227-7013 and DFARS 252.227-7014. State if unlimited rights in technical data are proposed. See section 2.5 of this BAA for additional information.

3.6.4.7. Transition from Prototype to Production.

Describe the overall strategy to transition the results of this development effort to production once the funded effort is concluded. Briefly describe the overall strategy for transition, potential partners, transition issues to include any obvious regulatory, liability, interoperability, or financing issues. Discuss the interaction with representative users and the concept for test and evaluation by those users and follow on support of a product resulting from this effort.

3.6.4.8. Organizational Capability Statement.

Describe the offeror's capability and/or experience in doing this type of work. Identify technical team members or principal investigators and associated expertise. If applicable, include a description of co-participants' capabilities and/or experience. State whether an agreement has been reached (or not) with the co-participants. The offeror is only required to submit past performance information in response to a request for Full Proposal.

3.6.5. Phase 2 Status and Inquiries.

Phase 2 is complete when all submissions have been accepted or rejected in accordance with this BAA. Inquiries outside of the BIDS system (e.g., phone, email, etc.) concerning the status of White Papers will not be accepted. After login to the [BIDS website](#), submitters are able to check the status of their submission(s) under Previously Uploaded Proposals.

3.6.6. Phase 2 Notifications to Offeror.

The Government will notify the offeror when a submission has been accepted or rejected. Notification of acceptance with a request to submit the next phase document will be emailed to the offeror's contracting authority as entered in the BIDS registration and will indicate the next submission type, clarification requests, and due date and time. Likewise, rejection notifications will be emailed to the address provided in the BIDS registration.

Debriefings for White Papers will not be conducted due to the nature of BAAs. In general, submissions are not considered for further review when they do not meet the basic requirement, are too costly, do not fit the mission, or funding is not expected. All White Papers are evaluated in accordance with section 4. Proposal Evaluation of this BAA.

3.7. Phase 3 Full Proposal Submissions.

Offerors shall prepare and upload a Full Proposal, consisting of a Technical Proposal in Portable Document Format (.pdf), a completed IWTSD Cost Proposal template (using the Microsoft Excel format provided by IWTSD) along with a supporting Cost Narrative in .pdf, plus a cover page, in response to Phase 3 of this BAA. All pages shall be 8 ½ by 11 inches, double-spaced with Times New Roman font no smaller than 10 point; all margins shall be one inch. Each page of the submission shall contain the document identifier in the document header. The Technical Proposal must be no more than 50 pages including tables, charts, and figures. If the document contains more than 50 pages, only the first 50 pages will be evaluated. All paragraphs containing proprietary information must be clearly marked. The Cost Proposal has no page limit; however, unnecessarily elaborate or information beyond those sufficient to present a complete and effective response is not desired.

Disclaimer - To minimize the cost and effort for submitters, Phase 3, Full Proposals, will only be requested for qualifying solutions that have a high probability of award; however, the Government reserves the right to cancel requirements, or any request for proposals for this solicitation, at any time prior to award and shall not be liable for any cost of proposal preparation or submission.

3.7.1. Phase 3 Due Date and Time.

All unclassified Full Proposals must be received electronically through BIDS no later than the due date and time specified in the acceptance email. Likewise, classified submissions must be received by the IWTSD Security Office by the due date and time; offerors must create a placeholder record in BIDS with an unclassified cover page attachment. Refer to section 3.4 of this BAA for instructions on classified submissions. BIDS does not allow proposals to be uploaded or placeholders for classified submissions to be created after the due date and time. Any proposal, regardless of classification, submitted by any other means, or that is late, will not be considered by the Government.

3.7.2. Electronic File Format.

The technical proposal must be submitted in **Portable Document Format (.pdf)**. The IWTSD Cost Proposal Template (MS Excel) must be completed and submitted with formulas visible and the document unlocked. A supporting cost narrative must be submitted in **Portable Document Format (.pdf)**.

The document must be print-capable, without password, and no larger than 2048 KB. File names cannot contain spaces or special characters. Apple users must ensure the entire file name and path are free of spaces and special characters. Submissions that cannot be opened, viewed, or printed will not be considered.

3.7.3. Phase 3 Document Upload.

To upload a next phase document, locate and open the accepted record under Requested Proposals. Review any available files (e.g., SOW, CDRLS) and the checklist, then click Create Proposal and follow the instructions.

3.7.4. Full Proposal Components.

Full Proposal shall consist of three major sections (Technical Proposal and Cost Proposal with a supporting Cost Narrative) described in this document, and can be uploaded to BIDS as three separate files each limited to 2048 KB.

- The first section is the technical proposal and shall include all information related to the proposal as specified in this BAA including figures, charts, and tables plus the cover page.
- The second section is the cost proposal, which will show a breakdown of costs by CLIN as well as phase using the Cost Proposal template. **This template is available on the Resources page of BIDS.**
 - Part of the cost proposal is a cost narrative that includes all cost data as well as an explanation of changes in cost from those proposed in the prior submission. Additionally, the offeror will include a cover page as follows:

A cover page template is provided at the BIDS website under [Resources](#). The cover page includes necessary contractual information including the offeror's

contracting POC (name, telephone number, email address, facsimile number, mailing address) and business information such as your Unique Entity ID issued by the sam.gov website. Include the proposed contract type, total cost, and the duration of all phases/tasks.

3.7.5. Technical Proposal Content.

The Technical Proposal shall provide a technically detailed solution of the problem addressed in the requirement and fully expand the technology proposed in the prior submissions. The following sections and associated data are required. The offeror shall incorporate all clarification data requests in the Phase 2 acceptance email. Indicate clarification entries by footnote and reference the requested item(s) in the footer area.

3.7.5.1. Table of Contents.

The technical proposal shall include a table of contents noting the page number of each section detailed below. The table of contents is excluded from page count.

3.7.5.2. Abstract.

The abstract is a one-page (or less) synopsis of the proposal that includes the title and the basic approach to satisfy the requirement. Describe the overall scope of work to be performed for the entire period of performance, inclusive of options. The abstract shall stand alone and be suitable for release under the Freedom of Information Act, 5 U.S.C. § 552, as amended.

3.7.5.3. Executive Summary.

An executive summary is a concise description of the technology and solution being proposed. Include key information that demonstrates how the proposed solution meets the published requirement. The executive summary should not introduce any new information not covered in the subsequent content.

3.7.5.4. Technical Approach.

Describe the technical approach for the proposed solution to meet the requirement. Include technical details of the solution and fully expand the technology proposed in the prior phase submission. Include the methodology, underlying theory, system components, and operational scenario for the intended users. Include drawings, diagrams, charts, and tables needed to explain the effort. Describe relevant prior application of the proposed technology and/or solution, how it is being used, and by whom. Identify sponsoring agency and funding resources; or if none, so state. If subcontractors are proposed, include a detailed description of the effort that they will be performing in support of or in addition to the prime.

3.7.5.5. Project Plan.

The project plan shall be organized by phase and describe the work to be performed along with all associated requirements to successfully complete the proposed effort. Include a summary of the individual phases to follow.

3.7.5.5.1. Phases.

Phases shall be defined by the subset of tasks to be performed, phase objectives to be accomplished, and the required POP to completion. Phases shall be listed in order of occurrence. Identify phases that are optional. Each phase must contain clear exit criteria that is measurable evidence of completion and serves as a “go” or “no-go” decision point. Each phase shall include a total cost.

3.7.5.5.2. Tasks Within a Phase.

For each task, provide a detailed description of the work to be performed. Identify any work that will be performed by other organizations or agencies; or if none, so state. Indicate if an agreement is in place for the resources.

3.7.5.5.3. Products and Deliverables.

Identify all deliverables - products as well as documentation and reports - for each Task/Phase. Refer to section 2.6 of this BAA for minimum reporting requirements, and additional products and deliverables in performance of the effort proposed.

3.7.5.6. Master Schedule.

Develop a master project schedule that includes phase start and stop dates as well as major milestones, critical tasks, and report and product delivery dates. Assume a start date immediately upon execution of contract. Use January 30th as a notional start date. Indicate any optional phases.

3.7.5.7. Government Furnished Equipment.

Reasonably identify all Government furnished equipment (GFE), materials, facilities, or information with the need date and suggested source at the time of proposal submission. GFE includes, but is not limited to: Government email accounts, SIPRNET access, Common Access Cards (CACs), and/or space at an IWTSD or other Government facility (e.g., permanent residence, temporary residence, or testing). Upon identifying GFE, if an offeror’s proposal is selected for contract award, the proposed GFE will be identified in the resulting contract. Failure to adequately identify necessary GFE may result in contract termination due to the offeror’s inability to perform under this competitive source selection. State if Government equipment, materials, facilities, or information are not required.

3.7.5.8. Project Risks and Mitigation.

Identify anticipated technical and management risks along with planned mitigation efforts. Indicate the risk assessment as high, medium, or low.

3.7.5.9. Organizational Capability Statement.

Include a brief description of the offeror’s organization. Describe the offeror’s capability and/or experience in doing the type of work being proposed. If

applicable, include a description of co-participants' capabilities and/or experience. State whether an agreement has been reached with the co-participants. Provide at least three references, to include points of contact, for like or similar work.

3.7.5.10. Organizational Resources.

Identify key technical personnel and principal investigator(s) including alternates and co-participants, if applicable. Include a brief biography, relevant expertise, and a list of recent publications for each. Identify any team members with potential conflicts of interest. Possible conflicts of interest include personnel formerly employed by the federal Government within the past two years from the date of proposal submission. Provide name, duties, employing agency, and dates of employment; or state if none.

3.7.5.11. Intellectual Property, Technical Data, and Software.

All anticipated intellectual property, technical data or software rights shall be disclosed. See section 2.5 of this BAA for additional information.

3.7.5.11.1. Patents and Patent Applications.

Identify any existing, applied for, or pending patents that will be used in the conduct of this effort. Provide patent number or application number and title. Any patent that resulted from prior Government funding should be identified. State if no patents or patent applications are relevant.

3.7.5.11.2. Rights in Technical Data.

State if unlimited rights in technical data are proposed. If not, identify any technical data and/or computer software that will be delivered with less than unlimited rights as prescribed in DFARS 252.227-7013 and DFARS 252.227-7014. When less than unlimited rights are proposed, a data rights assertion table shall be provided as prescribed in DFARS 252.227-7017.

3.7.5.12. Transition from Prototype to Production.

Describe the approach and issues related to transition or commercialization of the results of this effort to an operationally suitable and affordable product for the intended users to include the following. The cost to prepare the Transition Plan should be detailed in the cost proposal. Additional information regarding the Transition Plan can be found in the IWTSD Technology Transition Handbook located on BIDS under Resources.

[NOTE: If the specific requirement will not reasonably result in a prototype (e.g., study, service requirement), state "Not Applicable to this Requirement" and justify why.]

3.7.5.12.1. Transition Strategy.

Provide the overall strategy for transition to production (licensing, partnering, or venturing) along with the associated timelines for actions associated with the transition. Describe the roles of current development

partners, subcontractors, or other organizations that will be leveraged. If the offeror is not a commercial entity, indicate if a commercial partner has been identified. Discuss barriers to commercialization, such as anticipated regulatory issues (such as environmental, safety, health, and transportation), liability issues, interoperability, and financing, and planned steps to address these barriers.

3.7.5.12.2. Transition Approach.

Describe the type and level of effort envisioned to take the technology from its state at the end of the development effort to a production ready, affordable, operationally suitable product (such as size and/or weight reduction, packaging, environmental hardening, integration, additional test and certification). Provide an estimate of any costs to transition the prototype to low rate initial production. Provide the estimated production unit price for the end users.

3.7.5.12.3. Test and Evaluation.

Describe the plan to involve representative users during the design and development process and the general plan for test and evaluation by representative end users. If the phases of performance include representative user test and evaluation: (1) ensure coordination of user participation is thoroughly discussed in the technical approach; and (2) state “Representative User Participation will occur during contract performance.”

3.7.5.12.4. Operational Support.

Describe the estimated level of training needed to prepare users to utilize the product in an operational environment. Discuss the anticipated support concept such as level(s) of repair, spare parts, warranties, operation and maintenance technical manuals, simulators, and other logistics considerations.

3.7.5.13. Human Subjects and Animal Testing.

The proposal shall provide a statement regarding the anticipated use of human subjects or animals in testing, or state if none. If yes, procedures for complying with all laws and regulations governing the use of animals or human subjects in research projects shall be included in the technical proposal. See section 2.9, “Animal or Human Testing Compliance” in this document for details.

3.7.5.14. Environmental Impact.

The proposal shall provide a statement regarding the impact of the work proposed on the environment. State if no impact exists.

3.7.5.15. Classification and Security.

If the offeror is proposing to perform research in a classified area, indicate the level of classification of the research and the level of clearance of the potential

principal investigator and all proposed personnel. The contractor shall include facility clearance information. Also, the contractor shall indicate the Government agency that issued the clearances. State if the proposed effort is unclassified.

3.7.5.16. Subcontracting Plan.

If the total amount of the proposal exceeds \$750,000 and the offeror is not a small business, the offeror shall submit a subcontracting plan for small business and small socially and economically disadvantaged business concerns. A mutually agreeable plan will be included in and made a part of the resultant contract. The contract cannot be executed unless the contracting officer determines that the plan provides the maximum practicable opportunity for small business and small disadvantaged business concerns to participate in the performance of the contract. The Subcontracting Plan/information is excluded from page count.

3.7.6. Cost Proposal.

The offeror and each significant subcontractor, if any, shall fill out the IWTSD Cost Proposal Template (available on BIDS under Resources) and submit all supporting cost or pricing data along with any other supporting attachments. All prepared spreadsheet formulas must be accessible. As soon as practicable after agreement on price, but before contract award, the offeror shall submit a Certificate of Current Cost or Pricing Data for contracts exceeding \$2,000,000 as prescribed by FAR 15.406-2.

[NOTE: To determine the reasonableness of the cost proposal, the Government may request additional supporting documentation for proposed costs.]

3.7.6.1. Cost Narrative.

Provide a narrative discussing/substantiating elements of the cost proposal. Provide a separate summary of the total cost for each phase and for the total of the entire effort proposed. Indicate optional phases. Explain changes in cost from those proposed in the previous submission. The Cost Narrative must be submitted in PDF (.pdf) format with Times New Roman font no smaller than 10 point.

3.7.6.1.1. Table of Contents.

The cost narrative shall include a table of contents noting the page number of each section detailed below.

3.7.6.1.2. Direct Labor Costs.

Detail the direct labor cost estimate by showing the breakdown of labor hours, rates, cost for each category, and furnish the basis for the estimates.

- *Labor Category.* Include a detailed description of the category.
- *Labor Hours.* Include a Basis of Estimate for the proposed hours. Detail hours to be worked by each labor category proposed per each task, per each fiscal year and cumulatively.
- *Labor Rates.* Rates shall be in accordance with established rate agreements. If no rate agreement exists, use payroll data with actual rates to substantiate the proposed rates. If fully loaded rates are

proposed, the offeror shall identify the base rate and build up.

- *Escalation.* Identify the escalation rate, how the rate is applied, and provide justification for the rate used.

3.7.6.1.3. Indirect Costs.

Indicate how the offeror has computed and applied offeror's indirect costs (e.g., overhead, G&A, material burden). Indicate the rates used and provide an appropriate explanation.

3.7.6.1.4. Other Direct Costs.

Identify all other costs directly attributable to the effort and not included in other sections (e.g., special tooling, travel, computer and consultant services, preservation, packaging and packing, spoilage and rework) and provide the basis for pricing.

- *Travel.* The basis for travel estimates will include trip purpose, departure site and destination, number of persons traveling, number of days, ground transportation requirements, and detailed costs for airfare, hotel, rental cars, and per diem allowances per Federal Travel Regulations (FTR).
- *Materials.* Submit a detailed Bill of Materials identifying each discrete material component. Backup documentation must be submitted to explain the basis of estimate for at least 80 percent of the total material cost proposed. Backup documentation may include actual production costs, catalog listings, supplier quotes, actual invoices, or other documentation from a third-party source which verifies the proposed price.
- *Consultants.* If any consultants are to be used, the offeror shall submit consultant quotes for hourly rates, estimated number of hours required, and justification.
- *Subcontractors.* If any subcontractors are to be used, the offeror shall submit complete subcontractor quotes or proposals as part of the proposal. Subcontractor proposals will be evaluated along with the prime's proposal, and they are expected to contain the same level of detail as a prime proposal. Subcontractors providing commercial items may submit a commercial quote instead of a detailed proposal.

[NOTE: In order to protect proprietary data, subcontractors may submit their detailed cost proposals directly to the Contracting Officer instead of submitting to the prime contractor. If this occurs, the prime is responsible for ensuring subcontractor's submission is timely and is completed in accordance with these instructions.]

3.7.6.1.5. Government Furnished or Contractor Acquired Equipment.

Identify the external property or materials required to perform the task in the summary. Separate items to be acquired with contract funds and those to be furnished by the Government. Reasonably provide the description or

title and estimated unit and total costs of each item (i.e., manufacturer, catalog price, or previous purchase price). When such information on individual items is not available, the items should be grouped by class and estimated values indicated. In addition, the offeror shall include a statement of the extent to which the offeror is willing to acquire the items.

[NOTE: The FAR generally prohibits providing an industrial contractor with facilities (including plant equipment and real property) with a unit acquisition cost of less than \$10,000.]

3.7.6.1.6. Profit or Fee.

Include the profit or fee proposed for this effort. State if no profit or fee is proposed. Include a discussion, in the summary, of risk, technical difficulty, need for management/oversight, exceptional circumstances, etc.

3.7.6.1.7. Competitive Methods.

For those acquisitions (e.g., subcontract, purchase orders, material orders) over \$250,000 priced on a competitive basis, also provide data showing degree of competition and the basis for establishing the source and reasonableness of price. For inter-organizational transfers priced at other than cost of the comparable competitive commercial work of the division, subsidiary, or affiliate of the contractor, explain the pricing method (See FAR 31.205-26(e)).

3.7.6.1.8. Established Catalog or Market Prices/Prices Set by Law or Regulation.

When an exemption from the requirement to submit cost or pricing data is claimed, whether the item was produced by others or by the offeror, provide justification for the exemption.

3.7.6.1.9. Royalties.

If more than \$250, provide the following information on a separate page for each separate royalty or license fee:

- Name and Address of Licensor.
- Date of the License Agreement.
[NOTE: A copy of the current license agreement and identification of applicable claims of specific patents shall be provided upon request by the contracting officer. See FAR 27.204 and FAR 31.205.37.]
- Patent numbers, patent application serial numbers, or other basis on which the royalty is payable.
- Brief description (including any part or model numbers of each contract item or component on which the royalty is payable).
- Percentage or dollar rate of royalty per unit.
- Unit price of contract item.
- Number of units.

- Total dollar amount of royalties.

3.7.6.2. Facilities Capital Cost of Money.

When the offeror elects to claim facilities capital cost of money as an allowable cost, the offeror must submit Form CASB-CMF and show the calculation of the proposed amount. See FAR 31.205-10.

3.7.6.3. Other Funding Sources.

The proposal shall provide the names of other federal, state, or local agencies, or other parties receiving the proposal and/or funding or potentially funding the proposed effort. State if no other funding sources or parties are involved.

3.7.6.4. Additional Information/Documents.

Additional information/documents to be included in the Cost Narrative:

- *Business/Cost Checklist.* The offeror shall complete and include a copy of the Business/Cost Checklist found at the BIDS website under Resources. Information and documents required in the Business/Cost Checklist shall be included in this proposal.
- *Terms & Conditions.* The offeror shall identify any anticipated/proposed contract terms and conditions in the proposal summary.
- *Proposal Validity.* The proposal shall remain valid for a period of no less than 180 days from submission.
- *Forward Pricing Rate Agreement.* If the offeror has an applicable rate agreement with DCAA (or another Federal Agency, e.g., HHS), please include a copy of the agreement and provide a point of contact to your cognizant DCAA office. If the offeror has not previously been audited by DCAA, the procuring office may request an audit to verify the proposal labor direct and indirect rates. This applies to both prime contractors and subcontractors.
- *ACH Form.* The offeror will submit a completed ACH Form. (Found on BIDS under Resources).
- *VETS-4212.* The offeror will submit the most recent VETS-4212 filing confirmation.
- *Subcontracting Plan.* If the offeror is a large business and work will be performed in the United States, a Small Business Subcontracting Plan shall be submitted if the contract is expected to exceed \$750,000.
- *Past Performance.* The offeror shall provide information on previous Federal Government prime or subcontracts featuring endeavors relevant (i.e., within the past three years and of similar size and complexity) to the specific requirement.

3.7.7. Phase 3 Notifications to Offerors.

Notification of acceptance or rejection of a Phase 3 submission will be sent via email to the offeror's principal contact as entered in the BIDS registration. Acceptance of a Full Proposal does not guarantee a contract will be awarded. If the Government does not

accept the Phase 3 proposal, the offeror may request a formal pre-award debriefing.

3.7.8. Phase 3 Protests.

Offerors are encouraged to see resolution within the agency before filing a protest. Offerors who choose to submit any protest, must do so directly to the IWTSD Contracting Officer. All such protests will be processed under procedures that depend on whether the protest is directed to the agency, or to the Government Accountability Office (GAO) or to the Court of Federal Claims. Should the offeror choose to submit a protest, the Offeror must clearly label whether such protest is to the agency, GAO or the Court of Federal Claims. The Government will deem receipt of the protest by the Contracting Officer as constituting receipt or purposes of determining timeliness. Addresses for receipt confirmation can be requested via the BIDS Help function.

3.7.9. Phase 3 Status and Inquiries.

Phase 3 is complete when the Government concludes technical evaluations of all submissions and awards any contracts considered under this BAA. Inquiries by phone concerning the status of Full Proposals will not be accepted. After log in to the BIDS website, submitters are able to check the status of any submission under **Previously Uploaded Proposals**.

3.8. Clarification Requests.

Should the offeror be asked to submit clarifications to a Phase 2 White Paper or a Phase 3 Full Proposal, the BIDS email from the Contracting Officer will contain instructions on the specific request and associated requirements. BIDS will use CL (Clarification) instead of WP (White Paper), or FP (Full Proposal) as the Document Identifier designation (e.g., CL CBRNE-1112-ABCORP-xxxx-CL; where xxxx-CL is the VIT entered by the submitter). The request will contain the due date and time and can be less than the standard 30-day response time depending on the nature of the request.

3.9. Instructions for Offeror “No-bid” and Submission Withdrawal.

From time to time, an offeror decides not to submit a subsequent Phase 2 or Phase 3 submission. If this is the case, the offeror shall indicate in BIDS that they are not providing the subsequent submission. The offeror shall follow the steps identified in BIDS to upload a submission and attach a document to indicate the withdrawal of the previous submission(s) and the intent to not participate in further submissions. If possible, the Document Identifier should reflect the submission status (e.g., CBRNE-1112-ABCORP-xxxx-WD or xxxx-NoBid). To withdraw a submission after the due date and time, notify the contracting officer at BIDSHelp@iwtsd.gov.

4. PROPOSAL EVALUATION.

This section describes the criteria that will be used to evaluate each submission. The phase of the submission will determine the extent that each criterion applies based on the information requirements described in Section 3. Criteria are not weighted, and submissions are not ranked.

4.1. Evaluation Criteria.

The criteria used to evaluate and select proposals for projects are described as follows. Each

proposal will be evaluated on its own merit and relevance to the program requirements rather than against other proposals in the same general research area.

4.1.1. Basic Requirement.

The proposed solution must meet the letter and intent of the stated requirement; all elements within the proposal must exhibit a comprehensive understanding of the problem and the requirements of intended end users. The proposed solution must meet multiple user (U.S. Government or commercial) needs and be fully compliant with all elements of the solicitation including format, content, and structure as well as all BAA instructions.

4.1.2. Technical Performance.

The proposed technical approach must be feasible, achievable, complete, and supported by a proposed technical team that has the expertise and experience to accomplish the proposed tasks. Task descriptions and associated technical elements are to be complete and in a logical sequence. All proposed deliverables must clearly define a final product that meets the requirement and can be expected as a result of the award. The proposal must identify and clearly define technical risks and planned mitigation efforts. Those risks and the associated mitigation must be defined, feasible, and reasonable. The roles of the prime and other participants required must be clearly distinguished and pre-coordination with all participants (including Government facilities) fully documented.

The requirement for and the anticipated use or integration of Government Furnished Equipment/Information/Property (GFE/GFI/GFP) including all equipment, facilities, and information, must be fully described including dates when such GFE/GFI/GFP will be required. Intellectual property ownership and the planned transition to production must be adequately addressed, including a support concept for the product described. Similar efforts completed by the offeror in this area must be fully described including identification of other Government sponsors.

4.1.3. Cost.

The proposed costs must be both reasonable for the work proposed and achievable. The proposal must document all anticipated costs including those of subcontractors. The proposal must demonstrate that the offeror has fully analyzed budget requirements and addressed resulting cost risks. The proposal must indicate all cost-sharing and leveraging opportunities explored and identified and the intellectual property expectations associated with that cost-sharing. Other sponsors who have funded or are funding this offeror for the same or similar efforts must be identified by agency, program manager name, phone number and email address.

4.1.4. Schedule.

The proposed schedule must be reasonable, achievable, and complete. The proposal must indicate that the offeror has fully analyzed the project's critical path and has addressed the resulting schedule risks.

4.1.5. Contractor Past Performance.

Past performance is a confidence assessment based upon the probability of successfully performing the requirement. The offeror's past performance in similar efforts must clearly demonstrate an ability to deliver products that meet the proposed technical performance requirements within the proposed budget and schedule. The proposed project team must have demonstrated expertise to manage the cost, schedule, and technical aspects of the project.

5. TECHNOLOGY DEVELOPMENT REQUIREMENTS AND OBJECTIVES.

This section provides the requirement descriptions and overall technical objectives. The intent of this BAA is to identify technologies and approaches that provide solutions that enhance the capabilities for DOD to conduct Irregular Warfare (which includes missions of unconventional warfare (UW), stabilization, foreign internal defense (FID), counterterrorism (CT), and counterinsurgency (COIN)) against all adversaries and to deliver those capabilities to DOD components and interagency partners through rapid research and development, advanced studies, and technical innovation.

Where noted, T = Threshold and O = Objective.

5.1. Advanced Analytics (AA)

R5174 Prioritized Risk & Integrated Management (PRISM)

The Joint Force requires an enterprise tool for Continuity Programs across the Department of Defense (DOD), including the Office of the Secretary of Defense (OSD), Office of the Deputy Secretary of Defense (ODSD), and 19 OSD components. The 2024 OSD Continuity Task Force identified a requirement for situational awareness and decision support tools to collaborate and integrate critical information feeds and facilitate senior leader decision-making during a continuity event. DOD Continuity Programs require compliance assessments, evaluation of continuity operations, analysis of mission interoperability across DOD and other Government agencies (OGAs), and the ability to mitigate newly-identified risks with recommended actions to senior leaders.

Develop, test, and evaluate an enterprise continuity software that facilitates the tracking of Principals eligible for succession to the role of Secretary of Defense (SecDef), while also providing executable rapid contingency plans for the SecDef and the OSD. This software shall ensure the readiness of alternate sites, maintain a database, and leverage existing data on pre-existing rapid contingency plans. Additionally, it shall provide Continuity Programs' readiness status, identify potential risks, and recommend actionable steps to mitigate risks.

The application shall feature a Structured Query Language (SQL) relational database to facilitate data entry and mapping, as well as the ability to pull data from databases of stored information. Data inputs into the relational database shall be derived from two sources: 1) user-sourced materials (e.g., actor interest tables and other human-analog analyses to bootstrap subsequent analyses) and 2) external event databases (e.g., National Special Security Events (NSSE)). The application shall include multi-factor user authentication, secure protocol via Transport Layer Security (TSL), user-specific case management, and editing functionality. The application must include fillable forms that dynamically adapt to

information entered in previous steps/sections and allow rapid editing of reference information. The application must also allow for user customization of the interface and be capable of including all data deemed important to the customer.

Competitive proposals shall use an iterative or agile approach to development that allows DOD end users to test/sample milestone software releases (alpha, beta, etc.) and offer guidance on software performance and alignment with the desired end-state.

Base Contract Deliverables:

- Phase 1 - Deliver a production prototype enterprise continuity software with supporting documentation.
- Phase 2 - Support three (3) months of operational testing and evaluation with selected DOD end users, to support enhancement of underperforming features, resolve software stability issues, and issue software patches.

Contract Options:

- Deploy production prototype software with Authority to Operate on an Impact Level (IL)-4 DOD end user selected enclave (e.g., Government network, cloud, or enterprise server).
- Deploy production prototype software with Authority to Operate on an IL-6 DOD end user selected enclave (e.g., Government network, cloud, or enterprise server).

The Contractor shall follow the DOD Risk Management Framework (RMF) based on Instruction 8510.01 – Risk Management Framework for DOD Systems.

Developers will be required to provide a virtual five (5) day train-the-trainer course or up to ten (10) designated individuals, and user guide-quick start manual, on all systems delivered to enable end users to support OT&E. The Government is seeking government purpose rights to all deliverables and unlimited rights to technical data and training data.

5.2. Advanced Development (AD)

R5195 Assessing Cyber Risk within the Transportation Sector

The security of critical infrastructure is heavily reliant on the resilience and security of its supply chains. DOD depends on commercial transportation service providers (TSPs), which have varying degrees of cybersecurity maturity, for the movement of troops, equipment, and goods. Small and medium size TSPs often face significant challenges in assessing their cybersecurity posture, understanding measures to improve their cybersecurity, and having resources to address weaknesses—leading to vulnerabilities that adversaries can exploit.

The civil transportation sector, including commercial TSPs, also rely on Positioning, Navigation, and Timing (PNT), particularly on the Global Positioning System (GPS), which is susceptible to jamming and spoofing due to weak signals and a lack of security protocols and encryption among civil signals and data messages. Civil transportation is vulnerable to PNT disruption, for example, a 33-hour GPS interference incident in January 2022 impacted not only commercial

aviation but also surface and rail providers¹. A cyber-attack on GPS, or other PNT technologies/capabilities, would have cascading effects on not only civilian critical infrastructure and needs, but also military missions.

The Advanced Development subgroup and its end users seek innovative and low-cost solutions that address one or more of the following:

- Customized self-assessment capabilities to help commercial suppliers across different transportation modes understand their cybersecurity posture and alignment with National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171. Proposed solutions should consider that organizations across different transportation modes have varying levels of cybersecurity expertise—requiring an intuitive interface with easy-to-understand prompts and output results that map relevant cybersecurity best practices with areas for improvement. Proposed solutions should also consider how the tool can support TSPs in understanding the cost/benefit associated with implementing the cybersecurity measures outlined in the assessment tool to support broader adoption.
- Tools, methods, or capabilities to help the U.S. Government with PNT cyber risk assessment and modeling the operational impact of PNT cybersecurity risks across transportation modes to assist in prioritization of PNT cybersecurity mitigation efforts. Proposed solutions should consider how to integrate transportation mode specific NIST PNT profiles into the tool development as well as PNT dependencies for processes and assets associated with each transportation mode.
- Tools, methods, or capabilities for DOD to aggregate, analyze, and visualize cyber risks across multiple transportation modes to enable decision-makers to quickly understand the cyber risk landscape, assess the impact on mission assurance, and make informed decisions to mitigate risks. The goal is for proposed solutions to encourage collaboration with Industry partners and promote information sharing among agencies to enhance overall cybersecurity resilience.

Any proposed solution that leverages information technology to transmit, process, and/or store government data shall comply with DOD Instruction 8510.01, Risk Management Framework (RMF) for Department of Defense systems, and integrate cybersecurity principles into the overarching systems engineering process. See section 2.11 of this BAA for more information.

R5198 Deriving Actionable Information from Cyber Threat Intel (CTI)

Current Cyber Threat Intelligence (CTI) reports are often cumbersome and narrative-driven, failing to effectively capture the full scope of intrusion activities. While threat feeds provide a general landscape of potential threats, they fall short in delivering the crucial contextualized technical artifacts needed to develop effective detection rules and algorithms for Advanced Persistent Threats (APTs). Existing data extraction capabilities have low reliability and accuracy, and cannot infer relationships between indicators, resulting in a manpower intensive process to

¹ https://www.cisa.gov/sites/default/files/publications/CISA-Insights_GPS-Interference_508.pdf

analyze CTI reports. Furthermore, the accompanying indicators of compromise (IOCs) can be easily manipulated by APTs, undermining their reliability for long-term threat detection and attribution.

The Advanced Development subgroup and its end-users seek innovative and affordable solutions that can effectively process, analyze, and transform CTI reports into actionable insights.

Proposed solutions should address one or both of the following:

- A data extraction capability based on the Structured Threat Intelligence expression (STIX) data model that can read long-form cyber threat reports (e.g., PDFs, Word documents, plain text, and CSVs) and not only extract indicators/observables with high accuracy and reliability but also create relationships between them based on the narrative context in the cyber threat intel reports, allowing for high-fidelity correlations among related data points.
- A prototype software solution that provides contextualized technical artifacts from cyber threat intelligence and internal network data to develop rules and algorithms required to detect and attribute to APTs. The system shall 1) collect and classify critical features from various system artifacts, including network flows, malware payloads, and other digital signatures to investigate patterns and behaviors that may indicate malicious activity; 2) recognize and categorize APT groups by analyzing their techniques, tactics, and procedures (TTPs); and 3) perform attribution analysis to classify extracted features according to their associated APT groups, helping to pinpoint the actors behind cyber threats and facilitating a more calibrated response.

Any proposed solution that leverages information technology to transmit, process, and/or store government data shall comply with DOD Instruction 8510.01, Risk Management Framework (RMF) for Department of Defense systems, and integrate cybersecurity principles into the overarching systems engineering process. See section 2.11 of this BAA for more information.

R000-AD-FY26 Unspecified Requirement

The Advanced Development subgroup seeks innovative solutions, new or improved technologies, or emerging capabilities for enhancing cybersecurity defenses through the integration of artificial intelligence/machine learning (AI/ML) and secure-by-design principles. This includes focuses on proactive threat detection, resilient infrastructure, continuous monitoring, and comprehensive supply chain security to ensure mission assurance.

Proposed projects shall be timely, relevant, cost-effective, and support operations for DOD as well as interagency and international partners. These projects shall advance high-technology readiness level (>TRL 6) prototypes and demonstrate new concepts and solutions. Areas of particular interest include tools, technologies, and capabilities that:

- Implement secure-by-design principles early in the development lifecycle of silicon chips, firmware, software, hardware, and system of systems (SoS) integration.
- Enhance ontologies, Trusted Automated eXchange of Intelligence Information (TAXII), and Structured Threat Information eXpression (STIX) standards to improve cyber threat

intelligence sharing and support automated detection and response. This will cultivate collaborative threat analysis of large volumes of cybersecurity data to uncover patterns and provide a comprehensive view of the threat landscape.

- Integrate behavioral analysis into existing AI/ML models to improve the detection of anomalous activities and potential cyber threats.
- Support real-time compliance and testing frameworks that continuously monitor and enforce cybersecurity standards.
- Scalable and affordable solutions that simplify container hardening and compliance while meeting a wide range of use cases required by DOD developers.
- Automate processes to strengthen the cyber hardening of command-and-control for unmanned systems and other critical defense infrastructure.

All submissions shall identify the anticipated U.S. DOD end user and/or endorsing organization. Any proposed project that leverages information technology to transmit, process, and/or store government data shall comply with DOD Instruction 8510.01, Risk Management Framework (RMF) for Department of Defense systems, and integrate cybersecurity principles into the overarching systems engineering process. See section 2.11 of this BAA for more information.

Unspecified requirements (R000s) are for proposing unique innovations that have not yet been identified by IWTSD. Submissions against an unspecified requirement shall be responsive to the focus areas and topics noted. Proposed technologies from the unspecified requirements will be competing against proposed technologies for identified and prioritized specified requirements. Because IWTSD does not budget for unspecified requirements, awards may not be made against them.

Note: Quad charts submitted in response to a Subgroup's R000 may be shared with other IWTSD Subgroups if the submission demonstrates relevance to that Subgroup's focus areas.

5.3. Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE)

R5178 Radiological-Nuclear Detection using Multiple Interactive Aerial Platforms

Current surveys of large radiological and nuclear contamination fields are performed using personnel-carried equipment or large manned aircraft systems, which are expensive or time-consuming and expose personnel to hazardous environments.

Develop a system of three (3) or more interactive aerial platforms capable of semi-autonomously (Threshold) or autonomously (Objective) collecting spectra and quantifying radioactive material present over large outdoor areas (1 km² to 10 km²) within 12 hours. For the purposes of this requirement, semi-autonomous refers to a level of automation where platforms can perform certain tasks or missions based on pre-programmed behaviors or algorithms but still require some level of human oversight or intervention. Autonomous platforms can operate independently with no human input.

The system shall detect gamma radiation (Threshold) and it is desired for the system to also measure neutron counts (Objective). The system shall be capable of measuring and transmitting dose rates and collecting full spectroscopic measurements, not just alarms. The system shall be

able to quantify from 1 milli-Roentgen per hour (mR/hr) up to 500 mR/hr at 1 meter above ground level with at least 10-meter resolution. The system shall include a multichannel analyzer with a minimum of 1024 channels; operate from 40 keV to 3 MeV; and save spectral files as .N42 format in accordance with N42.42-2020. The system shall have a resolution of at least 8% full width at half maximum (FWHM) at 662 keV (Threshold), with less than or equal to 6% FWHM at 662 keV being desired (Objective).

The system shall weigh less than or equal to 55 pounds maximum gross takeoff weight. The system shall be able to return to base before power source exhaustion and be capable of achieving 30 minutes of flight time (Threshold), with 45 minutes of flight time being desired (Objective). If battery operated, the system shall leverage batteries that are on 110V-220V power supply, hot swappable, and chargeable when the system is connected to shore power.

The system shall wirelessly communicate AES-256 encrypted data feeds in near real-time to enable interoperability with Android Tactical Assault Kit (ATAK), Chem-Bio-Rad-Nuclear-Emergency responder "CBRNResponder", and Advanced Visualization and Integration of Data "AVID". The system shall automatically process the data and be integrated into ATAK, CBRNResponder, and AVID with near real-time data upload. System data feeds shall enable telemetry of dose rates and full spectroscopic measurements, GPS location, battery life, system health, and above ground level (AGL) determination to within 1 meter while at AGL less than 100 meters. The communication system shall be capable of being operated with a 2.4 GHz, 5 GHz, and LTE/5G cellular system or tactical radio for sensor telemetry and remote operation, as needed. The system shall have HDMI and USB-C outputs to download system information as required.

The system shall include a built-in contextual sensor package to enable simultaneous localization and mapping in 3D space for navigation, object avoidance, scene capture, and mapping. The System shall be able to operate beyond visual line of sight and be able to deploy within 60 minutes (Threshold), with 30 minutes being desired (Objective). The system shall be able to operate -20 °C to 45 °C (Threshold) or -40 °C to 50 °C (Objective) and in wind gusts up to 12.8 meters per second (m/s) (Threshold), with up to 13.5 m/s being desired (Objective). The system should be able to operate at altitudes between 0 meters to 125 meters. The system shall be tested and shown to meet Ingress Protection Rating 43/MIL-STD-810H.

If the system has a controller, the controller shall have HDMI and USB-C outputs for downloading system information. The controller's screen shall be usable and visible outdoors in direct sunlight; have a refresh rate of 120 Hz or better; have a screen resolution at least 2340 × 1080 pixels; and brightness at least 1750 nits (cd/m²).

The system's physical and cybersecurity requirements shall include: National Defense Authorization Act Section 889 compliance; encrypted internal data storage; password protection; root of trust function; and trusted boot function.

System training, including operating maintenance training, shall not exceed three (3) days for experienced first responders/operators.

Base Contract Deliverables:

- Three (3) system prototypes for operational test and evaluation.

Contract Options:

- Five (5) options, each for one (1) additional system prototype.

A firm-fixed-price proposal with a base contract period of performance of twenty-four (24) months or less is preferred.

5.4. Expeditionary Force Protection

R5194 Maritime Autonomous Retention and Interdiction Network (MARINet)

The U.S. Navy currently employs a combination of active and passive sensors to detect, track, and evaluate subsurface threats, including uncrewed undersea vehicles (UUVs). These threats are mitigated through coordination with Harbor Patrol Units, which deploy countermeasures. However, there is a critical gap in our defense capabilities: the absence of a system to delay or deny UUVs access to secure waterways and protect high-value assets.

The objective of the requirement is to develop and validate a floating barrier system that can autonomously extend and retract to the seabed. The material solution shall be designed to effectively halt the progression of Group 1 and Group 2 UUVs. It shall employ non-lethal technology that minimizes environmental impact and adheres to existing navigation regulations, thereby providing a sustainable and regulatory-compliant security solution.

The material solution must seamlessly integrate with and enhance existing port security systems. It should enable fully automated operations for deploying a subsurface defensive measure, such as nets, which can be activated remotely by an operator, or automatically for detected underwater threats.

In addition to operational efficiency, the design characteristics and materials used must comply with all Federal environmental regulations. Furthermore, while the primary focus is on countering UUVs, the capability shall also be effective against other threats such as drifting mines and divers.

Operations

The capability shall automatically deploy by a remote operator based on threat conditions or to stop a detected UUV as part of an integrated system such as the Electronic Harbor Security System (EHSS). When not in use, the net is stored above water to significantly reduce environmental impact, maintenance costs, and operational requirements. Upon deployment, the net extends from surface to seafloor, providing passive threat mitigation and complete water column, access control. The modular, floating design allows the system to operate effectively in high-traffic or multi-use waterways and in conjunction with existing waterside security barriers.

The system shall fully deploy a net within waterways up to specified depths. Specifications are based on Group 1 UUV speeds and expected sensor detection ranges. The system shall be operable without a connection to shore power.

Specifications

- Modular design to cover confined spaces such as ship berthing to longer lengths, such as a bay entrance.
- Capable of stopping at least Groups 1 and 2 UUVs across the barrier boundary from surface to seabed (excludes UUV defeat measures) (T); Group 3-4 UUV (O)
- Deployable depth (surface to seabed, including tidal variation) of 20 meters (T); 50 meters (O).
- The barrier component must maintain its integrity and functionality, with the capability to be fully extended or retracted for a minimum period of 45 days without any degradation (T).
- Must operate in varying environmental conditions.
 - Normal Operation: Capable of functioning in conditions up to Beaufort Scale 4 (winds up to 16 knots and waves up to 4 feet).
 - Emergency Operation: Capable of functioning in conditions up to Beaufort Scale 6 (winds up to 27 knots and waves up to 13 feet).
- Survive: Must withstand conditions up to Beaufort Scale 12 (winds higher than 64 knots) whether tied open or closed. Normal operations shall not rely on a connection to shore power.
- Mean time to fully lower or raise the net at maximum depth shall not exceed 3 min (T).
- Manual mode (Fail-Safe) operation shall open, close, raise, or lower in 120 min or less (T=O). Normal operating mode is fully automated to raise or lower the net; controls to be implemented remotely.
- Modules towable (under normal operating conditions) up to speeds of 5 kts (T); 8 kts (O).
- Surface length includes one or more gate segments that can be opened for ship movements.
 - Mean-time to fully open or close gate segment(s) is 30 min (T).
- Max-deflection of any point on a fully deployed net is 15 meters (T).
- The design life shall be 15 years with scheduled refurbishment after 5 years.
- Materials shall not degrade performance in the environment for a minimum of 15 years.
- Modules shall be interchangeable for maintenance.
- Hardware shall be transportable by standard commercial means.
- Mean Time Between Failures / Mean Time to Repair 2,160 hours / 8 hours (T); 4,320 hours / 4 hours (O).
- Design and materials comply with the National Environmental Policy Act (NEPA).
- System deployable as part of a layered defense and work in concert with security forces.
- Delay capability is designed to eliminate single points of failure.
- Barrier Material Selection for Acoustic Transmissibility: Must maximize high frequency transmissions and must minimize low frequency transmissions (O).
- Integrated control via SEIWG 0101C compliant Command & Control Console.
- Backup mode ensures manual opening of the gate such that operations of U.S. Navy vessels are minimally impacted when any/all automated functions fail.

Transition

Initial low-rate production anticipated within 18 months of completion for up to 3 sites ranging in lengths of 500 yards to 1,500 yards. Full-rate production will extend up to 25 or more locations worldwide.

The Government will provide subject matter experts and necessary Government Furnished Equipment (GFE), as available, throughout the effort.

A firm-fixed-price proposal with a base period of performance of twelve (12) to twenty-four (24) months is preferred.

R5202 Subterranean Innovation Technology Competition

Special Operations Forces (SOF) tasked with attack on an Underground Facility (UGF) and Hard and Deeply Buried Targets (HDBT) require cutting edge material solutions. These critical material solutions, often situated in hostile countries and non-permissive environments, range from standalone facilities (Category Three Systems – ref. ATP 3-21.51) to those embedded within Dense Urban Environment (Category Two Systems – ref ATP 3-21.51.). Combatant Commands (CCMDs) and subordinate organizations necessitate immediate access to innovative technologies that are still in research, development, test, and evaluation (RDT&E) phase to enhance operational effectiveness in the difficult, austere, and problematic operating environments.

The objective is to launch an industry-wide RDT&E competition to identify and evaluate technologies that address the capability gaps associated with operating in and functionally defeat of UGF and HDBT challenges. The competition will showcase these technologies to the user community, enabling the selection of the most promising solutions for further development and integration. The selected industry partner will be responsible for the comprehensive management of the competition, including planning, initiation, execution, monitoring, controlling, and closeout phases of the competition.

Industry Partner Responsibilities:

- **Competition Management:** Develop and execute the competition structure, including eligibility criteria, submission guidelines, and evaluation processes. Serve as the primary contact for participants, handling inquiries, notifications, and technical support.
- **Participant Evaluation:** Design and implement a review process for participant submissions while ensuring government input in final evaluations. Proposals will be assessed based on operational relevance, technical feasibility, team expertise, development plans, and business strategy, with semi-finalists chosen for each Challenge category. Verify selected submissions virtually and host an informational webinar to guide prospective submitters on Challenge objectives and processes.
- **End-User Engagement:** Facilitate polling, surveys, or direct engagement with end-users to gather insights for assessing the effectiveness of proposed solutions.
- **Prize Allocation:** Define and administer the criteria for awarding prize money to

successful participants. The awarding of prizes will go to the top-tier winners in each of the focus areas.

- **Regulatory Compliance:** Ensure full adherence to Federal Acquisition Regulations (FAR) and Defense Federal Acquisition Regulations Supplement (DFARS), including competition transparency and fairness.
- **Logistics and Execution:** Handle all logistics for the event, including venue setup, travel arrangements, and on-site coordination.
- **Platform Management:** Maintain an online platform for competition details, registrations, updates, result announcements, submission, and evaluation of proposals. The platform must support proposal submissions, facilitate evaluations, and provide post-competition reporting and analysis capabilities. The online platform must be secure to host virtual simulations and live demonstrations to evaluate material solutions.

Requirements:

- The proposal should highlight an efficient and cost-effective approach that encompasses, but is not limited to, five phases: 1) Online reviews and selection, 2) Material solution simulations, 3) Live demonstration of material solutions, 4) Final conference and award ceremony, and 5) Post-conference activities.

The competition will concentrate on three lines of effort: 1) Mapping a Subterranean (SbT) environment, 2) Operating within a SbT environment, and 3) Functional Defeat. Areas of interest under these lines include, but are not limited to:

- Automated and robotic unmanned ground mobility systems designed to operate in confined SbT spaces.
- Long haul man portable communication systems that will provide an open and integrable architecture to operate in SbT environments and organically integrate with TAK (team Awareness Kit) – that can provide SMS and voice communications, live data stream of HD video, and provide a platform to control unmanned automated systems.
- Innovative approaches to functionally defeat underground threats in CAT II and III systems.
- Provide simultaneous 3D HD mapping of UGF's and tracking of individual maneuver elements and personal all integrated to transmit and display through TAK and integrate through an open communication architecture.
- Demonstrate UxS platforms which can deliver payloads designed to carry a lethal and/or support package through an open communication and integrable architecture which can interface and be controlled through TAK.
- Remotely emplaced breaching systems.
- Innovative breaching capabilities using mechanical, energetic, and exothermic capabilities in level 1 and 2 breaching targets. Remotely emplaced breaching systems.
- Software capable of computing explosive effects and overpressure minimum safe distances (MSD) in confined spaces found in CAT II and CAT III underground systems which can be operated through TAK by way of an integrable plug-in or application.

A firm-fixed-price proposal is preferred.

The Government will provide subject matter experts and necessary Government Furnished

Equipment (GFE), as available, throughout the effort.

The period of performance is 12 months. This will include distinct phases: planning, participant screening, execution, evaluations, and close-out.

5.5. Explosive Ordnance Disposal and Explosive Operations (EOD-EXO)

R5133 Disruptor Standard Slug Load for Unexploded Ordnance (UXO) Render Safe Procedures (RSPs)

The Mk 2 or 0.50 caliber dearmer is an approved-joint service tool for performing render safe procedures (RSPs) on a large variety of numerous unexploded ordnance (UXO) and explosive remnants of war (ERW) items. The dearmer has select payloads (slugs) to render safe small firing devices and fuzes. There is a need for Explosive Ordnance Disposal (EOD) operators to successfully replicate the energetic properties of a Mk 2 dearmer slug using existing blank cartridges to expand the operational capabilities of alternate disruptors. The Mk 2 inherently possesses limitations due to its weight and size. Alternate disruptors with improved capabilities such as the Percussion Actuated Neutralizer (PAN) and TiTAN disruptors were developed and fielded to render safe conventional and improvised ordnance. Notwithstanding the advantages of these alternate disruptors, the propelled slugs and projectiles lack the same kinetic properties of Mk 2 standard slug and are not used on conventional ordnance. By developing and calibrating the standard slug loads for the PAN and TiTAN to equate the energetic properties of the Mk 2 disruptor, EOD teams can reduce their equipment burden and amplify equipment capabilities to address UXO and ERW items with alternative dearmer.

The final deliverables will include standard slugs and wedge slugs for both the PAN and TiTAN disruptors within an approximate eighteen (18) month timeline. These deliverables will allow a diverse set of units to evaluate the feasibility of the standard slug loads for lighter and more effective disruptors in their inventories. The proposed solution has the potential to render the Mk 2 optional and could thereby free up equipment burdens significantly through optional tool selection.

A firm-fixed-price proposal is preferred.

R5134 Beacon Delivery System

USN and USMC EOD lack an expedient method of emplacing location markers for undersea objects. Current mine countermeasure (MCM) tactics, training, and procedures require EOD operators to put themselves at risk over potentially hazardous bottom contacts in a time-consuming, dangerous, and technically complex way. An uncrewed delivery method would eliminate operator risk on potential hazardous bottom contacts and significantly reduce timelines.

MCM operations require an uncrewed method to deliver a marking buoy to a specific location. In addition to the marking buoy, the system shall include a dispenser that houses and deploys the detached package. The detached package will have an unspooling mechanism for line that will connect from one end to an easily visible buoy; on the other end to the clump/weight (ideally lead or other low/non-magnetic material) with an acoustic pinging beacon on the weighted end. The line will use Amsteel Spectron 7/64", and the length of the line in the water should be

manually adjustable before deployment on the delivery system, with a maximum depth from buoy to weight/clump = 100 m. The delivery system shall have its own command and control system or be able to easily interface with existing systems.

The delivery system shall be designed to be system agnostic. It must be able to be carried by a Performance Drone Works (PDW) C100 (10-pound payload capacity) and other uncrewed systems that can carry payloads up to 22 pounds so different clump weights may be employed.

A firm-fixed-price proposal is preferred.

R5135 Micro Unmanned Relay Vehicle (MURV)

Several of EOD operations rely on the remote control of uncrewed systems and their associated tools to neutralize or render safe explosive hazards. These remote capabilities require radio frequency (RF) communication between operator and vehicle or tool and when transmission or receipt of signal is interrupted, shielded, or delayed, it interferes with mission critical activity. Currently, there is no dedicated RF relay/repeater for Joint EOD equipment/gear with self-locomotion. The ability to increase the range of EOD radios, uncrewed systems, X-ray systems, firing devices, and other EOD RF transmitting equipment is paramount to defending the homeland when conducting EOD operations in environments where signal interruption is expected (e.g., tunnels, hardened structures, dense urban areas) and in scenarios which require greater standoff. The proposed project MURV shall consist of modular and secure communication frequency stacks for repeating signals between EOD-specific transmitters and receivers. Due to terrain and distance variabilities between primary RF tools and operators, the MURV shall also be mobile and remotely operated as an independent-remote communications relay vehicle. This technology shall be capable of bridging RF gaps between EOD equipment and operators as well as mesh communications between operator and RF-enabled equipment through cooperative MURV multiples in a cost-effective way for EOD and Tier 1 units. The proposed project aims to extend RF communication dramatically to enhance equipment reliability, increase standoff, and mitigate signal noise for EOD/EXO and USSOCOM operations by remotely positioning RF based systems at further ranges or optimal locations, or in environments that usually present issues with RF communications.

A firm-fixed-price proposal is preferred.

R5136 Precision Aim Stand

The Joint Force EOD community and Public Safety Bomb Squads do not currently possess a configurable stand which permits the EOD operator to take an X-ray and precision aim shot on the same platform without any potential for movement between tool changes or disruptor ejection. The potential project Precision Aim Tool shall be a configurable PAN stand that reduces or eliminates the rearward hazard caused by the PAN at discharge and permits the switching between the X-ray and precision aim capability without movement between tool changes. The current PAN with the stand does not account for any rearward ejection hazards upon discharge of the tool. Many situations require the use of sandbags or ancillary mechanisms to block, catch, or divert the PAN from “kicking” back and damaging surrounding environmental objects, walls, and entities. The benefits of a Precision Aim Stand are to allow the EOD operator to take an X-ray and precision aim shot on the same platform without any potential for

movement between tool changes and disruptor ejection during tool discharge. This potential would reduce/eliminate collateral damage to save departmental and local resources.

A firm-fixed-price proposal is preferred.

R5140 Magnetometer Harness Carrier System

Explosive Ordnance Disposal (EOD), Explosive Operators (EXO), mine clearance personnel, and explosive engineers need to use metal detectors/magnetometers frequently for detailed and wide-area clearance operations for detection and/or removal of subsurface explosive hazards. Accessing and restowing the magnetometer usually requires another person to retrieve and repack it for the individual carrying the tool and often makes functionality a cumbersome and time-consuming task. The potential for a harness devoted to such a highly accessed tool in EOD, ERW, and mine clearance operations would accelerate detection and disposal operations considerably. A ruggedized metal detector harness carrier system which would hold securely and enable access to a variety of Joint Service Program of Record (POR) magnetometers. The harness shall be detachable, light weight, and permit rapid deployment and restow of the magnetometers for military, demining, and engineering use cases. The benefits of the harness carrier system could reduce time on target, fatigue, and increase performance outcomes.

A firm-fixed-price proposal is preferred.

R000 Unspecified Requirement Decision Support and Tactical Information Assurance Incorporating Artificial Intelligence

The EOD community lacks appropriate decision support and tactical information assurance tools using artificial intelligence (AI) to rapidly and effectively supplement informed decisions in dynamic combat situations. The R000 is an opportunity for industry to propose an unspecified requirement towards developing or enhancing operational planning, information sharing, and exploitation technologies using AI. These enhancements increase the speed of information gathering and improve response cycles for explosives, ERW missions, and counter IED operations. Tools and technologies borne from this R000 shall increase end user abilities to synchronize activities with interagency, host nation, multinational, and nongovernmental partners. The proposed R000 allows development possibilities with creatives (academia and industry) that may have been overlooked or not considered by end users. Firm-fixed-price proposals are preferred.

Unspecified requirements (R000s) are for proposing unique innovations that have not yet been identified by IWTSD. Submissions against an unspecified requirement shall be responsive to the focus areas and topics noted. Proposed technologies from the unspecified requirements will be competing against proposed technologies for identified and prioritized specified requirements. Because IWTSD does not budget for unspecified requirements, awards may not be made against them.

Note: Quad charts submitted in response to a Subgroup's R000 may be shared with other IWTSD Subgroups if the submission demonstrates relevance to that Subgroup's focus areas.

5.6. Human Performance and Training (HPT)

R5180 Robotics Warrant Officer Basic Course (WOBC)

Special Operations Forces (SOF) currently lack a specially selected and trained robotics technician capable of integrating and adapting current technologies in support of operations. These robotics technicians are needed by Commanders to act as subject matter experts (SMEs) who can advise on the planning, employment, operational level maneuver, development and procurement of technological capabilities in support of current operations.

This effort is to design, develop, evaluate, and deliver a program of instruction (POI) focused on creating a Warrant Officer military occupational specialty (MOS) and generate a deployable robotics expert within the Force. This POI shall enable continuous learning, application of robotics, and create a senior leader with technical abilities in robotics. Operators who successfully complete this course will allow Commanders to leverage this Warrant Officer's knowledge, skills, and abilities to integrate robotics effectively, adaptively and to assess risk related to robotics employment methodology. The POI shall include:

Module 1: Foundational Knowledge and Skills - Demonstrate foundational information and technology functions to set the standard of how a robot processes, perceives, and functions. This phase should include but not be limited to setup and maintaining a computer network, editing and updating configuration files, setup of cloud services network, attaching to virtual services, administration, and training others on essential digital force protection practices.

- a. Digital Literacy
- b. Digital Force Protection
- c. Network Engineering
- d. Project Management Profession Training
- e. Robotics Sensors and Interoperability
- f. Basic Artificial Intelligence and Machine Learning
- g. Spatial Awareness and Navigation

Module 2: Operations and Employment - Direct skills module that aligns with mission capability and readiness, fundamentals of robotics operation, execution of operating specified platforms, understanding of how robotics can be employed, tactics, techniques, and procedures and applications.

- a. Foundational Tactics and Operations
- b. Build, Modify, and Repair
- c. Payload Integration
- d. Counter Unmanned Systems (UxS) Theory
- e. Electromagnetic Theory and Advanced Applications
- f. Multi-Domain Robotics

Module 3: Policy, Interoperability, and Information - Demonstrate how to align current policy and doctrine to the construction of a concept of operations, generate risk assessment, and risk management for robotics-integrated operations.

- a. Policy and Interorganizational Interoperability
- b. Acquisitions Fundamentals for Robotics
- c. Information and Documentation

- d. Research Fundamentals
- e. Battlefield Recovery
- f. Reporting and Databases

Module 4: Training, Advise ment, and Project Planning - Demonstrate project management fundamentals, managing people, cost tracking, coordination, and supervising training campaigns that align with the Commander's intent to ensure successful training.

- a. Training and Advise ment Management
- b. Program of Instruction (POI) Development
- c. Product Release Processes
- d. Risk Assessment
- e. Project Management

Module 5: Culminating Exercise (CULEX) - Able to plan, execute, and supervise advise ment packages; understand relevant indigenous systems; execute compliant release procedures.

- a. Battlespace Advise ment and Control
- b. Applied Effects Situational Training Exercise (STX) Lanes
- c. Mission Planning
- d. Advanced Tactics
- e. Full Mission Profile (FMP) Design and Execution

Deliver up to four (4) iterations of the phases/modules that are proposed. The overall course length shall not exceed twenty (20)-weeks of program instruction if comprised of all phases/modules outlined above. Offerors may submit a proposal that addresses a technical solution for a singular phase/module or for the full course as described above. Offerors must reference the above phase/module titles in their response. Failure to clearly address this requirement may result in your proposal being considered non-responsive.

Courses and CULEX shall take place at Government-approved training locations. Proposed locations shall support training full mission profiles.

Offeror shall provide information on current experience and expertise with professional adult learning, the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) or equivalent instructional systems design framework, instructing technical concepts to SOF personnel, developing training products in accordance with the U.S. Army Training and Doctrine Command (TRADOC) 350-70 standard.

Offeror must possess the necessary clearances to perform this work. The offeror must propose personnel capable of doing work and for access to DOD classified systems and networks at the SECRET level. Developed courseware will be no higher than the Controlled Unclassified Information (CUI) level.

The Government will provide students, operational subject matter experts, and necessary Government Furnished Information/Government Furnished Equipment/Government Furnished Material, as available (e.g., Program of Record (POR) capabilities for counter uncrewed aerial systems (CUAS), electronic warfare (EW), and small unmanned maritime systems (sUMS). POR

communications, both tactical and administrative), throughout the effort to guide development and transition of the POI to an established Government training activity.

The U.S. Government must receive full unlimited intellectual technical data rights of all products developed during this project.

R5181 SOF Human-Centric Talent Optimization

Special Operations Forces (SOF) are constantly focused on the state of manning to avoid operating in a deficit. As the pool of candidates to recruit from reduces, it is important to accurately target ideal candidates for recruitment, process all data collected during candidate testing and training, and to accurately predict candidate success rates based on the data collected. This would allow SOF to maintain its current force structure, maintain its ability to execute its mission and continue to prioritize national security.

This effort is to design, develop, test, and deliver a cloud-based integrated software system that is customizable to meet the specific needs of SOF. The system shall assist leadership in identifying ideal candidates for recruitment and shall create tailored recommendations for career paths based on a candidate's traits. A user training course shall be delivered to the Government upon the completion of the software system.

The system shall:

- Create a common operating picture that integrates and analyzes data from various Department of Defense (DOD) sources and systems to include physical, cognitive, and self/peer/leader assessments, and measures individual and team metrics of performance.
- Collect, process, and analyze feedback from candidates, recruiters, instructors, and operational leaders to refine selection criteria and improve candidate quality.
- Utilize predictive modeling to identify effective leaders and top performers based on their collective performance data as individuals, teams and leaders, to support targeted recruiting to identify potential candidates based on best fit and enable data-driven decisions.
- Analyze individual, team, and leader performance and provide recommendations on development at each level.
- Incorporate an automatic feedback tool designed to collect, process, and respond to user feedback without human intervention.
- Support enduring and historical digital records from recruitment to retirement.
- Be designed to manage increased user traffic, data volume, and system performance.
- Be deployed on a cloud-based infrastructure for scalability, flexibility, and security.
- Be capable of integrating with existing and segregated unclassified and classified DOD systems to ensure data centricity across multiple platforms.
- Provide a user-centric, intuitive, and customizable user interface designed to support configurable workflows, dashboards, surveys, and reports applicable to use cases, and is accessible without reliance on internet connectivity.
- Be compliant with human subjects research study requirements, and personally identifiable information/protected health information protection policies.

The Government will provide subject matter experts and Government Furnished Information, as

available, in the form of organizational functions documentation and data, throughout the effort to guide development and transition of the system to the Government.

The DOD requires all solutions that use information technology to follow current best practices for maintaining cybersecurity. See section 2.11 of this BAA for additional information.

The offeror must possess the necessary clearances to perform this work. The offeror must propose personnel capable of doing work and access to DOD classified systems and networks at the SECRET/NOFORN level. The developed system will be at the CONFIDENTIAL level.

The offeror must integrate expertise of industrial-organizational psychologists into the development and implementation effort.

The U.S. Government must receive full unlimited intellectual property technical data and computer software rights of all technical data and products developed during this project.

R5182 Seidr High-End Threat Sensor Tactical and Training Tool

Special Operations Forces (SOF) trainers currently store vast amounts of high-end electromagnetic spectrum, climatological, and other user data on data storage mechanisms such as SharePoint, which provides limited functionality to enable SOF operators and training personnel with the tools to enhance readiness and lethality.

SOF requires a new software-based capability that can utilize machine learning (ML) and artificial intelligence (AI) to optimize training and planning for current and future operations. SOF requires a solution that can provide training and operational support for High-End Threat System (HETS) analysis and planning to units prior to operations and as a tool to capture readiness during the pre-deployment training cycle.

This effort is to design, develop, test, train, and deliver an advanced data and knowledge management capability for large amounts of data collected from disparate sources. The data shall be correlated to near-real-time geographic atmospheric data to inform risk management decisions, assist with realistic training, and support pre-mission planning. Data received must be curated such that it is readily searchable and accessible to trainers, operators and higher headquarters. Multi-level user training and a train-the-trainer course shall be delivered to the Government upon the completion of the software/system.

The system shall:

- Be capable of ingesting and parsing relevant data from nearly 6 years of historical mixed media data sources, to include classified data, from video files, PDFs, audio files, text-based files and be able to ingest raw data files. Data shall include but not be limited to; electro-optical (EO), infrared (IR), maritime and ground radar, acoustic and sonar, climatological data, geographic location, date, time, Meteorological Aerodrome Reports, Terminal Aerodrome Forecasts, radio frequency spectrum analysis data, and wave propagation.
- Utilize artificial intelligence/machine learning technologies to model and identify current probability of detection, susceptibility modeling aligned with current threat(s) and attempt to identify potential future probability of detection issues as related to predicted

weather, sea state, temperature, and spectrum analysis of a specified geographic area. Modeling must be able to utilize current and future platforms and individual signatures (i.e., electromagnetic, EO/IR, cyber).

- Analyze and visualize data onto a geolocated map system and be compatible with current generation SOF communications systems (i.e., Tactical Assault Kit (TAK), Portable Radio Communications (PRC)-163/167) and be able to accept future open-source systems both military and commercial.
- Provide global-enviro data correlation and point location matching at a minimum of 15NM x 15NM.
- Support the analysis/tracking of 15 (Threshold) and 25 (Objective) threat devices in near-real time.
- Provide capability for mission planning (Threshold) and operational threat cueing (Objective).
- Provide post-mission product data management, operational trends, and iteration training trends.
- Provide HETS and signature management training modules and operational modeling.
- Allow instructors/operators to visualize analyzed data, highlighting anomalies from single or multiple source(s).
- Process and analyze the data via a scalable cloud-based/hosted to Edge computing infrastructure with global access system, whereas instructors/operators will need to access and visualize the analyzed data via currently installed operational and training systems and be able to accept future open-source systems both military and commercial.
- Be available on: scalable cloud-based/hosted Edge computing infrastructure with global access; on-premises network; SIPRNET Department of Defense Impact Level 6 (DOD IL 6) network, and able to generate analyzed data derived from commercially available near real-time information.
- Be portable, man-packable, integrate and access DOD networks and current DOD equipment within the TAK enterprise including TAK, PRC-163/167, Field Computing Device-Wearable (FCD/FCD-W) equipment, and other currently fielded tactical radios (Threshold) and commercial radios (Objective).
- Provide a battery life of 16 hours standby, 8 hours constant use (Threshold); 48 hours standby, 24 hours constant use (Objective)

The Government will provide participants, operational subject matter experts, and necessary Government Furnished Information as available, throughout the effort to guide development and transition of the system to the Government.

The DOD requires all solutions that use information technology to follow current best practices for maintaining cybersecurity. See section 2.11 of this BAA for additional information.

Data, curricula and working material will include unclassified and classified information elements. The system developed and courses will be at the SECRET/NOFORN level. The offeror must possess personnel with a minimum level of SECRET clearance and possess approved facility clearances to access, analyze, process, store, and generate SECRET/NOFORN materials.

The U.S. Government must receive unlimited intellectual property technical data and computer software rights of all technical data and products developed during this project. A firm-fixed-price proposal is preferred.

R5183 Artificial Intelligence (AI) Marksmanship and Firearms Trainer

Conducting quality marksmanship training can become impractical for organizations and operators if they are in an environment that lacks access to ammunition, live fire training areas, or qualified instructors. Military and law enforcement lack a mobile and customizable system that can utilize artificial intelligence (AI) to provide personalized feedback during marksmanship training. In many instances, novice marksmen will only reinforce negative habits if not trained by a knowledgeable coach.

This effort is to design, develop, test, train, and deliver an AI-enhanced firearms handling and marksmanship training system. The system shall include the following capabilities:

- Utilizes novel extended reality (XR), AI and an eye-tracking mode (optional) to provide marksmanship diagnostics and real time corrective feedback.
- Training platform that provides at a minimum a basic marksmanship training mode; and a close-quarters battle mode that develops high accuracy and speed.
- Compatible with rifles and handguns.
- Operate in both virtual reality (VR) and in live simulation environments.
- Ability of the AI system to integrate with existing simulation systems. Compatible with commercial-of-the-shelf VR headsets equipped with integrated high-quality eye tracking sensors and laser-based drop-in kits (e.g., Virtra Simulation System, VCAT by Eyeviation, or others).
- Provide root cause analysis and summary after action review written report of student errors, failures, and what the student did correctly in real time utilizing three-dimensional visualization in VR, and in the case of simulation, shall present a virtual instructor on screen to demonstrate the corrective action needed to improve marksmanship skills.
- Adapt and personalize training, difficulty level, and corrective actions based on individual student performance and skill level, in real time.
- Portable, mobile system to enable training anytime, anywhere.
- Suitable for individual- or instructor-led training with the ability to support a minimum class of 12 trainees simultaneously. Support instructor and trainees in disparate locations.
- Database that stores training drills, automatically tags and weighs various shooting skills and adapts training modules based on proficiency levels.

The Government will provide subject matter experts and necessary Government Furnished Information (GFI), as available, throughout the effort to guide development and transition of the system to the Government.

The Department of Defense requires all solutions that use information technology to follow current best practices for maintaining cybersecurity. See section 2.11 of this BAA for additional information.

The U.S. Government must receive full unlimited intellectual property technical data and

computer software rights of all technical data and products developed during this project.

R000-HPT-FY26 Unspecified Requirement

The Human Performance and Training (HPT) subgroup focus is to address the most challenging problem sets associated with developing knowledge, skills, and abilities to deter, defeat, prevent, protect against, mitigate, and respond to irregular warfare, combating terrorism, and national security threats. This unspecified requirement (R000) seeks solutions to enhance the operational capabilities of our U.S. military, federal law enforcement, and interagency customers involved in combating U.S. adversaries by optimizing performance for significantly improved readiness and mission execution. All submissions shall identify the anticipated end user and/or endorsing organization.

Key overarching areas of interest based on HPT's focus areas are:

1. Technology that allows a learner to seamlessly interact with and become immersed in a learning environment. Tools, technologies, and techniques for improving the design and validation of interactive and immersive learning technology.
2. The full range of performance gaps and interventions to improve and sustain human performance. Methods, technologies, and programs based on cognitive and physiological principles that will optimize operator training, enhance mental and physical skills, and improve mission performance.
3. Training and educational programs that employ novel instructional design, delivery methods, and concepts to accelerate and enhance learning.

More specific areas of interest include:

- Quick and affordable renderings of virtual three-dimensional replica of a city.
- Monitoring and exploiting human performance data (e.g., physiological state) within a training environment.
- Human performance data analytics, predictive modeling, and artificial intelligence (AI)/machine learning (ML) algorithms.
- Wearable technology for operator state assessment.
- Measuring and mitigating stress and mental workload.
- Novel applications of immersive technology including virtual reality, augmented reality, and mixed reality.
- Natural language processing (e.g., conversational interaction) within immersive, simulation-based training technology.
- Cognitive skills development and assessment for those encountering complex problems and making high-risk decisions.
- Human factors/usability for operational systems.
- Human-machine teaming/brain-machine interfaces.
- Application of neurotechnology/neuroscience, non-invasive methods, and innovative neurotechnology to optimize cognitive function and human performance in stressful and extreme environments (e.g., neuroplasticity).
- Novel solutions for the rapid identification of surgical instruments in austere tactical environments that survive repeated heat/pressure/light/and sterilization processes.

Unspecified requirements (R000s) are for proposing unique innovations that have not yet been identified by IWTSD. Submissions against an unspecified requirement shall be responsive to the focus areas and topics noted. Proposed technologies from the unspecified requirements will be competing against proposed technologies for identified and prioritized specified requirements. Because IWTSD does not budget for unspecified requirements, awards may not be made against them.

Note: Quad charts submitted in response to a Subgroup's R000 may be shared with other IWTSD Subgroups if the submission demonstrates relevance to that Subgroup's focus areas.

5.7. Influence and Information Capabilities (I2C)

R5127 Assessment, Monitoring, and Evaluation

Conduct research, develop, test and evaluation (RDT&E) that supports users' capability to assess, monitor and evaluate information and influence operations more effectively. This focus area specifically addresses the ability to conduct formative and post-campaign/event/intervention assessments, monitoring and evaluation in varied operational environments, domains, and conflict conditions. The I2C subgroup and its end-users are interested in innovative solutions addressing gaps and needs including, but not limited to:

- Automated techniques to characterize the performance of narratives (e.g., value, influence, truth, provenance) in a manner useful for assessment of the information environment.
- A system for establishing benchmarks for digital tool evaluation and comparison using synthetic data. This gap is focused on evaluating social listening/sensemaking tools designed to examine message groups or message campaigns (as opposed to single messages), where benchmark validation might include a human performance baseline. Innovative approaches to assessing the perception of friendly forces' activities footprint.
- Map adversarial informational impact on behavior globally and dynamically. Evidence-based analysis to conduct detection, characterization and attribution of adversary information techniques and population segmentation.
- Discovery, access and collection of relevant publicly available information (PAI) and commercially available information (CAI). Multi-modal media summarization (e.g., audio, text, video, user-generated content, video games, social media), micro- and macro-economic data) to detect patterns, narratives, coordinated efforts, and campaigns.

R5128 Develop and Deliver

Conduct research, development, test, and evaluation (RDT&E) that supports users' capability to more effectively develop information, content and narratives that enable targeted engagement of foreign audiences in support of specific mission objectives. The I2C subgroup and its end-users are interested in innovative solutions addressing gaps and needs including, but not limited to:

- Decoys capable of representing high value equipment. Preferred capabilities include systems that integrate both physical/visual decoy with accurate signatures.
- Low-cost, precise system/vehicles to deliver small non-kinetic physical payloads (e.g.,

handheld radio, pamphlets, etc.). Preferred capabilities include systems that do not rely entirely on Global Positioning System (GPS) navigation, systems that can be deployed from different platforms (e.g., aircraft, unmanned aerial systems (UAS), ground vehicles, maritime platforms).

- Expeditionary capability for man-portable print production of paper products while in a tactical/operational environment. Preferred specifications include system capable of producing both leaflet-size and poster-size paper products, battery powered capable, and backpackable capability less than 40lbs.
- Tool to directionally focus audio to a single human size target at distance. Preferred capabilities include man-packable solutions, vehicle integrated solution, system capable of focused audio propagation distances beyond 100 meters.
- Payloads employed from small UAS ground-based system, or small maritime systems that simulate the signals of platforms of larger and higher value or offer audio/sonic dissemination of messages.
- Text-to-video capabilities with innovative methods for minimizing computing processing power and graphics processing units (GPU) requirements.
- Synchronized delivery of information effects across physical, informational, and cognitive dimensions with unified messaging without physical presence in the target area.

R5129 Concept Development and Integration

Develop future information and influence capabilities and concepts, integrate existing information related capabilities and technology to enhance operations from tactical through strategic level. Conduct operational test and evaluation (OT&E) and experimentation to validate novel capabilities. The I2C subgroup and its end-users are interested in innovative solutions addressing gaps and needs including, but not limited to:

- Tools to simulate and build target audience profiles and target audience responses to friendly messaging or products.
- Rapid, in-stride legal & ethics planning assistance during operational planning and product development. Preferred capabilities include legal assessments of products with Department of Defense policy citations, summarized legal analysis of campaign plans for decision makers.
- Exportable electromagnetic spectrum operations (EMSO) and other operations in the information environment (OIE) capabilities.
- Resilience and operational security (OPSEC) testing tools oriented at blue force/organization assessments.
- Intelligence support to influence activities at the unclassified level. Preferred capabilities include summarization and compilation of available open-source products that support influence goals, precision searchability within open-source products.
- Proof of concept validation of new, low-cost means of tactical deception and denial in large scale combat operations.

5.8. Protection, Survivability, and Recovery (PSR)

R5187 Special Operations Forces Prolonged Blood Storage Apparatus

Special Operations Forces (SOF) medical personnel are often deployed well beyond the reach of

traditional field hospitals, sometimes operating without electrical power or conventional support systems. To provide initial resuscitation to casualties at risk of hemorrhagic shock, SOF medical personnel shall carry Cold Stored Whole Blood (CSWB), which is a fragile substance requiring precise temperature control between 1°C to 6 °C for safe use. However, SOF currently lacks a portable solution to store CSWB within this critical temperature range for more than 20 hours, even under ideal environmental conditions.

The Special Operations Forces Prolonged Blood Storage Apparatus shall meet the following specifications:

- **Size and Portability:** The apparatus shall be man-packable, occupying no more than two liters of bag space when carrying a single unit of CSWB, and four liters when carrying two units. Each component that makes up the apparatus shall not exceed 4 lbs.
- **Storage Capacity:** It shall store a maximum of two units of CSWB, with each unit being 450cc.
- **Temperature Maintenance:** The apparatus shall maintain an internal temperature of 1°C to 6 °C for 96 hours in environmental conditions ranging from -40 °C to 40 °C.
- **Weight:** The total weight of the apparatus shall not exceed 8 lbs., excluding the weight of the CSWB units. If power sources are required to maintain temperature, the total weight of the apparatus and power sources shall not exceed 20 lbs., excluding the weight of the CSWB units.
- **Accessibility:** The apparatus shall allow access to contents within 5 seconds under zero-lumen conditions (with training). The apparatus shall have a means to monitor the internal temperature without opening it. This feature shall have the option to be disabled when not in use. If swappable power sources are required, they shall be replaceable within 5 seconds.
- **Signature Management:** The apparatus shall not transmit data of any kind for the user to operate it. Any noise generated from the apparatus shall not exceed 20 dB (T) and 10 dB(O). The cooling mechanism shall not generate a thermal or infrared (IR) signature greater than that of a human.
- **Ingress Protection:** The apparatus shall have a minimum ingress protection rating of IP67.

If power sources are proposed to meet the specifications listed above, any type of power source is acceptable as long as the apparatus is reusable. However, if batteries or chemical cooling are proposed, the following specifications will be considered:

- **Batteries:** If batteries are proposed, the apparatus shall either:
 - Use a proprietary USB-C rechargeable battery, or
 - Use standard battery types such as AA, AAA, CR123, or military-specific batteries.
- **Chemical Cooling:** If chemical cooling is proposed, the apparatus shall be reusable after operation. Chemicals required for this reaction must not conflict with the weight requirements.

The offeror shall deliver three (3) Special Operations Prolonged Blood Storage Apparatuses for operational test and evaluation.

A firm-fixed-price proposal is preferred.

5.9. Surveillance, Collection, and Operations Support (SCOS)

R5111 Low Visibility Non-Global System for Mobile Communications (GSM) Communications

Operators require a low-visibility, long-range communications platform that does not rely on GSM. This system will facilitate low-visibility communication between US military members conducting sensitive and/or clandestine operations. The system will support clandestine communication in support of advanced special operations.

Description: This capability will provide a small form-factor, handheld, communications device that is:

- Open source programmable
- Encrypted
- Mesh network capable
- Have configurable user roles
- Ability for internal QWERTY keyboard
- U) Long range
- Options for 1-Watt low probability of detection (LPD)/low probability of Intercept (LPI) and higher power
- Dimensions: 4" × 6" × 1"
- Lithium Polymer battery, USB-C charging port

Proposed deliverables: The contractor shall deliver a Low Visibility Non-GSM Comms capability that can support sensitive military operations. The contractor shall deliver three complete and fully functioning systems to the Government with the options to deliver up to ten additional systems. All information, software, and prototypes will transition to the end-users for operational test and evaluations with a minimum of Government purpose rights. Unlimited rights are preferred.

Risk Management Framework (RMF): The Department of Defense (DOD) requires all solutions that use information technology (IT) to follow current practices for maintaining cybersecurity. Standards and compliances apply even if the solution is a component of a larger system. IT systems must be compliant with the DOD Risk Management Framework (RMF) as described in DOD Instruction 8500.01. Compliance with this instruction ensures all projects account for information security from requirements gathering to implementation, maintenance, and continuous monitoring.

Intellectual Property (IP) Rights, Limitations, and Licensing: Concerning most requirements, the Government will seek licensing for the IP developed under awarded contracts in accordance

with the DFARS 252.227-7013 and 252.227-7014. On a limited number of requirements, instead of obtaining a license, the Government may seek to purchase the IP.

The Government seeks a firm-fixed price proposal. IWTSD is looking for solutions with periods of performance from 18-24 months.

R5117 Ubiquitous Selector Technical Collection Tool

Near-peer threats now have technical capabilities and organizational experience which allow them to evade traditional means of detection. Current solutions are not conducive for use in low-visibility or clandestine operations in both maritime and ground scenarios. Operators require a ubiquitous signal collection tool that can be mounted or fit into existing maritime autonomous platforms, common vehicle voids, or common sized commercial backpacks. Current capabilities are not conducive for use in low-visibility or clandestine operations.

Description: This solution must meet the following requirements:

- Facilitate detection, isolation, and exploitation of the following protocols: Cellular (all modes), Wi-Fi (all signal types), Bluetooth, tire pressure monitoring systems (TPMS), Wireless on board diagnostics 2, medical devices, automatic dependent surveillance – broadcast (ADS-B), automatic identification system (AIS), multi-use radio service (MURS), key fobs, radio frequency identification (RFID), satellite communication and other non-traditional indicators.
- Allow the system to fingerprint radio frequency signals from equipment and vehicles and then assign those signals to digital persona in support of digital force protection.
- Operate in a Debian based Linux environment.
- Be completely compatible with 4DV Scout, 3dB Labs SCEPTRE, and Strike Solutions THUNDERDOME.
- Meet the standards for ingress protection (IP)-64 dust tight, protected against splashing water, tested in accordance with (IAW) military standard (Mil-Std) -810 509.5 Salt Fog (T), with a goal of IP-67 dust tight, protected against the effects of temporary immersion in water, tested IAW Mil-Std-810 512 (O).
- Be less than 600 cubic inches (T) The system shall fit within a small backpack or carry-on luggage type case.
- Use 110 volts alternating current (VAC) 60 hertz (Hz) /12 volts direct current (VDC) (T) with a goal of 110VAC 400 Hz/220VAC 50Hz/24VDC (O).
- Use multi-core x86 architecture with at least 64 gigabytes (GB) of Random-access memory (RAM) and at least 2TB of Non-Volatile Memory Express (NVMe) storage (T) with a goal of 128 GB of RAM and 4TB of NVMe storage (O)
- Have an on/off switch with the ability to start a pre-determined collection on boot (no multistep startup or shutdown procedures) (T=O).
- Capture and demodulate the following protocols: cellular, Wi-Fi, Bluetooth, vehicle key fobs, TPMS, RFID at a minimum (T) with ADS-B, AIS, MURS, Nordic Semiconductor, and Iridium as the overall goal (O).
- Use Open Source (OS)/Open Standards Firmware (T=O).

Proposed deliverables: The contractor shall deliver a Low Visibility Non-GSM Comms capability that can support sensitive military operations. The contractor shall deliver four complete and fully functioning systems to the Government with the options to deliver an additional ten systems. All information, software, and prototypes will transition to the end-users for operational test and evaluations.

RMF: The DOD requires all solutions that use IT to follow current practices for maintaining cybersecurity. Standards and compliances apply even if the solution is a component of a larger system. IT systems must be compliant with the DOD RMF as described in DOD Instruction 8500.01. Compliance with this instruction ensures all projects account for information security from requirements gathering to implementation, maintenance, and continuous monitoring.

IP Rights, Limitations, and Licensing: Concerning most requirements, the Government will seek licensing for the IP developed under awarded contracts in accordance with the DFARS 252.227-7013 and 252.227-7014. On a limited number of requirements, instead of obtaining a license, the Government may seek to purchase the IP.

The Government seeks a firm-fixed price proposal. IWTSD is looking for solutions with periods of performance from 18-24 months.

R5119 KU-KA Band Low Noise Block and Polarity Agnostic Adapter

The Department of Defense (DOD) requires a KU-KA Low Noise Block (LNB) and Polarity Agnostic Adapter set that is antenna agnostic (can connect to wide array of commercial ground-based satellite systems and USMC/SOCOM systems).e array of commercial ground base satellite systems. There is no universal adapter set for KU-KA LNB and Polarity that supports a wide array of ground-based satellites. This requirement seeks to develop one universal adapter for the LNB and Polarity. If one universal adapter is not achievable, two separate universal adapters that are compatible with one another is acceptable.

The adapters shall allow the user to independently and rapidly deploy a low profile very small aperture terminal collection system with the capability to automatically identify multiple modem protocols on Ku and Ka beams of interest. The capability shall function in both the survey mode or collection mode, delivering both output network management information and raw user packet data. This provides the user with an organic, dynamic, and flexible capability to support activities under a variety of mission CONOPS.

The key performance objectives of this effort are the following: The Contractor shall develop a small kit that can connect to organic USMC, SOCOM and a wide array of commercial ground base satellites.

Polarity Adapter

Size 3"× 3"× 5" (O), 3"× 3" × 9" (T)

Quantity: 1 adaptor per kit (KU/ KA).

Interface: Standard face plate to connect to feed horn connection points.

Low Noise Block (LNB) Adapter
 Size 3" × 3" × 5" (O), 3" × 3" × 9" (T)
 Volume: 2 adaptors per kit (2 KU/2 KA).

Interface: Standard face plate to connect to LNB connection points.

Proposed Deliverables: The contractor shall deliver a KU-KA LNB and Polarity Agnostic Adapter that can connect to organic USMC, SOCOM and a wide array of commercial ground base satellite systems. The contractor shall deliver two complete and fully functional systems to the Government with options to deliver up to ten additional systems. All information, software, and prototypes will transition to end users for operational test and evaluation with a minimum of Government purpose rights.

RMF: The DOD requires all solutions that use IT to follow current practices for maintaining cybersecurity. Standards and compliances apply even if the solution is a component of a larger system. IT systems must be compliant with the DOD RMF as described in DOD Instruction 8500.01. Compliance with this instruction ensures all projects account for information security from requirements gathering to implementation, maintenance, and continuous monitoring.

IP Rights, Limitations and Licensing: Concerning most requirements, the Government will seek licensing for the IP developed under awarded contracts in accordance with DFARS 252.227-7013 and 252.227-7014. On a limited number of requirements, instead of obtaining a license, the government may seek to purchase the IP.

The Government seeks a firm-fixed-price proposal. IWTSD is looking for solutions with periods of performance from 18 to 24 months.

R5122 Virtual Waveforms for Satellite Communications

The DOD and IC are seeking a single platform that enables operators to rapidly deploy multiple and varying waveforms in support of satellite communication operations globally.

Currently multiple physical modems and systems are employed to provide the required waveform diversity needed to conduct satellite operations. As new military and commercial waveforms are developed, the increase in hardware costs and equipment sustainment increases the burden to the end user. Having the ability to deploy waveforms on a virtual platform will streamline the requirements needed for missions. This will reduce the amount of hardware needed and increase the overall ability to rapidly build and deploy new waveforms to a single platform. This project will save development time, procurement cost, and enhance operational capabilities for the end users.

Key objectives of this effort will enable a unique set of operational scenarios by meeting the following specifications:

Operating Band(s)	System shall be interoperable with government and commercial super high frequency architectures L band 950 -2159 megahertz (MHz)	T
Virtual environment	System shall run in a microservices environment	T

Waveform deployment	Waveforms shall be able to be deployed virtually as applications without major host/firmware changes	T
Waveform storage	System shall allow storage and onload/offload of multiple waveforms	T= 4 waveforms O= 6 waveforms
Size	System shall be in a small form factor	T= 17" × 10" × 4" O= 12" × 8" × 3"
Weight	System shall be light weight	T= <30lbs O= <20lbs
Electromagnetic radiation hazard	System shall be safe from electromagnetic radiation hazards to personnel IAW Mil-STD-464	T
Environmental	Systems shall withstand impact and vibration while in transport; withstand sand/dust, high humidity and salt fog exposure, and be rust and corrosion resistant.	T
Power requirements	Alternating current/direct current power adaptable shall conform to standardization agreement 4133 (NATO) standards: 110/220 volts alternating current, 50/60 Hertz	T
Bias and reference	Systems shall support BIAS power and 10MHz reference to supplier security and privacy assurance and legal notice of objection, as well as the ability to turn it off.	T
Orbit	System shall be able to work on low earth orbit, medium earth orbit, geostationary orbit satellite constellations	T
Data rate	The system shall simultaneously transmit (TX) and receive (RX) high data rates	T= >TX: 400 megabits per second (mbs), RX: 400mbs O= >TX: 1gigabitd per second (gbs) RX: 1gbs
Ports	The system shall have receive port, transmit port, and monitor port with N-type connector	T
Spectrum monitoring	The system shall have a built-in spectrum monitoring capability	T
Waveforms	The system shall have a number of waveforms virtualized and ready to use	T=EBEM/EDIM, DVB-S2X, Comtech DSSS; O= UBDM
Certification	Shall be capable of meeting modem certification testing standards in accordance with wideband global SATCOM(WGS) certification requirements	T
Micro Services	The system shall be containerized/Kubernetes	T
Trade Agreement Compliant (TAA)/899 Compliant	All physical hardware must be TAA/899 compliant	T

Proposed Deliverables: The contractor shall deliver three complete and fully functional systems to the Government with options to deliver up to ten additional systems. All information, software, and prototypes will transition to end users for operational test and evaluation.

RMF: The DOD requires all solutions that use IT to follow current practices for maintaining cybersecurity. Standards and compliances apply even if the solution is a component of a larger system. IT systems must be compliant with the DOD RMF as described in DOD Instruction

8500.01. Compliance with this instruction ensures all projects account for information security from requirements gathering to implementation, maintenance, and continuous monitoring.

IP Rights, Limitations and Licensing: Concerning most requirements, the Government will seek licensing for the IP developed under awarded contracts in accordance with DFARS 252.227-7013 and 252.227-7014. On a limited number of requirements, instead of obtaining a license, the government may seek to purchase the IP.

The Government seeks a firm-fixed-price proposal. IWTSD is looking for solutions with periods of performance from 18 to 24 months.

R000 Unspecified Requirement Supporting SCOS Focus Areas

The Irregular Warfare Technical Support Directorate's Surveillance, Collection, and Operations Support subgroup is looking for unique, leap ahead emerging technology in support of the National Intelligence Community and Joint Special Operations Command. Focus areas of interest are:

- Develop or improve technologies supporting joint offensive and defensive electromagnetic spectrum operations to include cyber, electronic, electromagnetic, and signals collection as these technologies increasingly converge with other systems and technologies to include, but not limited to the Internet of Things, telematics, and emerging "Smart" technologies.
- Develop or improve technologies that provide operators with tools to protect, mitigate, or detect identifying information. Areas of particular interest are; biometric and fingerprints, facial recognition, internet activity, electromagnetic footprint/pattern of life, signature management, managed attribution, etc.
- Develop or enhance advanced communication technologies to communicate and exfiltrate information from non-permissive and semi-permissive environments. Areas of particular interest are unique uses of the electromagnetic spectrum, non-radio frequency communications, use of the deep-and-dark-web, machine to machine communication, steganography, etc.
- Develop or enhance multi-intelligence collection efforts in the human, signals (communication, electronic, foreign instrumentation), measurement and signature, and geospatial disciplines to support intelligence operation by providing strategic and operational level intelligence, surveillance, and reconnaissance capabilities. Capability improvements include subsurface, surface, airborne (to include stratospheric and space) sensors, and tagging and locating technologies.
- Develop Advanced Surveillance and Counter Surveillance technologies, as well as automated tools and techniques to recognize, mitigate, exploit and/or defeat adversarial tactics, techniques, and procedures, and methodologies.

RMF: The DOD requires all solutions that use IT to follow current practices for maintaining

cybersecurity. Standards and compliances apply even if the solution is a component of a larger system. IT systems must be compliant with the DOD RMF as described in DOD Instruction 8500.01. Compliance with this instruction ensures all projects account for information security from requirements gathering to implementation, maintenance, and continuous monitoring.

IP Rights, Limitations and Licensing: Concerning most requirements, the Government will seek licensing for the IP developed under awarded contracts in accordance with DFARS 252.227-7013 and 252.227-7014. On a limited number of requirements, instead of obtaining a license, the government may seek to purchase the IP.

The Government seeks a firm-fixed-price proposal. IWTSD is looking for solutions with periods of performance from 18 to 24 months.

Unspecified requirements (R000s) are for proposing unique innovations that have not yet been identified by IWTSD. Submissions against an unspecified requirement shall be responsive to the focus areas and topics noted. Proposed technologies from the unspecified requirements will be competing against proposed technologies for identified and prioritized specified requirements. Because IWTSD does not budget for unspecified requirements, awards may not be made against them.

Note: Quad charts submitted in response to a Subgroup's R000 may be shared with other IWTSD Subgroups if the submission demonstrates relevance to that Subgroup's focus areas.

5.10. Tactical Offensive Support (TOS)

R5145 Affordable Close Quarters Modular Effects FPV - Drone Kit (ACQME-DK)

Small Tactical Team Operators require a Next Generation Affordable Close Quarters Modular Effects First Person View (FPV) Drone Kit (ACQME-DK) to be used in complex urban terrain, rural and maritime confined spaces. ACQME-DK will be a NDAA Compliant FPV sUAS Hybrid Modular kit. It will include interoperable platforms (small, medium, and large) with interchangeable payloads (day/night reconnaissance, surveillance & target acquisition mode, distraction mode, lethal mode, and inert lethal training mode) that can be tailored in the field by a trained operator based on mission needs. ACQME-DK drones shall be backpackable. A single trained operator will be able to fly up to three (3) ACQME-DK platforms, with varying payloads, simultaneously. ACQME-DK will have robust cyber hardened mesh networked communications for command & control, be ATAK compatible, with AI enabled navigation, automatic target recognition and tracking. ACQME-DK will also be capable of operating in High EW, GPS denied, and communications challenged environments using a fiber optic cable tether.

ACQME-DK will provide the Small Tactical Team Operator an advanced modular kit capability to remotely detect, confirm and destroy a greater variety of targets using sUAS Vertical Take-Off and Landing (VTOL) multi-rotor platform and munitions technologies. Able to be hand launched from confined spaces, ACQME-DK will search, identify, track and destroy elusive targets hiding behind cover, in defilade, surrounded by substantial vertical obstacles, and threats maneuvering in channelized areas that are found in complex urban terrain.

ACQME-DK is primarily designed for re-use. Its multi-role methods of lethal attack include

sUAS VTOL air delivery with accurate placement and remote detonation of munitions, accurate drop of effects with impact or height of burst detonation, accurately fired with impact detonation. Where noted, T = Threshold and O = Objective.

ACQME-DK shall:

1. Be modular FPV sUAS kits, with collapsible arms and wings, backpackable with configurations in weights as follows:
 - a. Small – without interchangeable payload – total takeoff weight: less than five (5) pounds (T), three (3) pounds (O).
 - b. Medium - without interchangeable payload – total takeoff weight: less than twelve (12) pounds (T); eight (8) pounds (O).
 - c. Large - without interchangeable payload – total takeoff weight: less than thirty (30) pounds (T); twenty (20) pounds (O).
2. Consist of user selected interchangeable payloads:
 - a. day/night reconnaissance, surveillance & target acquisition (RSTA) mode
 - b. distraction mode
 - c. lethal mode
 - d. inert lethal training mode
 - e. sense mode
3. The platform air vehicle, batteries, and lethal payload components, by design, shall be separated for storage, transportation, and integration for training and operations (T=O).
4. Be transported by a maximum of two operators (T), one operator (O) during a foot movement, hand launched and operated.
5. Be assembled and put into operation rapidly in the field by one (1) trained operator in the field in three (3) minutes (T); one (1) minute (O).
6. Have a total system endurance of no less than fifteen (15) minutes (T); forty-five (45) minutes (O) continuous flight time.
7. Have a dash speed of fifty (50) knots/fifty-seven (57) miles per hour (T); sixty-nine (69) knots/eighty (80) miles per hour (O).
8. Have a minimum range of one (1) kilometer in complex urban terrain (T); five (5) kilometers in complex urban terrain (O).
9. Have the ability to launch from, fly through, and be recovered in complex urban terrain (T=O).
10. Have no component part longer than eighteen (18) inches in length (T=O). Telescoping modular configuration should be considered.
 - a. Components of the complete operational system (1x aircraft, 1x GCS and, 1x lethal payload) fit into a backpack with a capacity of no more than forty (40) liters (T=O).
11. Use rechargeable batteries and battery rechargers that are Commercial off-the-shelf (COTS) available that are Department of Defense (DOD) UN/UL qualified and compliant; be interoperable with Joint Program of Record Universal Battery Charger (T=O).
12. Have Electro-Optical (EO) and Infrared (IR) sensors with the following performance:
 - a. Have the ability to detect humans and vehicles in the open within a one (1) kilometer by one (1) kilometer area (T=O).

- b. Differentiate between unarmed and armed human target:
 - i. Four hundred (400) meters (T); six hundred (600) meters (O) (Day)
 - ii. Two hundred (200) meters with IR illuminator/flood light (T); three hundred (300) meters (Night) with IR illuminator/flood light (O).
 - c. Differentiate between unarmed and armed mounted target:
 - i. Eight hundred (800) meters (T); fifteen hundred meters (1500) (O) (Day)
 - ii. Four hundred (400) meters with IR illuminator/flood light (T); seven hundred fifty meters (750) (Night) with IR illuminator/flood light (O).
 - d. Have the ability to lock on and track man sized targets Day and Night moving at (five) 5 mph (T); (twenty) 20 mph (O) in clear weather.
 - e. Have the ability to lock on and track moving vehicle targets Day and Night at (fifty) 50 mph (T); (seventy) 70 mph (O) in clear weather.
13. Communications, Command and Control (C3), Video and Data Link Radio:
- a. Cyber Hardened; must pass DOD Cyber Vulnerability Assessment (CVA) (T=O).
 - b. Stand Alone Mesh network with user configured antennas (T=O).
 - i. Platform Control (C2): L/C Band (Frequency Hop (FH)).
 - ii. Digital Data Link (Video): L/C Band (FH).
 - iii. User changeable/modular with currently DOD Approved MESH/MANET radios.
 - c. Fiber Optic communication link option for denied environments:
 - i. Have a fiber optic cable for assured communications with a minimum tensile strength of ten (10) pounds (T); twenty (20) pounds (O).
 - ii. Have a fiber optic cable for assured communications with a minimum length of one (1) kilometer (T); ten (10) kilometers (O).
 - iii. Fiber spool can easily be swapped in the field by a trained operator (T=O).
 - iv. Fiber optic cable does not decrease ACQME-DK maneuverability or speed (T=O).
 - v. Fiber optic cable integration does not replace RF capabilities and is operator selectable (T=O).
 - d. Encryption:
 - i. AES-256 (T); NSA Suite B (O)
 - e. Include Whip, Omni-directional and Directional collapsible antennas (T=O)
 - f. Export video:
 - i. To ATAK (O)
 - ii. To separate End User Device (EUD) display (T=O)
 - iii. To separate controller (T=O)
14. Include the following Global Positioning System (GPS) / Inertial Navigation System (INS) capabilities:
- a. L1 & L2 band (T=O)
 - b. Must operate in a GPS-denied environment (T=O)
 - c. Inertial Measurement Unit (IMU) (T=O)
 - d. SAASM Y-Code option capable (T=O)
 - e. M-Code compliant (O)
15. Have external IR lights to assist pilot in determining flight aspect of platform (ingress, egress from pilot's position), for deconfliction (Identify Friend or Foe) and be able to be turned on/off as needed (T=O).

16. Include Ground Control Unit(s) with the following attributes:
 - a. Two separate controllers integrated into a single handheld tactical Fire Control Unit (FCU) (T):
 - i. Platform Control – Flight & EO/IR sensors with Touch Screen and Physical Controls (T=O).
 - ii. Payload Control – Strike - Arm, Fire, Disarm with combination Touch Screen and Physical Controls (T=O).
 - iii. No less than seven (7) inches and no more than ten (10) inches of viewable screen (T=O).
17. Fuse & Warhead must be of US-origin and able to achieve U.S. Weapon Systems Safety Review Board approval for fielding(T=O).
18. Vendor shall assist the Government with information and participation in obtaining Limited Safety Release (LSR), Air Worthiness Release (AWR), Interim Flight Clearance (IFC), DD-1494 and/or JF12 required for Government testing, training and employment in operations (T=O).
19. Include field configurable multi-role lethal modes of attack (T=O):
 - a. Accurate Effects (e.g., munition) PLACEMENT with Remote Activation – reload & reuse platform.
 - b. Accurate Effects (e.g., munition) DROP – remote detonation with selectable fuse function - reload & reuse platform:
 - i. Height of Burst Detonation
 - ii. Impact Detonation
 1. Anti-personnel – 360 degrees personnel in the open, personnel in confined space:
 - a. Neutralization of Personnel in the open (Pk is probability of incapacitation): Single shot Pk of eighty percent (0.8) given three (3) personnel located in a circle thirty (30) feet in diameter (T); Single shot Pk of one hundred percent (1.0) given three (3) personnel located in a circle thirty (30) feet in diameter (O).
 - b. Neutralization of Personnel in a confined space (Pk is probability of incapacitation): Single shot Pk of eighty percent (0.8) given three (3) personnel located in a confined space with dimensions twenty (20) x twenty (20) ft (T); Single shot Pk of one hundred percent (1.0) given three (3) personnel located in a confined space with dimensions twenty (20) x twenty (20) ft (O).
 2. Anti-vehicle – soft-skinned vehicle (stationary and moving): Neutralization of Personnel in a soft-skinned vehicle (Pk is probability of incapacitation: Single shot Pk of seventy percent (0.7) for two (2) personnel sitting in the front seat of a soft-skinned vehicle (T); Single shot Pk of one-hundred percent (1.0) for two (2) personnel sitting in the front seat of a soft-skinned vehicle (O).
20. Include a lethal payload, consisting of a Fuse Safe and Arm Device warhead designed and constructed IAW DOD Weapon System Safety requirements compliant with Insensitive Munition military specifications (T=O).

21. Have an Electronic Safe & Arm Device (ESAD) that is MIL-STD-1316F compliant and include proximity, impact and command modes of detonation. The use of Micro-Electro-Mechanical System (MEMS) sensors and components is acceptable. The ESAD must include all sensors required for safe and effective operation. This includes proximity sensors enabling remote detonation at a stand-off distance. The ESAD must be capable of being returned to a SAFE condition if the lethal payload is not deployed during flight. Positive indication of ESAD state is required (T=O).
22. Be compliant with American Security Drone Act (ASDA) and Department of Defense Instructions (DODi) (T=O).
23. Have detonation components constructed using DOD qualified energetics (T=O)
24. Have a warhead consisting of a DOD qualified Insensitive Munitions fill, that maximizes target neutralization, which can be attached, safely removed, reattached to the ACQME-DK as required throughout the duration of extended operations (T=O).
25. Ability to arm and disarm munition for return/reuse
 - a. Externally visible indicator of arming status for pilot (e.g., green or red light, IR steady/flashing) (T=O).
 - i. Mechanical stud showing red or green (T=O).
 - b. Ditching – programmable offset (return to pre-designated ditch site) (T=O).
26. Be able to operate within the following environmental conditions:
 - a. Wind: twenty (20) mph (T), forty 40 mph (O).
 - b. Temperature: -20 degrees Celsius (C) to 60 degrees C (T=O)
 - c. Precipitation: 1/8-inch rainfall per hour (T=O)
27. Have the following durability:
 - a. Ingress Protection of IP66 (T); IP68 (O)
 - b. Induced Environments – The ACQME-DK must be able to safely operate after exposure to all induced environments encountered during its life cycle:
 - i. Vibration – common carrier, loose cargo, captive carry (platforms including UH-60, CH-47, CV-22, C-130) (T=O)
 - ii. Mechanical Shock – 4 ft drop (T); 40 ft drop (safe to dispose of) (O)
 - iii. Electromagnetic Environments – HERO/EMI/ESD, IAW the latest issuances of MIL-STD-461 and MIL-STD-464 (T=O)
 - iv. Temperature and humidity extremes
 - c. Modular Shipping and Storage and Hardened Tactical Carrying Containers for lethal payloads, batteries, and inert system components (T=O).
28. Each ACQME-DK kit contains the following:
 - a. Two complete (2) Ground Control Station (GCS)/Fire Control Unit (FCU), programmed for use to operate ACQME-DK drones simultaneously
 - b. Two (2) Collapsible Directional Antenna
 - c. Two (2) First Person View Goggles
 - d. One (1) Small UAS Airframe – all accessories noted in the requirement above
 - e. One (1) Medium UAS Airframe – all accessories noted in the requirement above
 - f. One (1) Large UAS Airframe – all accessories noted in the requirement above
 - g. One (1) EO, IR Payload for Day/Night Reconnaissance
 - h. Three (3) Fiber Optic payloads
 - i. Nine (9) Air Vehicle Rechargeable Batteries
 - j. Two (2) Battery Charger Assemblies that can charge two (2) Air Vehicle Batteries

- and GCS simultaneously, multi-voltage compatible
- k. Two (2) complete Lethality Package Payloads (Placement, Drop)
- l. Two (2) complete Distraction Device Packages (Placement, Drop)
- m. One (1) complete Inert Training Payload
- n. Rugged Cables
- o. Container Transport Unit for shipping and storage
- p. Tactical Carrying Cases
- q. Spares Parts Kit – propeller assemblies, motors, arms/wings, landing gear, charge leads
- r. New Equipment Training, Video Sustainment Training, Maintenance Manual, and Quick Reference Cards

Deliverables:

Base Contract: 24-month or less PoP – develop and deliver ten (10) ACQME-DK prototype kits with training.

Option 1: 9-month or less PoP – deliver up to an additional forty (40) ACQME-DK prototype kits with training for expanded OT&E and combat evaluations (eight CLINs of 5 prototype kits each)

Firm-fixed-price proposals are preferred with twenty-four (24) months or less base contract PoP, nine (9) month or less contract option PoP. Base Contract and options may be exercised concurrently by the Government.

Responses to this requirement should include proposed post-development end-unit ROM cost for follow on deliverables.

R5146 Surgical Anti-Material Munition for Signature On eNemy iNterdiction (SAMSON) – 338NM API for Mk22 PSR (SNIPER) & 338LMG-M (SUPPRESSION)

Increased Lethality and Survivability. The Surgical Anti-Material Munition for Signature on eNemy iNterdiction (SAMSON)-SNIPER project will develop a .338 Norma Magnum Armor Piercing Incendiary (API) round for the US ARMY Major Force Program (MFP) 2 Program of Record Mk22 Precision Sniper Rifle (PSR) capable of substantially exceeding the penetration & pyrophoric performance of currently fielded .50 Caliber Mk211 RAUFUSS ammunition. SAMSON-SNIPER will provide the ARMY and SOCOM a full capability replacement for the antiquated M107 / Mk15 special application sniper rifles in a more accurate, sustainable, and efficient platform (6 > 1.75 Minute of Angle (MOA) / 35 > 22 pounds / 57 > 49 inches; 12 > 0.5 Pounds per Square Inch (PSI) / 174 > 136 decibels at shooter’s ear) in preparation for overmatch of Great Power Adversaries equipped with armored vehicles and protected critical infrastructure. SAMSON-SUPPRESSION is a follow-on Option Phase to the effort, leveraging the developmental achievements of SAMSON-SNIPER & applying these to a cartridge ballistically matched to the Program of Record and purpose built for linked-employment by the 338NM Lightweight Machine Gun Medium (LMG-M) to achieve improved suppression of enemy targets.

SAMSON 338NM API submissions must include BOTH of the following capabilities, reflecting contract BASE & OPTION Development Efforts: SAMSON-SNIPER & SAMSON-SUPPRESSION.

SAMSON-SNIPER

1. Weapon System, Mk22 Precision Sniper Rifle (PSR)

- 1.1. Shall be standard cartridge projectile direct fire type. (T=O)
- 1.2. Shall be tested in barrels with a minimum of 200 rounds fired through them to achieve “break in” & prevent “velocity migration” as seen in new barrels. (T=O)
- 1.3. Shall meet or exceed thresholds when fired from a suppressed, 27” / 1:9.4” Twist Barrel on a Mk22 Barret MRAD Precision Sniper Rifle (PSR) Weapon System. (T=O)

2. Flight Ballistic Performance

- 2.1. Dispersion. Averaging five (5) iterations of five (5) round shot groups fired at 100 meters, SAMSON-SNIPER shall meet or exceed the following:
 - 2.1.1. Extreme Spread of 1.5 Minute of Angle (MOA) (T); 1.0 MOA. (O)
- 2.2. Projectile & Velocity. Averaging (3) iterations of ten (10) round shot groups, SAMSON-SNIPER shall:
 - 2.2.1. Demonstrate ballistic match to the M1162 Armor Piercing (AP) 300 Grain Program of Record Cartridge at 300m, 800m & 1200m. (T=O) ²
 - 2.2.1.1. Characteristics of M1162 as specified in Detailed Specification MIL-DTL-M1162 CARTRIDGE, CALIBER .338 Norma Magnum, Armor-Piercing (AP), M1162, as follows:
 - 2.2.1.1.1. Muzzle Velocity: 2750 FPS \pm 10 FPS
 - 2.2.1.1.2. Ballistic Coefficient, G7: 0.385
 - 2.2.2. Muzzle Velocity Standard Deviation (SD) shall not exceed 10 feet per second (FPS) (T); 4 FPS. (O)
 - 2.2.3. Ballistic Coefficient (BC) Variation shall not exceed 1.5% (T); 1%. (O)

3. Terminal Ballistic Performance

- 3.1. RAUFUSS Test. Shall fully penetrate 3/8” AR500 High Hardness Armor (HHA) Plate at 110 yards (T); 150 yards (O) \pm 3 yards from the muzzle of the test weapon at an angle of

² IWTSO TOS defines “ballistically matched” at specified ranges against specified cartridges to mean that center of shot group should not exceed height of human torso (36”) with no change in windage or dispersion of that group.

40 degrees to 45 degrees.³ (T=O)

3.2. Anti-Structure/ Ant-Vehicle. Shall be tested for consistency in penetration using one (1) ten (10) prototype round shot group at each distance of 300 meters, 800 meters, and 1,200 meters against the following barriers:

3.2.1. 3/8" AR500 HHA Equivalent, frame-braced 2' x 2' Panels. (T=O)

3.2.2. 8" x 16" Concrete Masonry Unit (CMU) block wall, stacked in 3x3 matrix. (T=O)

4. **Fragmentation Performance**

4.1. Upon impact normal to the surface (0 degrees) at 190 yards ± 10 yards, SAMSON shall break into a minimum of eight (8) penetrating fragments on witness panel over an average of ten (10) shots (T=O).⁴

4.2. Upon impact normal to the surface (0 degrees) at 800fps (T) / 400fps (O), SAMSON shall break into minimum of eight (8) penetrating fragments on witness panel over an average of ten (10) shots (T=O).

5. **Incendiary Performance**

5.1. Upon impact normal to the surface (0 degrees) at 190 yards ± 10 yards, the incendiary composition of SAMSON shall ignite and produce an incandescent flash within twenty-four (24) inches (T); six (6) inches (O) after penetrating the target panel over an average of ten (10) shots.⁵

5.2. Upon impact normal to the surface (0 degrees) at 800fps, the incendiary composition of SAMSON shall ignite and produce an incandescent flash within twenty-four (24) inches (T) after penetrating the target panel over an average of ten (10) shots. Upon impact normal to the surface (0 degrees) at 400fps the incendiary composition of SAMSON shall ignite and produce an incandescent flash within six (6) inches (O) after penetrating the target panel over an average of ten (10) shots.

6. **Safety and Maintenance**

6.1. All SAMSON shall be tested, following the procedures outlined in ANSI/SAAMI Z299.4 – 2015 (T); MIL-STD-1461E, MIL-STD-1168, MIL-STD-709D, and MIL-STD-636 specifications (O).

³ AR500 High Hardness Armor (HHA) Plate is defined as MIL-A-12560, Class 3, (341-388 Brinell Hardness Number) type steel with nominal thickness 0.417 inch ± 0.024 inch braced in a steel frame.

⁴ Witness panel is defined as 0.020 inches of aluminum 2024-T3, SAE-AMS-QQ-A-250 (ALCAN 26S, 1024 or equivalent) placed six (6) feet directly behind and parallel to the target plate.

⁵ Target Panel is defined as an AR500 HHA Plate described above.

- 6.2. Industry Partner shall support and provide all necessary information to the government required to obtain an Interim Hazard Classification (IHC) in accordance with NAVSEAINST 8020.8C/TO 11A-1-47 Department of Defense Ammunition and Explosives Hazard Classification Procedures to enable safe Continental United States (CONUS) and International Government shipment. (T=O)
- 6.3. Industry Partner shall submit to and successfully perform all tests required to achieve limited safety release (LSR) from a credited government safety lab IAW governing Reference Documents including Detailed Specification, MIL-DTL-M1162 CARTRIDGE, CALIBER .338 Norma Magnum, Armor-Piercing (AP), M1162, dated Day Month Year. As part of a DOD Engineer-directed Limited Safety Test Report (LSTR), SAMSON shall fulfill the following production, safety, and maintenance parameters unless otherwise noted: (T=O)

6.3.1. Supply Chain Compliance

- 6.3.1.1. Shall be produced in the United States and not reliant on any first-order ingredients from adversary countries as defined in the National Defense Strategy 2022. Any such reliance must be fully documented and mitigated in the Contract Risk Register by Industry Partner.
- 6.3.1.2. Shall be corrosion resistant.
- 6.3.1.3. Shall contain markings to include caliber, year of manufacture, and manufacturer identification.
- 6.3.1.4. Shall be packaged and shipped in industry-standard cartons marked with Industry Partner, OASD(SO/LIC), and IWTSD TOS logos.

6.3.2. Visual & Dimensional (V&D) Inspection.

- 6.3.2.1. Shall comply with LSR-mandated specifications across specified iterations of specified groups (Min/ Max/ Average) for:
- 6.3.2.1.1. Length, weight (projectile, powder, case, full cartridge, submerged), primer depth, bullet extraction force.

6.3.3. Pressure & Velocity (P&V) Inspection.

- 6.3.3.1. Shall comply with LSR-mandated specifications (Min/ Max/ Average) for the following measured in Cold (-25 °F); Ambient (70 °F); Hot (125 °F); and submerged (no less than twelve (12) inches of water for no less than ten (10) minutes):
- 6.3.3.1.1. Chamber Pressure IAW SAAMI Z299.4 (2015). Failures to meet specifications will be noted with additional risk mitigations measures

required by Industry Partner to achieve Limited Safety Release (LSR).

6.3.4. Function & Casualty (F&C) Inspection.

6.3.4.1. Shall comply with LSR-mandated specifications (Min/ Max/ Average) for the following measured in Cold (-25 °F); Ambient (70 °F); Hot (125 °F); and submerged (no less than twelve (12) inches of water for no less than ten (10) minutes):

6.3.4.1.1. Function Fire without stoppage. Failures to meet specifications will be noted with additional risk mitigations measures required by Industry Partner to achieve LSR.

6.3.4.2. Shall pass the forty (40') foot drop test.

6.3.4.3. Shall pass the "Jolt and Jumble" testing.

6.3.4.4. Shall pass the Muzzle and Drop Sensitivity testing.

6.3.4.5. Shall be loaded with reduced flash and temperature stable propellant.

6.3.4.6. Shall be loaded with a non-toxic primer. (O)

SAMSON SUPPRESSION

1. Weapon System, .338 Norma Magnum Lightweight Machine Gun Medium (LMG-M)

1.1. Shall be standard cartridge projectile direct fire type. (T=O)

1.2. Shall be tested in barrels that previously have a minimum of 200 rounds fired through them so they will be beyond break in/velocity migration, as seen in new barrels. (T=O)

1.3. Shall meet or exceed thresholds when fired in a linked-configuration from a suppressed, 24" / 1:8 Twist Barrel on a 338NM Lightweight Machine Gun- Medium Weapon System. (T=O)

2. Flight Ballistic Performance

2.1. Dispersion. Averaging five (5) iterations of five (5) round shot groups fired at 100 meters, SAMSON-SUPPRESSION shall have the following average:

2.1.1. Extreme Spread of 2.5 Minute of Angle (MOA) (T); 1.75 MOA. (O)

2.2. Projectile & Velocity. Averaging (3) iterations of ten (10) round shot groups, SAMSON-SUPPRESSION shall:

2.2.1. Demonstrate ballistic match to the M1214 Multi-Purpose (MP) 272 Grain Program of Record Cartridge at 300m, 800m & 1200m. (T=O) ⁶

2.2.1.1. Characteristics of M1214 as specified in Detailed Specification MIL-DTL-M1214 CARTRIDGE, CALIBER .338 Norma Magnum, Multi-Purpose (MP), M1214, dated 21 August 2023 are as follows:

2.2.1.1.1. Muzzle Velocity: 2650 FPS ± 50 FPS

2.2.1.1.2. Ballistic Coefficient, G7: 0.410

2.2.2. Have a Muzzle Velocity Standard Deviation 25 feet per second (FPS) (T); 10 FPS. (O)

2.2.3. Ballistic Coefficient (BC) Variation shall not exceed 2.5% (T); 1%. (O)

2.3. Rate of Fire. SAMSON-SUPPRESSION shall fire at the same rate of fire with equal to or less-than the same frequency of defects as the linked M1214 cartridge from the 338 LMG-M under the same Firing Defects Acceptance Criteria specified in MIL-DTL-M1214 Table VI.

3. Terminal Ballistic Performance

3.1. No change from SAMSON-SNIPER.

4. Fragmentation Performance

4.1. No change from SAMSON-SNIPER.

5. Incendiary Performance

5.1. No change from SAMSON-SNIPER.

6. Safety and Maintenance

6.1. No change from SAMSON-SNIPER, with the exception that SAMSON-SUPPRESSION Limited Safety Test Report (LSTR) shall be executed to the specifications laid out in Detailed Specification MIL-DTL-M1214 CARTRIDGE, CALIBER .338 Norma Magnum, Multi-Purpose (MP), M1214, dated 21 August 2023.

Deliverables:

Base Contract, develop SAMSON-SNIPER: Twelve (12) months or less Period of Performance (PoP) for Industry to develop, deliver 17,000 prototype rounds and provide New Equipment Training.

⁶ IWTS&D TOS defines “ballistically matched” at specified ranges against specified cartridges to mean that center of shot group should not exceed height of human torso (36”) with no change in windage or dispersion of that group.

Contract Options 1-4, deliver SAMSON-SNIPER: Six (6) months or less PoP for Industry deliver up to an additional ten thousand (10,000) prototype rounds and New Equipment Training for expanded OT&E (4 CLINs of 2,500 rounds each).

Contract Option 5, develop SAMSON-SUPPRESSION: Twelve (12) months or less PoP for Industry to develop, deliver 17,000 prototype rounds and New Equipment Training.

Contract Options 6-9, deliver SAMSON-SUPPRESSION: six (6) months or less PoP for Industry to deliver up to an additional ten thousand (10,000) prototype rounds and New Equipment Training for expanded OT&E (4 CLINs of 2,500 rounds each).

A firm-fixed-price proposal is preferred; twelve (12) months or less Base Contract PoP; six (6) months or less Contract Options PoP.

Responses to this requirement shall include a proposed post-development end-unit ROM cost.

R5148 Affordable Tactical Ballistics Field Lab (ATBFL)

Increased Lethality. ATBFL will enhance the lethality and precision of Special Operations Forces (SOF) and Conventional Forces in extreme long-range engagements by providing organic real-time ballistic data during live-fire training exercises and pre-combat checks (PCCs) in support of combat operations, improving effectiveness against Great Power Adversary targets.

SOF and Conventional Units require next-generation equipment to enhance their precision and accuracy in engaging targets at extreme distances. The ATBFL will provide an organic, portable ballistics measurement system to enable operators in the field the ability to rapidly and accurately capture critical ballistic performance data of their weapon systems. ATBFL will help ensure tactical operators can unilaterally test, verify, and as required modify and optimize their weapon systems for maximum performance before conducting real-world operations.

Marksmanship training programs and operational tactical units must achieve precision fires on targets extending from 300 to beyond 1500 meters, making accurate characterization of projectile flight essential for success at these extreme distances. However, current mission preparations for small arms long-range engagements rely on chronograph systems with limited capabilities, often supplemented by commercial-off-the-shelf (COTS) products, most often purchased at the operator's expense. To effectively counter evolving and emerging threats from Great Power Competitors, both SOF and Conventional Units require additional organic comprehensive ballistic data to ensure consistent long-range accuracy.

ATBFL's objective is to provide an affordable, compact and ruggedized kit of intuitive components designed to deliver essential data on ammunition performance. This includes chronograph metrics, projectile drag data (Standard "G" 1 and 7 ballistic coefficients), and ballistic coefficient standard deviation to support ballistic engine calibration, assess overall weapon system's capabilities/performance, maintain historical records, and determine when a barrel requires replacement. ATBFL will empower small tactical teams operating in Irregular

Warfare remote environments with real-time ballistic insights to help ensure their lethality in extreme long-range engagements.

Affordable Tactical Ballistics Field Lab (ATBFL) attributes and performance standards:

1. The ATBFL shall measure muzzle velocity within .1%, provide high velocity, low velocity, average velocity, extreme spread, and standard deviation (T=O).
 - a. Integrate a chronograph (equal to or superior in form, fit, and function to a Garmin Xero C1 Pro) with 1 additional back up chronograph for velocity measurement (T=O).
2. The ATBFL shall measure ballistic coefficient (G1/G7) and ballistic coefficient standard deviation (T=O).
3. The ATBFL shall measure Time of Flight (ToF) 5 decimal places e.g., 1.12345 seconds (T=O).
 - a. Ability to measure ToF from the muzzle to downrange 300m to 1,500m (T), 300m to 3,220m (O).
 - b. Muzzle start time instrument and downrange measuring instrument must communicate to provide ToF within 20 seconds of each shot (T=O).
 - c. Provide a laser range finder that can accurately measure range within 6 inches (T), 1 inch (O), to a minimum distance downrange of 300m (T=O).
4. The ATBFL shall provide an integrated ruggedized tablet or laptop with a touch screen that can be easily read in direct sunlight (T=O).
5. The ATBFL shall develop and provide software with software integration that will display user-friendly field data in simple form and store data for long term historical reference (T=O).
6. The ATBFL and all components shall provide organic power to run for 8 hours (T), 12 hours (O) before recharge or battery replacement is required.
7. The ATBFL shall provide a Kestrel 5700 Elite or equal environmentally integrated ballistic unit (T=O).
8. The ATBFL shall include an incremented measuring tape with no less than a 15 ft capability (T=O).
9. The ATBFL shall require a set up time not to exceed 20 minutes for a typical 300 m test on flat ground (T=O).

10. The ATBFL shall provide a quick set up guide (T=O).
11. The ATBFL shall include a ruggedized medium size tough case for storage and transportation. All ATBFL components and accessories shall fit within the medium sized tough case (T=O).

Deliverables:

Base Contract: Fifteen (15) or less month period of performance (PoP) – develop, deliver, and train twelve (12) ATBFL prototype kits for Operational Testing and Evaluation (OT&E).

Contract Options: Six (6) month or less PoP – deliver up to an additional twenty (20) ATBFL prototypes with training for expanded OT&E and combat evaluations. (5 CLINs of 4 prototype kits each)

Base Contract and Options will each be provided with New Equipment Training, Operations & Maintenance Manual, Quick Reference Card and Video Sustainment Training.

A firm-fixed-price proposal is preferred; fifteen (15) months or less base contract PoP; six (6) months or less contract options PoP.

Responses to this requirement should include proposed post-development end unit ROM cost.

R5149 Enhanced Precision Rifle Barrels (EPRB)

Increased Lethality and Survivability. Small Tactical Teams require next generation Enhanced Precision Rifle Barrels (EPRB) designed to withstand the chamber pressures and muzzle velocities associated with emerging advanced bullet technologies in .300 Norma Magnum and 6.8x51mm calibers. This necessitates the integration of innovative barrel designs, metal alloys, and coatings that will substantially increase the performance of existing DOD legacy barrels. The EPRB will help to provide tactical unit operators with immediate organic firepower superiority when conducting Irregular Warfare and large-scale combat operations.

EPRB will provide the next generation of substantially higher performing precision rifle barrel's capability to US Special Operations Forces (SOF), Army and Conventional Forces. The EPRB will significantly extend the Barret MK22 Advanced Sniper Rifle (ASR) & Precision Sniper Rifle (PSR) barrel service life by a minimum of 45%, reducing the need for frequent barrel replacements. These barrels will maintain current levels of sub-Minute of Angle (MOA) accuracy and a Ballistic Coefficient Standard Deviation (BCSD) of less than 1% over 2,000 rounds, ensuring consistent performance. EPRB will also enhance SOF snipers' accuracy and reliability through advanced metal alloys and updated groove designs capable of withstanding extreme chamber pressures and muzzle velocities from .300 Norma Magnum and 6.8x51mm cartridges. It will also improve sniper training, reduce maintenance demands, and help to ensure readiness. EPRB will strengthen the lethality and operational capability of SOF in the Great

Power Competition and in preparation for future conflicts that will follow against Peer Adversaries.

EPRB submissions shall feature the following system performance specifications:

Enhanced Precision Rifle Barrel (EPRB) System Performance Specification (SPS)

1. The EPRB shall be developed in .300 Norma Magnum (NM) and 6.8x51mm (T=O).
 - 1.1 .300 Norma Magnum ammunition shall be 215gr. OTM Program of Record (POR) ammunition. (T=O)
 - 1.2 6.8x51mm ammunition shall be 118gr. XM1186 POR ammunition / 6.8mm Match loadings. (T=O)
2. The EPRB shall be fully compatible and interoperable with the USSOCOM/ARMY PORs for The Barret MK 22 Multi-role Adaptive Design (MRAD) ASR & PSR weapon platform. (T=O)
3. The EPRB shall not exceed 1 Minute of Angle (MOA) (T), 0.5 MOA (O) at 100 meters after barrel is broken in, conditioned. Precision will be measured using a three (3) round x ten (10) round iteration Average Mean Radius (AMR) dispersion.
 - 3.1 The current MK22 .300 NM and 6.8x51mm weapon system and ammunition shall be tested for AMR in the fixed position every 200 rounds. When the AMR falls outside of the set parameter of one (1) MOA, the barrel will be considered “shot out”. (T=O)
 - 3.2 The EPRB barrel shall use the current MK22 .300 NM and 6.8x51mm weapon system, ammunition, and testing methodologies listed in 3 & 3.1. (T=O)
 - 3.3 The EPRB shall maintain ballistic performance and increase the barrel life of the currently fielded MK22 .300 NM and 6.8x51mm barrel by a minimum of forty-five (45) percent (T), one hundred (100) percent. (O)
 - 3.4 The EPRB Ballistic Coefficient Standard Deviation (BCSD) for the .300 NM and 6.8x51mm shall be one (1) percent or less during the entirety of the barrel life. (T=O)
 - 3.5 The EPRB shall test Velocity Migration (VM), Average Mean Radius (AMR), Extreme Spread (ES), and Point Of Impact (POI) shift over the life of the barrel. (T=O)

ERP: .300 Norma Magnum Barrel

1. The EPRB .300 Norma Magnum barrel weight shall not exceed a 20% increase in weight of the current barrel weight (T=O)
2. The EPRB .300 Norma Magnum barrel length shall be the same as the current fielded barrel, 26 in (T=O)

ERP: 6.8x51mm Barrel

1. The EPRB 6.8x51mm barrel weight shall not exceed a 20% increase in weight of the current barrel weight (T=O)

2. The EPRB 6.8×51mm barrel length shall be between 20-24 in (T=O)

ERP Safety and Ancillary Equipment

1. The barrel shall pass safety certification to include obstructed bore and proof testing. (T=O)
2. All tools necessary to conduct maintenance and end-user barrel change (T=O).

Deliverables:

1. Base Contract: 15-month or less Period of Performance (PoP)- Develop and deliver 12 EPRB Prototype Barrels (6 each .300NM & 6 each 6.8x51mm) for Developmental Testing (DT) & Operational Testing (OT).
2. Option 1: 3 month or less PoP - Deliver up to an addition 20 EPRB Prototype Barrels (10 each in .300NM & 10 each in 6.8×51mm) for Operational Testing & Evaluation (OT&E).
3. Option 2: 3 month or less PoP - Deliver up to an addition 20 EPRB Prototype Barrels (10 each in .300NM & 10 each in 6.8×51mm) for OT&E.
4. Option 3: 3 month or less PoP - Deliver up to an addition 20 EPRB Prototype Barrels (10 each in .300NM & 10 each in 6.8×51mm) for OT&E.
5. Option 4: 3 month or less PoP - Deliver up to an addition 20 EPRB Prototype Barrels (10 each in .300NM & 10 each in 6.8×51mm) for OT&E.

Firm-fixed-price proposals are preferred with fifteen (15) month or less base contract PoP, three (3) month or less contract option PoP. Base contract and options may be exercised concurrently by the Government.

Responses to this requirement should include a proposed post-development end-unit ROM cost for follow on deliverables.