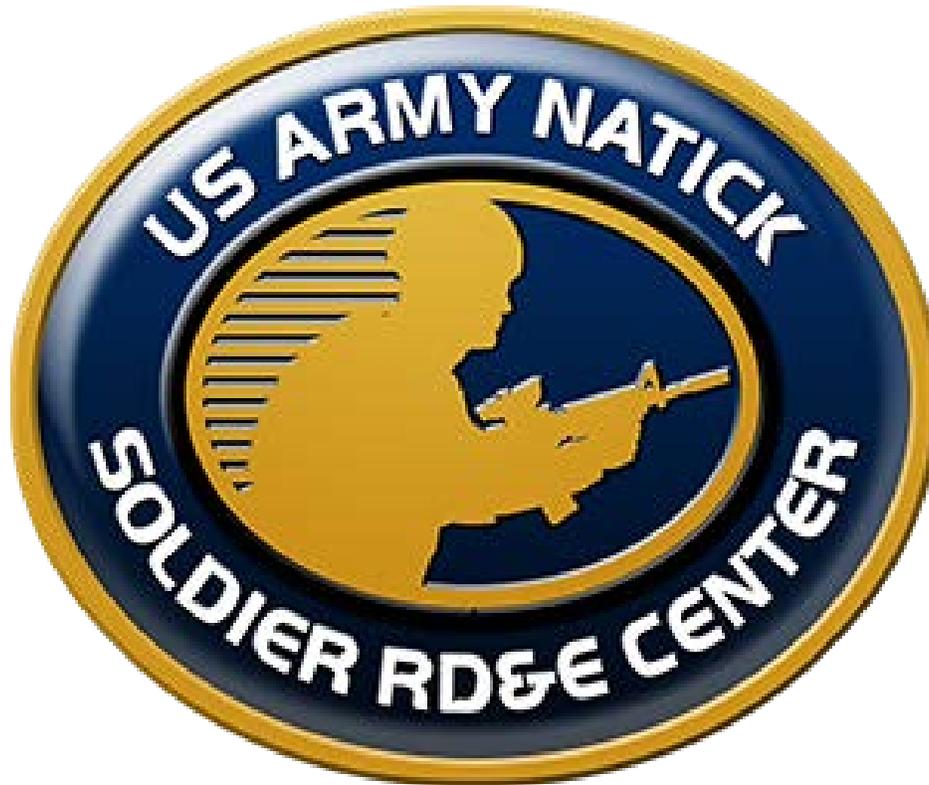


U.S. ARMY NATICK SOLDIER RESEARCH, DEVELOPMENT AND
ENGINEERING CENTER (NSRDEC)



BROAD OTHER TRANSACTION AUTHORITY ANNOUNCEMENT (BOTAA) FOR
NATICK SOLDIER RESEARCH, DEVELOPMENT AND ENGINEERING CENTER

NSRDEC-BOTAA 17-01

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I. INTRODUCTION:

The mission of the U.S. Army Natick Soldier Research, Development and Engineering Center (NSRDEC) is to “Maximize the Warfighter’s Survivability, Sustainability, Mobility, Combat Effectiveness and Field Quality of Life by Treating the Warfighter as a System.” Our focus is to deliver world class research, development, systems engineering, and services with a unique human-centric focus by:

- cultivating a highly motivated, expert, and agile workforce;
- exceeding customer and stakeholder expectations;
- delivering what we promise at an unprecedented pace and honoring our commitments;
- fostering long term strategic partnerships and collaborations with key customers, other Government agencies, industry and academia.

General information on NSRDEC can be obtained from the NSRDEC website at <http://www.nsrdec.army.mil/>.

Under the authority of 10 U.S.C. 2371b, NSRDEC seeks to award funding through Other Transaction Agreements (OTAs or Agreements) to non-traditional and traditional defense contractors for prototype projects within NSRDEC’s Areas of Interest. NSRDEC is interested in efforts directed toward the development of enabling technologies that speed up the advanced development process.

This **Broad Other Transaction Authority Announcement (BOTAA)** provides information, submission instructions, evaluation and selection criteria, and award administration.

How the process works:

- Offerors may submit preproposals against any area of interest listed in §IV. Additional areas of interest may be issued through a separate Request for Project Proposal. (Note: Guidelines for the requirements of a preproposal are listed in §III B 1.)
- Preproposals are reviewed by the Government.
- If there is interest, the Government will reply with a Request for Full Proposal (RFFP) within 60-90 days. (Note: The Guidelines for all required information needed for a full proposal is explained in §III B 2.)
- The offeror will prepare and submit the full proposal within the period of time stated in the RFFP. This is generally set at 30 days.
- Once received, the Government will evaluate the proposal.
- Discussions among the parties, whether verbally or in writing, will occur as appropriate.
- The Government will send an agreement to the offeror.
- Additional discussions will occur as necessary.
- Awards will be made after evaluation and selection of a successful proposal. (Note: Awards are dependent upon the availability of funds.)

II. DEFINITIONS:

ACCEPTABLE ACCOUNTING SYSTEMS REQUIREMENTS: Whenever an OT is awarded as a cost type agreement the accounting system must be capable of identifying direct costs to the agreements and equitably allocating indirect costs. The OT should typically utilize the company's existing accounting system and include cost principles and / or Cost Accounting Standards (CAS) only when a business unit is performing other work subject to these requirements.

AGENCY: Agency means any of the military departments or defense agencies with authority to award OTAs for prototype projects.

AGREEMENTS OFFICER: An Agreements Officer has authority to enter into, administer, or terminate OTs for prototype projects and make related determinations and findings.

DEVELOPMENT: The systematic use of scientific and technical knowledge in the design, development, testing, or evaluation of potential new products, processes, or services to meet specific performance requirements or objectives. It includes the functions of design engineering, prototyping, and engineering testing. Advanced development consists of activities that plan, produce and deliver information outputs (documents, data, and records) from discovery all the way through Phase 4 post-marketing studies and surveillance. The general phases of the lifecycle are discovery, preclinical, and clinical phases.

ENABLING TECHNOLOGIES: Technologies that are not countermeasure products or systems themselves but facilitate or accelerate the development of countermeasure products or systems. Examples of enabling technologies include combinatorial chemistry, high-throughput screening, microarrays, bioinformatics and computational biology, nanotechnologies, imaging (including biosensors and biomarkers), animal models, assays, and other product development tools.

HEALTH SURVEILLANCE: The ongoing, systematic collection, analysis, and interpretation of health-related data to detect and assess CBRN warfare risks in order to plan, implement, and evaluate prevention and intervention/response programs. Included are computational models, such as expert systems and predictive models.

IMPROVED LOGISTICS TRACKING: Technologies which facilitate tracking and monitoring individual product items throughout shipping, storage, delivery to, and use by the end user (factory to foxhole). Examples include technologies which facilitate or simplify supply chain management and/or shelf life extension, such as Time Temperature Indicators (TTI), Item Unique Identification (IUID), and Radio-Frequency Identification (RFID).

LIFE CYCLE BIOINFORMATICS: The systematic collection and analysis of data from all phases of research, development, manufacturing, and test and evaluation to enable informed decision making. Included are data obtained from preclinical studies, ensuring compliance with 21 Code of Federal Regulations (CFR) part 11.

NON-TRADITIONAL DEFENSE CONTRACTOR: as per 10 USC 2302(9) this is an entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by the Department of Defense for the procurement or transaction, any contract or subcontract for the Department of Defense that is subject to full coverage under the cost accounting standards prescribed pursuant to section 1502 of title 41 and the regulations implementing such section.

OTHER TRANSACTIONS FOR PROTOTYPES: The Department currently has authority under Section 2371b, of title 10, U.S.C., to award “other transactions” (OTs) in certain circumstances for prototype projects that are directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the Department of Defense, or to improvement of platforms, systems, components, or materials in use by the Armed Forces.

"OTHER TRANSACTIONS AGREEMENTS (OTA) for prototype projects": are acquisition instruments that generally are not subject to the federal laws and regulations governing procurement contracts. As such, they are not required to comply with the Federal Acquisition Regulation (FAR), its supplements, or laws limited in their applicability to procurement contracts. A prototype project can generally be described as a preliminary pilot, test, evaluation, demonstration, or agile development activity used to evaluate the technical or manufacturing feasibility or military utility of a particular technology, process, concept, end item, effect, or other discrete feature. Prototype projects may include systems, subsystems, components, materials, methodology, technology, or processes. By way of illustration, a prototype project may involve: a proof of concept; a pilot; a novel application of commercial technologies for defense purposes; a creation, design, development, demonstration of technical or operational utility; or combinations of the foregoing, related to a prototype. The quantity should generally be limited to that needed to prove technical or manufacturing feasibility or evaluate military utility.

III. OTHER TRANSACTIONS FOR PROTOTYPES:

A. GENERAL INFORMATION

The award of Prototype OTAs shall be for the development of prototypes in accordance with 10 U.S.C. 2371b for projects that are directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the Department of Defense, or to improvement of platforms, systems, components, or materials in use by the Armed Forces. A prototype project can generally be described as a preliminary pilot, test, evaluation, demonstration, or agile development activity used to evaluate the technical or manufacturing feasibility or military utility of a particular technology, process, concept, end item, effect, or other discrete feature.

The resultant award of any OTA using the procedures of this BOTAA are NOT made or issued under the provisions of the Competition in Contracting Act of 1984 (P.L. 98-369), FAR Part 6 or any other FAR based regulation. However, the information provided in this BOTAA is intended to ensure competitive procedures are used to the maximum extent practicable when entering into agreements to carry out these prototype projects.

Only a warranted Agreements Officer may obligate the U.S. Government to the expenditure of funds for awards under this Announcement.

The U.S. Government does not fund preparation of proposals or support work efforts or tasks that are inferred from discussions with technical project officers. The Offeror will not be reimbursed for any costs incurred prior to the effective date of the agreement.

There are certain post-employment restrictions on former Federal officers and employees as defined in 18 USC 207 and FAR 3.104-4(c). If an offeror believes a post-employment restriction or conflict of interest exists, notification should be sent to the Agreements Officer prior to initiating efforts on a full proposal.

Proposals may be disclosed outside of the U.S. Government subject matter experts for the sole purpose of technical and programmatic evaluation. The NSRDEC obtains a written agreement from the evaluators that information in the proposal will only be used for evaluation purposes and will not be further disclosed. Proposals for funded projects will be subject to public release under the Freedom of Information Act to the extent that they are incorporated into an award document; proposals that are not selected for funding will not be subject to public release.

The FOIA (5 USC 552) provides a statutory basis for public access to official U.S. Government records. "Records" are defined to include documentation received by the U.S. Government in connection with the transaction of public business. Certain types of information submitted to the Government in a process having the potential for award of an OT are exempt from disclosure requirements of 5 U.S.C. 552 (the Freedom of Information Act-FOIA) for a period of five (5) years from the date the Government receives the information. The types of information listed above may continue to be exempted, in whole or in part, from disclosure after the expiration of the five (5) year period if it falls within an exemption to the FOIA such as trade secrets and commercial or financial information obtained from a person and privileged or confidential. Offerors should mark business plans and technical information that are to be protected for five years from FOIA disclosure with a legend identifying the documents as being submitted on a confidential basis.

The Government is prohibited from soliciting and awarding actions to contractors that have engaged or are suspected to have engaged in criminal, fraudulent, or seriously improper conduct.

Prospective contractors shall complete electronic annual representations and certifications at SAM. By submission of an offer, the Offeror acknowledges the requirement that prospective awardees **MUST** be registered in the System for Award Management (SAM) database prior to submitting an invoice and through final payment of any contract resulting from this BOTAA Solicitation. Offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation. To remain registered in the SAM database after the initial registration, the Offeror is required to review and update on an annual basis from the date of initial registration (or subsequent updates) its information in the SAM database to ensure it is current, accurate and complete.

To facilitate communication on both scientific and administrative matters relating to this Announcement, a single email address may be used for all communication with NSRDEC. Please send all technical and administrative questions and inquiries to usarmy.natick.rdecom.mbx.ota-nsrdec@mail.mil

B. SUBMISSION PROCEDURES:

The NSRDEC contemplates the award of OTAs under this BOTAA in the following Areas of Interest and as stated in Section IV:

- a) Aerial Delivery Technology
- b) Expeditionary Maneuver and Support
- c) Combat Feeding Technology Objectives
- d) Soldier & Small Unit Protective Equipment & Mission Enhancement

NSRDEC may also issue a separate Request for Project Proposals (RPP) issued under this BOTAA for additional areas of interest.

This announcement of the NSRDEC's current interests, and any separate RPP, will be posted on the Federal Business Opportunity website (<http://www.fedbizopps.gov>) and Natick Contracting Division's website, (<http://www3.natick.army.mil/ssBOTAA.html>).

Generally, this announcement is continuously open; preliminary proposals (preproposals) may be submitted and will be evaluated for the general requirements of this BOTAA at any time throughout the year.

The availability of funds may limit the ability of the U.S. Government to make awards in specific areas, nevertheless preproposals are sought under this BOTAA for the Areas of Interest referenced above. See Section IV of this announcement for details.

This BOTAA is considered a competitive process. Preproposals will be submitted as detailed below. Those preproposals that are deemed to have merit may be invited to submit a full proposal. The Government will evaluate the proposals against the criteria in this announcement. The Government may engage in discussions to include during the development of the full proposal.

1. PREPROPOSALS: Preproposals should be no longer than three pages, and include a description of the relevant technology including supporting data, the scope of the proposed effort including a high-level Work Breakdown Structure (WBS), and a description of the proposer's research, development, manufacturing, past performance, or other special qualifications. The preproposal should indicate the Technology Readiness Level (TRL) level of the proposed prototype per the TRL level definitions found in Attachment 0001. The preproposal should also

include an anticipated cost for the efforts described in the preproposal. Preproposals shall be submitted to the following email address: usarmy.natick.rdecom.mbx.ota-nsrdec@mail.mil

Brochures or other descriptions of general organizational or individual capabilities will not be accepted as a preproposal. All preproposals will be assigned an identification number and an email will acknowledge receipt of a preproposal. Usually, the Project Manager of the submitting organization should receive a decision letter or email regarding the preproposal within 60-90 days of submission.

GENERAL FORMATTING GUIDELINES: Applications for all awards under this BOTAA shall be submitted electronically. All applications must be clear, legible, and conform to the following general formatting guidelines:

1. Elaborate proposals with high-gloss paper, vivid colors, detailed artwork, or other embellishments are unnecessary and not desired.
2. Paper: Pages shall be 8.5 x 11 inches, single sided, with each page numbered "X of Y pages."
3. Margins: Minimum of 1 inch on all sides.
4. Type Font: 12 point Times New Roman, single spaced.
5. Acronyms: Spell out all acronyms the first time they are used. One page of the proposal body is allocated to spell out acronyms, abbreviations and symbols.
6. Language: English.

7. Electronic file format: PDF, compatible with Adobe Acrobat Reader v. 11.0. File size less than 20 MB.

2. FULL PROPOSALS: If a preproposal submitted in response to this BOTAA is accepted by the U.S. Government, a Request for Full Proposal (RFFP) will be sent to the organization submitting the preproposal. The following is general guidance as to the scope of the proposal for an Agreement.

PROPOSAL GUIDELINES:

a. Cover Page (1 page) “Proposal for Prototype OTA”:

1. BOTAA number
2. Name of Lead Organization submitting proposal including Commercial and Government Entity code (CAGE) and Data Universal Number (DUNS).
3. Type of business, selected among the following categories: “Large Business,” “Small Disadvantaged Business,” “Other Small Business,” “HBCU,” “MI,” “Other Educational,” or “Other Nonprofit”
4. Contractor’s reference number (if any)
5. Proposal Title
6. Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), and electronic mail address (if available)
7. Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), and electronic mail address (if available)
8. Date proposal was submitted

b. Technical Section (20 pages)

1. Acronyms, Abbreviations, and Symbols
2. Project objective. Describe the prototype and what will be accomplished if the U.S. Government funds the proposal. Describe how it fulfills an area of interest described by this Announcement.
3. Background data. Include, for example, data supporting the safety and efficacy of the proposed technology, the validity of models used to test and evaluate the technology, and Offeror compliance with GLP, current Good Manufacturing Practices (cGMP), and/or Good Clinical Practices (GCP) compliance, as appropriate.
4. Proposed technical approach. Describe in a comprehensive manner the technical approach proposed to accomplish the project objective. Describe the proposed technical approach in sufficient detail so that the U.S. Government may determine that the proposed approach is of acceptable risk.
5. The proposal shall indicate at which Technology Readiness Level (TRL) the proposal will be at per the attached TRL level descriptions.

c. Project Management Section (20 pages).

1. Statement of Work (SOW). The Offeror shall submit a statement of work that formally captures and defines the work activities, deliverables, and timeline, for the prime contractor and any subcontractors, necessary to execute performance or development of the prototype. The SOW should include detailed requirements with standard regulatory and governance terms and conditions to sufficiently conceptually overlap with the contract.
2. WBS and WBS dictionary. The offeror may submit a Work Breakdown Structure (WBS) and use extended WBS elements as needed to define the contract scope and to accurately describe the proposed effort. The WBS should correlate with the SOW and Agreement Line Items (ALINs).

3. Integrated Master Schedule (IMS). (Optional) The IMS should document the critical path, major milestones, tasks/activities, duration, lead/lag/slack time, and schedule relationships. The IMS should be directly traceable to the SOW, ALINs, and the WBS. The IMS is intended to be used as a tool for day to day tracking of the program/project. Tasks/activities should roll-up to increasingly higher summary levels. All tasks/activities in the IMS should be logically linked together showing predecessor/successor relationships. The tasks/activities should be sufficient to account for the entire program/project under contract. Dates delineated in the IMS would become legally binding, and will be adjusted accordingly, based on actual award date. The IMS should be submitted electronically in "Read Only" format that shows all formulas and links for review. The data file shall be in the native format of the commercially off the shelf software.
4. Project Management Approach. The approach to managing and integrating the various aspects of the required work shall be described in sufficient detail so that the U.S. Government may assess associated risks. The Offeror shall identify significant milestones, decision points, and the processes that will be used to evaluate program status and progress. The Offeror shall include a description of any functional oversight. The Offeror shall present mechanisms for interactions/communications between Program Management and the U.S. Government, to include how processes will be updated (e.g., managing and interfacing with key Subcontractors and the U.S. Government). The Offeror shall include a description of management relationships or techniques that will be used to supplement day-to-day processes and procedures.
5. Risk Management Plan. The Offeror shall identify potential risks and describe the implementation of an integrated and proactive risk management plan as part of an overall management scheme (e.g., risk planning, risk assessment, risk handling, risk monitoring and documentation). The risk management plan shall discuss integrated methods for identifying, analyzing, prioritizing, and tracking risk drivers and include plans for adequate resources for risk mitigation. The Offeror shall describe tools or methodologies used in the integrated risk management and risk assessment processes.

d. Past Performance Section (10 pages).

Information shall be provided for all proposed first-tier subcontractors with whom the Offeror is teaming as well as the Offeror. The Offeror shall list ongoing and previous U.S. Government and commercial contracts held during the past three years, which are relevant and demonstrate ability to perform the effort required by the proposal. The Offeror shall explain the relevance of previous efforts with respect to the effort described in the proposal. The Government may send Past Performance questionnaires to Reference(s) listed. For that reason, the offeror must provide current contact information of all references listed in this section, to include: POC name, address, phone number, fax number and email address. Offerors shall provide notification to the Government pertaining to all contracts with commercial or Government entities that have been terminated for default in whole or in part, for any reason, during the past two years.

e. Cost or Pricing Section.

1. Proposals may be submitted on a firm fixed price basis. If during evaluation, or at any time prior to award, the Government determines that a firm fixed priced based agreement is not suitable for the particular effort, the parties will negotiate a cost based arrangement. At such time, cost proposal requirements will be provided to the Offeror by the Government.
2. If Offeror's proposal is submitted in response to a particular Request for Project Proposals (RPP), all pricing shall be in accordance with the pricing template attached to that RPP.
3. If Offeror's proposal is submitted as a cost reimbursement in response to this Announcement and not in response to a particular RPP, all pricing shall be submitted on a separate Price Proposal in a "Read Only" Microsoft Excel file, showing all formulas and links. The depth and breadth of the cost proposal shall be determined based on the complexity of the requirement. Instructions for submission shall be provided in the RFFP.

f. Security Requirements. Although not to be evaluated, the Offeror shall identify existing or describe capability of obtaining personnel/facilities security clearances. DoD security management and handling requirements outlined in regulations such as DoD 5200.1-R and DoD 5400.7-R apply to prototype other transactions.

g. Key personnel qualifications. The proposal shall include a Curriculum Vitae (CV) and bibliographic data for the Program Manager and other Key Personnel such as Directors (or equivalent) of Regulatory Affairs, Quality Assurance/Quality Control (QA/QC), Manufacturing, and Risk Management detailing their qualifications to perform the work. If the Offeror does not presently employ Personnel in the positions identified as Key, the Offeror must present a description of the terms of the commitment(s). The Offeror shall provide technical, regulatory, and management staffing plans, specifically addressing vacancies and maintaining Key Personnel. The Offeror shall also provide the CVs and/or resumes and list proposed duties of key subcontractor personnel and consultants (if any) who are proposed for this effort. The Offeror shall provide specific details of all assigned personnel explaining their appropriateness, scientific qualifications, depth and breadth of expertise and credentials relative to the projects. The Offeror shall describe the proposed labor hours and labor categories relating to the performance of the SOW of Key Personnel.

h. Subcontractor Management. The Offeror shall propose a subcontracting management approach to include analysis of subcontractor selection (i.e. list selection criteria), choice of subcontract types, and the plan for incentivizing contractors and assuring subcontractors meet cost, schedule, and performance requirements. The Offeror shall describe how subcontract competition will be sought, promoted, and sustained throughout the course of the cost reimbursement component of the acquisition, identify any known barriers to increasing subcontract competition and how to overcome any such barriers. Prior to Agreement execution, the Offeror shall submit with its proposal the first tier subcontractors' letter(s) of consent allowing the Government to disclose the subcontractors' past performance to the Offeror during negotiations.

i. Company Financial Statements. Offerors shall provide copies of their annual financial statements for the last three years.

j. Research Involving Animals. Awards funded by the NSRDEC require a second tier review for the use of animals prior to implementation. Therefore, the Project Manager must address all pertinent issues relating to the use of animals in the proposed work effort. Include the required assurances, approvals, forms and description in the proposal addenda entitled “Research Involving Animals,” as specified on the Animal Care and Use Review Office (ACURO)

website:https://mrmc.amedd.army.mil/index.cfm?pageid=research_protections.acuro.

Projects performed under NSRDEC sponsorship that generate preclinical safety data intended to support a research or marketing permit for products regulated by the FDA must be in conformance with GLP. Full proposals may be submitted without protocols for animal use; however, protocols and required institution approvals must be submitted not later than 60 days after award to ensure continuation of payments. The contracting office may grant exceptions in situations where animal use is not expected to occur until after the first year of the project. In such cases, Page 43 of 46 a time frame for submission of the appropriate protocols should be established during discussion/negotiations.

k. Reports / Meetings / Knowledge Dissemination: Reports are necessary for continuation of funding. Each request for full proposal will state the necessary reports that will be required. The Offeror must price all reports and deliverables.

l. Miscellaneous: Any other documentation that may be requested by the U.S. Government in a Request for Project Proposals (RPP).

C. EVALUATION FACTORS FOR PROTOTYPE AGREEMENTS:

Proposals may be submitted in response to this Announcement or separate Request for Project Proposals for particular requirements.

Full proposals will be evaluated by NSRDEC scientists, other Federal Agency Representatives, outside scientists with diverse expertise, clinicians, consumers, or combinations thereof will evaluate proposals. At a minimum, the following will be considerations during the evaluation (in no particular order):

a. Technical Merit: The proposed plans, methods, techniques, and procedures must be feasible, clear, valid, adequately referenced, and state-of-the-art. The proposed schedule must be reasonable. Literature searches are recommended for documenting the strengths of the proposed project.

b. Military and Program Relevance: Projects must be directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the Department of Defense, or to improvement of platforms, systems, components, or materials in use by the armed forces.

1. **Funds Availability:** NSRDEC must have funds available to support the proposed work.
2. **Technology Readiness Level (TRL):** The technology proposed shall indicate at which TRL level the technology is at currently. See attached for a full description of the TRL levels.
3. **Project Objectives:** The stated objectives must be clear, valid and logical. Projects that demonstrate an innovative approach are desired.
4. **Regulatory compliance.** The proposal will be evaluated for compliance with FDA guidelines for current cGMP, GLP, and GCP.
5. **Support of other U.S. Government requirements.** The proposal will be evaluated for alignment with, and ensure no unnecessary duplication of, NSRDEC or other DoD requirements.
6. **Key Personnel Qualifications:** Document the qualifications, capabilities and experience of the proposed Project Manager and other key personnel in sufficient details to demonstrate that the proposed staff has the knowledge and skills to achieve the proposed objectives.
7. **Facilities:** Describe the proposed facilities and equipment, or unique combinations of these, in detail to demonstrate that the organization has, or may access, the necessary facilities required for the accomplishing the proposed objectives.
8. **Budget/Cost:** The budget must reflect the actual needs of the proposed work and be fully justified so that the U.S. Government can evaluate and determine the cost to be fair and reasonable and commensurate with the complexity and nature of the work proposed.

9. **Best value:** Contract award will be made to that Offeror whose proposal offers the best overall value to the Government based on an integrated assessment of the non-cost and cost related factors.

10. **Past Performance:** Documented satisfactory performance record. In the case of an offeror without a record of relevant past performance or for whom information on past performance is not available, the offeror may not be evaluated favorably or unfavorably on past performance.

D. SELECTION FOR AWARD OF PROTOTYPE AGREEMENTS: Any proposal received may be negotiated. After the NSRDEC evaluation and selection, an award will be made to the successful proposal. Subsequent awards depend upon the availability of funds and fulfillment of requirements and priorities determined to exist at the time of award. In some cases, funding priorities may change as certain scientific tasks are addressed and new mission assignments arise. Award may also be dependent upon demonstration by the offeror that they have adequately addressed the following requirements, if applicable to the efforts being proposed:

- a. Research involving Human Subjects / Anatomical Substances (if proposed).
- b. Research involving Animals (if proposed).
- c. Facility Safety Plan.
- d. Certificate of Environmental Compliance.
- e. Evidence of GLP Compliance (if appropriate).
- f. Evidence of cGMP Compliance (if appropriate).
- g. Evidence of GCP Compliance (if appropriate).
- h. All required Representations and Certifications are completed and on file.

E. AWARD ADMINISTRATION:

ELIGIBILITY: To receive an award, one of the following must be present:

- Significant participation by non-traditional defense companies; or
- One-third cost share of the total agreed-upon price unless an exception under section 2371b(d)(1) applies.

PAYMENT: Payment process and terms will be set forth in any resultant agreement.

AUDITS AND COST PRINCIPLES:

1. Agreements will require that adequate records be maintained to account for federal funds received and cost-sharing, if any.
2. Section 801 of the National Defense Authorization Act for Fiscal Year 2000 establishes a requirement that an OT for a prototype project that provides for payments in a total amount in excess of \$5,000,000 include a clause that provides Comptroller General access to records. Because this is a mandatory requirement that has a substantial impact on the public, the Interim Rule implementing this law was published in the Federal Register, became effective July 5, 2000, is codified in Part 3 of Section 32 of the Code of Federal Regulations, Subtitle A, Chapter I, and is attached as Appendix 4. Section 804 of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 provides clarification that limits access in certain situations.

IV. NSRDEC AREAS OF INTEREST AND TECHNICAL POINTS OF CONTACT:

A. Aerial Delivery Technology: To develop, demonstrate, and transition technologies that improve safety, durability, reliability, payload capacity, accuracy, speed, effectiveness, or survivability of personnel and cargo aerial delivery systems and reduce the manpower, fuel, time, cost, weight, volume, environmental footprint, or logistics footprint associated with sustaining the Warfighter through aerial delivery. Applicable areas of interest include, but are not limited to technologies or materials that: provide aerial delivery capabilities up to 80K payload; rapidly rig and de-rig airdrop systems; reduce or prevent injuries or other harm to parachutists; minimize delivery system signatures in air and/or on the ground; promote degradable disposal of parachutes and improve extraction/exfiltration systems, integration with GOTS communication systems, precision guidance systems, oxygen supply systems, delivery platforms, Para foils, parachute systems, parachute automatic opening devices and other auxiliary systems, Helicopter Sling Load (HSL), and External Airlift Transportation (EAT). Research and development of technologies that are directly relevant to weapon systems proposed to be utilized by the DOD are encouraged.

Aerial Delivery POCs:

Ms. Allison Griffin, TEL: 508-233-4495 allison.k.griffin4.civ@mail.mil

B. Expeditionary Maneuver and Support: To develop, demonstrate, and transition technologies that reduce or improve the energy, manpower, water, fuel, solid waste, packaging, cost, weight, volume, environmental footprint, or logistics footprint associated with sustaining and protecting the Small Unit. Applicable areas of interest include, but are not limited to technologies or materials integrated into shelter systems that: reduce fuel and water requirements, reduce and safely dispose of solid waste; convert waste to energy; reduce energy consumption for environmental control and lighting. Also to reduce expeditionary base camp detection signatures; or improve protection of expeditionary base camps from environmental hazards and threats from ballistic/blast, Chemical/biological events, and electromagnetic interference/electromagnetic pulses, materials to improve strength and integrity of shelter systems; enable rapid deployment or self-erecting shelters; or reduce manpower required for systems set-up, operation and maintenance. Research and development of technologies that are directly relevant to weapon systems proposed to be utilized by the DoD are encouraged.

Expeditionary Maneuver POC:

Ms. Ariana Costa, TEL 508-233-4566, Ariana.n.Costa.civ@mail.mil

C. Combat Feeding Technology Objectives: To develop, demonstrate, and transition technologies that improve safety, suitability, reliability, or effectiveness of the nutrition, production, packaging, storage, preservation, sanitation, transportation, distribution, or preparation of sustenance for the military services across all operational scenarios. Also, to develop, demonstrate, and transition technologies that reduce the energy, manpower, water, fuel, solid waste, packaging, cost, weight, volume, or logistics footprint associated with ration and equipment technologies that provide sustenance to the military services across all operational scenarios.

Combat Feeding POC:

Ms. Sarah Cheney 508-233-4501, Sarah.I.Cheney.civ@mail.mil

D. Soldier & Small Unit Protective Equipment & Mission Enhancement: To develop, demonstrate, and transition technologies that protect or enhance the mission effectiveness of the Soldier & Small Unit. Applicable areas of interest include, but are not limited to ballistic & modular personal Protective equipment, wearable devices designed to augment Soldier performance (e.g., reduce metabolic cost of load carriage, enhance mobility, increase strength, etc.). Chemical/biological protective equipment, flame and thermal protection, Biological sensors and Power and data management solutions. Research and development of technologies that are directly relevant to weapon systems proposed to be utilized by the DoD are encouraged

Soldier & Small Unit Protective Equipment & Mission Enhancement POC:
Adin Morales, TEL: 508-233-6130, adin.e.morales.civ@mail.mil

V. ATTACHMENTS AND APPENDICES:

ATTACHMENT 0001 Technology Readiness Level Definitions

Technology Readiness Level Definitions

TRL	Definition	Hardware Description	Software Description	Exit Criteria
1	Basic principles observed and reported.	Scientific knowledge generated underpinning hardware technology concepts/applications.	Scientific knowledge generated underpinning basic properties of software architecture and mathematical formulation.	Peer reviewed publication of research underlying the proposed concept/application.
2	Technology concept and/or application formulated.	Invention begins, practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture.	Practical application is identified but is speculative, no experimental proof or detailed analysis is available to support the conjecture. Basic properties of algorithms, representations and concepts defined. Basic principles coded. Experiments performed with synthetic data.	Documented description of the application/concept that addresses feasibility and benefit.
3	Analytical and experimental critical function and/or characteristic proof of concept.	Analytical studies place the technology in an appropriate context and laboratory demonstrations, modeling and simulation validate analytical prediction.	Development of limited functionality to validate critical properties and predictions using non-integrated software components.	Documented analytical/experimental results validating predictions of key parameters.
4	Component and/or breadboard validation in laboratory environment.	A low fidelity system/component breadboard is built and operated to demonstrate basic functionality and critical test environments, and associated performance predictions are defined relative to the final operating environment.	Key, functionally critical, software components are integrated, and functionally validated, to establish interoperability and begin architecture development. Relevant Environments defined and performance in this environment predicted.	Documented test performance demonstrating agreement with analytical predictions. Documented definition of relevant environment.
5	Component and/or breadboard validation in relevant environment.	A medium fidelity system/component brassboard is built and operated to demonstrate overall performance in a simulated operational environment with realistic support elements that demonstrates overall performance in critical areas. Performance predictions are made for subsequent development phases.	End-to-end software elements implemented and interfaced with existing systems/simulations conforming to target environment. End-to-end software system, tested in relevant environment, meeting predicted performance. Operational environment performance predicted. Prototype implementations developed.	Documented test performance demonstrating agreement with analytical predictions. Documented definition of scaling requirements.
6	System/sub-system model or prototype demonstration in an operational environment.	A high fidelity system/component prototype that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate operations under critical environmental conditions.	Prototype implementations of the software demonstrated on full-scale realistic problems. Partially integrate with existing hardware/software systems. Limited documentation available. Engineering feasibility fully demonstrated.	Documented test performance demonstrating agreement with analytical predictions.
7	System prototype demonstration in an operational environment.	A high fidelity engineering unit that adequately addresses all critical scaling issues is built and operated in a relevant environment to demonstrate performance in the actual operational environment and platform (ground, airborne, or space).	Prototype software exists having all key functionality available for demonstration and test. Well integrated with operational hardware/software systems demonstrating operational feasibility. Most software bugs removed. Limited documentation available.	Documented test performance demonstrating agreement with analytical predictions.
8	Actual system completed and "flight qualified" through test and demonstration.	The final product in its final configuration is successfully demonstrated through test and analysis for its intended operational environment and platform (ground, airborne, or space).	All software has been thoroughly debugged and fully integrated with all operational hardware and software systems. All user documentation, training documentation, and maintenance documentation completed. All functionality successfully demonstrated in simulated operational scenarios. Verification and Validation (V&V) completed.	Documented test performance verifying analytical predictions.
9	Actual system flight proven through successful mission operations.	The final product is successfully operated in an actual mission.	All software has been thoroughly debugged and fully integrated with all operational hardware/software systems. All documentation has been completed. Sustaining software engineering support is in place. System has been successfully operated in the operational environment.	Documented mission operational results.