

Broad Agency Announcement

Targeted Neuroplasticity Training (TNT)

BIOLOGICAL TECHNOLOGIES OFFICE

DARPA-BAA-16-24

4-1-2016

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PART I: OVERVIEW INFORMATION

- Federal Agency Name Defense Advanced Research Projects Agency (DARPA), Biological Technologies Office
- Funding Opportunity Title Targeted Neuroplasticity Training (TNT)
- Announcement Type Initial Announcement
- Funding Opportunity Number DARPA-BAA-16-24
- Catalog of Federal Domestic Assistance Numbers (CFDA) 12.910 Research and Technology Development
- Dates
- o Posting Date: April 1, 2016
- o **Proposal Due Date:** June 2, 2016, 4:00 PM ET
- o **Proposers' Day:** April 8, 2016

https://www.fbo.gov/spg/ODA/DARPA/CMO/DARPA-SN-16-20/listing.html

- Concise description of the funding opportunity DARPA seeks innovative proposals to develop technology for enhancing cognitive skill learning in healthy adults by using noninvasive peripheral neurostimulation to promote synaptic plasticity in the brain. The Targeted Neuroplasticity Training (TNT) program will elucidate the anatomical and functional map of the underlying neural circuity involved in regulating synaptic plasticity. The program seeks to demonstrate peripheral modulation of the neural circuit, connect neuroplasticity with cognitive improvements, and optimize intervention protocols for long term retention with no side effects.
- Anticipated individual awards Multiple awards are anticipated.
- Anticipated funding type 6.2
- **Types of instruments that may be awarded** Procurement contracts, cooperative agreements, and other transactions are the preferred instrument types, though grants may be awarded at the Contracting Officer's discretion.
- Any cost sharing requirements None
- Agency contact

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PART II: FULL TEXT OF ANNOUNCEMENT

1. Funding Opportunity Description

The Defense Advanced Research Projects Agency (DARPA) often selects its research efforts through the Broad Agency Announcement (BAA) process. This BAA is being issued, and any resultant selection will be made, using procedures under Federal Acquisition Regulation (FAR) 35.016 and the Department of Defense Grant and Agreement Regulatory System (DoDGARS) Part 22 for Grants and Cooperative Agreements. Any negotiations and/or awards will use procedures under FAR 15.4, Contract Pricing, as specified in the BAA (including DoDGARS Part 22 for Grants and Cooperative Agreements). Proposals received as a result of this BAA shall be evaluated in accordance with evaluation criteria specified herein through a scientific review process. DARPA BAAs are posted on the Federal Business Opportunities (FedBizOpps) website, https://www.fbo.gov/, and, as applicable, the Grants.gov website at https://www.grants.gov/. The following information is for those wishing to respond to the BAA.

Service members are required to learn a variety of specialized skills that require sharp perceptual acuity, rapid and accurate judgment, and effective planning and execution of complex actions. Many of these skills, such as understanding and speaking a new foreign language, can be challenging to learn. Current training programs are time consuming, require intense study, and usually involve a minimum aptitude for eligibility. Thus, improving cognitive skill learning in healthy adults is of great interest to our national security. To address this challenge, DARPA is pursuing the advancement of technology to enhance learning through an approach called Targeted Neuroplasticity Training (TNT), which uses peripheral neurostimulation to selectively promote synaptic plasticity in the brain. TNT will develop a platform technology to enhance learning of a wide range of cognitive skills.

The DARPA TNT program seeks innovative proposals to combine noninvasive peripheral neurostimulation with training paradigms to modulate neuroplasticity for enhancing cognitive skill learning in healthy adults. To develop this capability, the TNT program will focus on identifying and understanding the function of peripheral neurostimulation on the central nervous system circuits that regulate plasticity in the brain. This knowledge will guide selection of peripheral nerve target sites and stimulation parameters to yield maximal learning enhancement while minimizing side effects.

1.1. PROGRAM OVERVIEW

The human brain is capable of integrating intricate and diverse inputs from multiple sensory systems simultaneously in order to rapidly comprehend and assess the information for planning and execution of complex actions. These and other cognitive functions are performed by the vastly interconnected neural networks formed by the roughly 100 billion neurons of the brain. The precise patterns of connectivity among neurons within these networks determines their function, and through experience, these connectivity patterns change over time to enable acquisition of new skills. Indeed, one of the most impressive aspects of brain function is the ability to learn new cognitive skills, such as the ability to understand and speak a foreign language. During learning,

connections between neurons change through a process known as synaptic plasticity, which plays a pivotal role in learning.

While traditional learning brings about changes in neural networks through experience, synaptic plasticity can also be enhanced by activating neuromodulatory regions in the brain via peripheral neurostimulation. This program seeks to use peripheral neurostimulation to facilitate the release of neurotransmitters associated with components of learning, such as acetylcholine, dopamine, serotonin, and norepinephrine. By combining peripheral neurostimulation with conventional training practices, we can leverage endogenous neuronal circuitry to enhance learning by accelerating the tuning of neural networks responsible for cognitive functions.

Recent success with this approach has been demonstrated in clinical rehabilitation studies, utilizing peripheral neurostimulation delivered through implanted electrodes. However, while invasive approaches may be justified for treating people with medical conditions, noninvasive methods are preferred for use in healthy individuals. The TNT program is specifically focused on using noninvasive peripheral neurostimulation to enhance learning in healthy individuals. While the physiological mechanisms underlying noninvasive peripheral neurostimulation and downstream effects on central nervous system (CNS) activity are not well understood, clinical trials have demonstrated modest benefits with noninvasive peripheral neurostimulation as a treatment for epilepsy, depression, anxiety, tinnitus, and pain.

The TNT program will explore and develop peripheral neurostimulation methods and noninvasive devices that boost learning by promoting synaptic plasticity in the brain. Since synaptic plasticity is a universal learning mechanism, it is anticipated that the targeted neuroplasticity intervention will be broadly applicable to a variety of cognitive skills.

1.1.1. Objectives

The research objectives of the TNT program are as follows: 1) elucidate the anatomical and functional map(s) of the peripheral and central nervous system circuitry that regulates synaptic plasticity in the brain; 2) demonstrate effects of peripheral neurostimulation on cognitive skills and the brain activity supporting those skills; and 3) optimize noninvasive stimulation methods and training protocols for long-term retention without negative side effects.

1.1.2. Scope

To develop capabilities for enhancing plasticity and cognitive skill learning, research in the TNT program will focus on two Technical Areas (TA): TA1) Biological Foundations for Targeted Neuroplasticity Training; and TA2) Targeted Neuroplasticity Training Applications for Humans. Integration of both TAs is essential to achieve the program's goal of creating human-ready systems.

Proposers are required to respond to both technical areas in full.

Cognition encompasses a broad range of brain functions. Cognitive skills of interest to TNT include, but are not limited to, sensory perception, comprehension, decision-making, motor intent. Work aimed at enhancing general memory functions is out of scope.

Proposers are expected to address multiple cognitive skills and are encouraged to tie proposed skills to specific Department of Defense (DoD) use cases, such as foreign language learning, intelligence analysis, tactical operation center control, and cryptography. Proposers should incorporate standardized training protocols and evaluation metrics when possible, and proposers should strive for consistency across TA1 and TA2 studies. Proposers should address how proposed tasks relate to the real-world tasks within specific DoD use cases. Specifically, proposers should assess the similarity between proposed task and real-world task environment, stimuli, and response mechanisms. By the end of the program, performers will be expected to demonstrate that the proposed targeted neuroplasticity training applications yield learning rates and/or skill performance that are at least 30% greater than a control group without peripheral neurostimulation.

Proposers should develop research plans that measure learning-induced neurophysiological changes in brain areas that support perception, comprehension, decision-making, and motor control. Behavioral experiments should be designed to directly and quantitatively assess improvements in each of these cognitive skills during learning tasks and to quantify the effects of peripheral neurostimulation on learning rates. Specific peripheral neurostimulation site(s) should be identified along with the known or hypothesized effects on neuromodulatory circuits in the brain. The TNT program is only interested in approaches based on peripheral neurostimulation, excluding all forms of transcranial stimulation (e.g., tDCS, tACS, tRNS, TMS, etc.).

Potential side effects should be identified within the proposal. Proposers should include research plans to assess and mitigate these side effects within the program

In Technical Area 1 (TA1), teams will perform hypothesis-driven research to measure and demonstrate effects of peripheral neurostimulation in promoting plasticity, and assess quantitative changes in neurophysiology and behavior. Established behaving animal models should be used to precisely determine how neurostimulation influences learning and how changes in neural activity affect cognitive functions. DARPA encourages studies that will record activity in large neural populations at single neuron resolution across multiple brain regions simultaneously for extended periods of time. The role of peripheral neurostimulation in promoting plasticity should be validated, such as through the use of neurochemical sensors to measure local neuromodulatory chemical release *in vivo*. The changes in neural activity as they relate to induced neuroplasticity and behavior should be assessed, such as through the analysis and modeling of local neuralnetwork function. Such rigorous and comprehensive studies of brain activity are necessary to understand the effects of peripheral neurostimulation in promoting neuroplasticity and to fully explore the large parameter space for delivering stimulation. This knowledge will guide the selection of optimal peripheral target sites and stimulation parameters for promoting neuroplasticity with minimal negative side effects.

In Technical Area 2 (TA2), teams will develop, demonstrate, and validate cognitive-skill training applications for humans that leverage noninvasive peripheral neurostimulation to promote synaptic plasticity. Experiments and training methods should be designed to address each of the proposed cognitive skills to achieve a thorough understanding of the effects of targeted neuroplasticity training on these basic processes. Functional neuroimaging and/or electrophysiology may be used to measure the location and extent of changes in brain activity during training, with and without neurostimulation. When relevant clinical populations are readily available, DARPA encourages

investigators to test and compare effects of stimulation delivered via implanted and non-implanted electrodes.

It is expected that TA1-2 teams will be multidisciplinary, spanning backgrounds such as cognitive neuroscience, neural plasticity, electrophysiology, systems neurophysiology, biomedical engineering, human performance, and computational modeling. Proposer teams are strongly encouraged to include expertise across these fields, as well as with industry partners that can develop commercial applications based on outputs of the TNT program. The breadth and depth of relevant expertise in the technical team will be an important consideration in the evaluation of proposals.

1.1.3. General Requirements

Performers are expected to attend annual program reviews to provide scientific and technical updates on progress towards their milestones and scientific goals, and to summarize outstanding challenges and limitations that must still be overcome to achieve the overarching TNT goals.

1.2. PROGRAM PLAN

TNT is a four year program comprising two 24-month phases. A detailed description of the research objectives for TAs 1 and 2 are provided in the following two subsections. Section 1.3 outlines the expected schedule, and major milestones and deliverables for the program. Proposals must provide a clear and detailed technical plan with schedule, associated scientific/technical approaches, and risk mitigation plan.

1.2.1. Technical Area 1 (TA1): Biological Foundations for Targeted Neuroplasticity Training.

TA1 Phase I Goals

Proposals should clearly describe plans to assess various peripheral neurostimulation parameters and their efficacy at modulating plasticity and learning rates, evaluated by examining changes in neurophysiology and behavior. Experiments should systematically explore the peripheral neurostimulation parameter space to generate a detailed input/output (I/O) mapping that links stimulation parameters to changes in plasticity. Short-term (e.g., acute) neurophysiological studies in the peripheral and/or central nervous systems are acceptable in Phase I, but chronic recording studies are required in Phase II to permit longer-term studies of learning-induced changes in brain function.

Behavioral tasks and learning paradigms should be chosen to allow direct and quantitative measures of the relevant cognitive skills. By the end of Phase I, teams are expected to demonstrate that their targeted neuroplasticity training methods yield at least a 15% increase in learning rates and/or skill performance relative to a control group without stimulation. Proposers should identify side-effects of peripheral neurostimulation and targeted neuroplasticity training within Phase I.

TA1 Phase II Goals

Phase II of TA1 will focus on optimizing targeted neuroplasticity training methods to reduce or eliminate negative side effects, increasing reproducibility, and ensuring long-term retention.

The peripheral neurostimulation parameters investigated in Phase I should be refined based on the biological understanding and acute cognitive improvements obtained to maximize efficacy of the targeted neuroplasticity training protocol. By the end of Phase II, teams are expected to demonstrate that their targeted neuroplasticity training methods yield at least a 30% increase in cognitive skill acquisition rate relative to control. Chronic studies of neural circuit activity should establish a direct link between stimulation-induced plasticity and changes in circuit function that develop over several days or weeks of training. Proposals should outline methods to assess the longevity of these benefits and determine to what extent and at what rate decay occurs. Teams should optimize peripheral neurostimulation parameters and protocols to maximize efficacy and minimize side effects by the end of Phase II.

1.2.2. Technical Area 2 (TA2): Targeted Neuroplasticity Training Applications for Humans.

TA2 Phase I Goals

The goal of TA2 Phase I is to develop and demonstrate an initial set of targeted neuroplasticity training applications for humans using noninvasive peripheral neurostimulation to promote plasticity. Work in Phase I should validate specific peripheral nerve targets, explore the stimulation parameter space to develop stimulation protocols that are effective, and develop training protocols that pair neurostimulation with training cues to enhance learning.

Proposers are encouraged to measure the effects of peripheral neurostimulation on activity in neuromodulatory regions of the brain that promote plasticity. These studies should aim to verify the physiological effects of peripheral neurostimulation and determine how those effects change with varying stimulation parameters. Appropriate methods should be used to measure the location and extent of changes in relevant brain areas during cognitive skill training, with and without peripheral neurostimulation. Results from the human neurophysiology studies should be compared to the results from TA1 animal studies to verify the mechanisms of the targeted neuroplasticity intervention intervention in humans.

Proposers are encouraged to identify methods for ensuring consistent and accurate placement of electrodes for peripheral neurostimulation. These methods should include measures of one or more physiological responses to peripheral neurostimulation that confirm activation of the intended nerve target. Proposers should also develop plans to identify side effects.

TA2 Phase II goals

The goal of TA2 Phase II will be to verify the efficacy of the targeted neuroplasticity intervention in a randomized controlled study that measures benefits against an unstimulated control group of healthy adult humans. Based on results obtained in Phase I, targeted neuroplasticity intervention protocols should be modified as needed to optimize peripheral neurostimulation parameters for maximum efficacy while minimizing off-target effects. As a target, proposers should aim to achieve at least a 30% increase in learning rate and/or skill performance with targeted neuroplasticity training methods.

To facilitate use of targeted neuroplasticity interventions by non-experts (e.g., at training centers or as a take-home system), the neurostimulation device and interface need to intuitive, reliable and

safe. Physiological measures that confirm engagement of the intended peripheral nerve should be considered to ensure accurate and reliable positioning of the peripheral neurostimulation device.

1.3. SCHEDULE, MILESTONES AND DELIVERABLES

The research plan for each technical area will be divided into two 24-month phases. The tables below highlight the major research objectives, milestones, and deliverables that are expected during each phase. Proposers should list and describe additional milestones and deliverables that are specific to their planned studies. Proposals should provide specific milestones and quantitative metrics for evaluating progress towards achieving those milestones. DARPA requires proposers to identify intermediate milestones (e.g., at ~6 month intervals) to facilitate tracking of scientific and technical progress. *Proposals that do not include quantitative metrics, intermediate and end-of-program-phase milestones will be considered non-responsive to the solicitation.*

TNT projects will require animal and human subjects research, and will therefore be subject to both local (i.e. Institutional Animal Care and Use Committee, Institutional Review Board) and DoD-level regulation. Proposers should allow sufficient time in their schedule to obtain the necessary approvals. In general, proposers should expect ~90 days to achieve DoD-level approval after local approval has been awarded.

Table 1: Major Research Objectives, Milestones, and Deliverables for TA1

Phase	Research Objectives	Milestones and Deliverables
I	Demonstrate that peripheral neurostimulation promotes synaptic plasticity by measuring changes in neural activity and neurochemicals in brain.	Provide data validating proposed hypotheses regarding functional and anatomical map(s) of circuitry between peripheral nerve and CNS structures.
		Input/output response profiles for peripheral neurostimulation and plasticity modulation in CNS.
I	Demonstrate acute effects of targeted neuroplasticity training on brain neurophysiology and learning rate and/or skill performance at least 15% greater than control.	Provide data demonstrating quantified changes in task performance (e.g., accuracy, speed) and neural network physiology (e.g., neural tuning functions and functional connectivity) with training.
Ι	Test for off-target effects of peripheral neurostimulation and training.	Provide stimulation parameter map for identified side effects.
Ш	Demonstrate chronic effects of targeted neuroplasticity training on neurophysiology and learning rate and/or skill performance at least 30% greater than control, including measures of long-term retention of trained skills.	Provide data demonstrating quantified changes in task performance (e.g., accuracy, speed) and neural network physiology (e.g., neural tuning functions and functional connectivity) over training periods that span days or weeks and retention evaluated >30 days after training.
II	Optimization of stimulus protocols in animal models to minimize negative side effects.	A peripheral neurostimulation and training protocol that exhibits minimal side effects in animal models.

Table 2: Major Research Objectives, Milestones, and Deliverables for TA2

Phase	Research Objectives	Milestones and Deliverables
I	Identify mechanisms for modulating neuroplasticity in humans with noninvasive peripheral neurostimulation devices.	Provide data validating proposed hypotheses regarding specific peripheral nerve targets for stimulation and effects on synaptic plasticity, brain function, and learning rates.
II	Refine peripheral neurostimulation and training protocols to ensure easy and reliable operation with minimal negative side effects.	A peripheral neurostimulation device and training protocol with reliable indicators of target nerve engagement and empirical data demonstrating minimal side effects on physical and cognitive functions.
II	Evaluate benefits of targeted neuroplasticity training with goal of demonstrating learning rate and/or skill performance at least 30% above control.	Provide performance data from randomized, controlled study comparing learning rates and retention between targeted neuroplasticity training and unstimulated controls.

Ethical, Legal, and Societal Implications

DARPA is committed to ensuring that efforts funded under this BAA adhere to ethical and legal regulations currently in place for federally- and DoD-funded research involving human and animal use. Proposers to this BAA should address potential ethical, legal, and societal implications of the proposed technology. Please see section <u>6.2.2</u>. (Human Subjects Research).

Data Sharing

All performers funded by the DARPA TNT program shall participate in data sharing with other program performers. Data sharing will be conducted in a manner that provides enough description for a third party to look at and conduct appropriate analysis and interpretation of the data. This data sharing includes, but is not limited to, raw and processed experimental data, processing methods used, algorithms used to process the data, artifact information, research reports, and software including source code and executables.

2. Award Information

Multiple awards are possible. The amount of resources made available under this BAA will depend on the quality of the proposals received and the availability of funds.

The Government reserves the right to select for negotiation all, some, one, or none of the proposals received in response to this solicitation, and to make awards without discussions with proposers. The Government also reserves the right to conduct discussions if it is later determined to be necessary. If warranted, portions of resulting awards may be segregated into pre-priced options. Additionally, DARPA reserves the right to accept proposals in their entirety or to select only portions of proposals for award. In the event that DARPA desires to award only portions of a proposal, negotiations may be opened with that proposer. The Government reserves the right to fund proposals in phases with options for continued work at the end of one or more of the phases.

Awards under this BAA will be made to proposers on the basis of the evaluation criteria listed below (see section labeled "Application Review Information", Sec. 5.), and program balance to provide overall value to the Government. The Government reserves the right to request any additional, necessary documentation once it makes the award instrument determination. Such additional information may include but is not limited to Representations and Certifications. The Government reserves the right to remove proposers from award consideration should the parties fail to reach agreement on award terms, conditions and cost/price within a reasonable time or the proposer fails to timely provide requested additional information. Proposals identified for negotiation may result in a procurement contract, grant, cooperative agreement, or other transaction depending upon the nature of the work proposed, the required degree of interaction between parties, whether or not the research is classified as Fundamental Research, and other factors. Procurement contracts, cooperative agreements, or other transactions are preferred.

In all cases, the Government contracting officer shall have sole discretion to select award instrument type and to negotiate all instrument terms and conditions with selectees. Proposers are advised that if they propose grants or cooperative agreements, DARPA may select other award instruments, as it deems appropriate. DARPA will apply publication or other restrictions, as necessary, if it determines that the research resulting from the proposed effort will present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Any award resulting from such a determination will include a requirement for DARPA permission before publishing any information or results on the program. For more information on publication restrictions, see the section below on Fundamental Research.

Fundamental Research

It is DoD policy that the publication of products of fundamental research will remain unrestricted to the maximum extent possible. National Security Decision Directive (NSDD) 189 established the national policy for controlling the flow of scientific, technical, and engineering information produced in federally funded fundamental research at colleges, universities, and laboratories. The Directive defines fundamental research as follows:

'Fundamental research' means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

As of the date of publication of this BAA, the Government expects that program goals as described herein either cannot be met by proposers intending to perform fundamental research or the proposed research is anticipated to present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Therefore, the Government anticipates restrictions on the resultant research that will require the contractor to seek DARPA permission before publishing any information or results relative to the program.

Proposers should indicate in their proposal whether they believe the scope of the research included in their proposal is fundamental or not. While proposers should clearly explain the intended results of their research, the Government shall have sole discretion to select award instrument type and to negotiate all instrument terms and conditions with selectees. Appropriate clauses will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate.

For certain research projects, it may be possible that although the research being performed by the prime contractor is restricted research, a subawardee may be conducting fundamental research. In those cases, it is the prime contractor's responsibility to explain in its proposal why its subawardee's effort is fundamental research.

The following statement or similar provision will be incorporated into any resultant non-fundamental research procurement contract or other transaction:

There shall be no dissemination or publication, except within and between the contractor and any subawardees, of information developed under this contract or contained in the reports to be furnished pursuant to this contract without prior written approval of DARPA's Public Release Center (DARPA/PRC). All technical reports will be given proper review by appropriate authority to determine which Distribution Statement is to be applied prior to the initial distribution of these reports by the contractor. With regard to subawardee proposals for Fundamental Research, papers resulting from unclassified fundamental research are exempt from prepublication controls and this review requirement, pursuant to DoD Instruction 5230.27 dated October 6, 1987.

When submitting material for written approval for open publication, the contractor/awardee must submit a request for public release to the DARPA/PRC and include the following information: (1) Document Information: document title, document author, short plain-language description of technology discussed in the material (approx. 30 words), number of pages (or minutes of video) and document type (e.g., briefing, report, abstract, article, or paper); (2) Event Information: event type (conference, principal investigator meeting, article or paper), event date, desired date for DARPA's approval; (3) DARPA Sponsor: DARPA Program Manager, DARPA office, and contract number; and (4) Contractor/Awardee's Information: POC name, email and phone. Allow four weeks for processing; due dates under four weeks require a justification. Unusual electronic file formats may require additional processing time. Requests may be sent either via email to public_release_center@darpa.mil or by mail at 675 North Randolph Street, Arlington VA 22203-2114, telephone (571) 218-4235. Refer to the following for link for information about DARPA's public release process: http://www.darpa.mil/work-with-us/contract-management/public-release."

3. Eligibility Information

All responsible sources capable of satisfying the Government's needs may submit a proposal that shall be considered by DARPA.

3.1. ELIGIBLE APPLICANTS

3.1.1. Federally Funded Research and Development Centers (FFRDCs) and Government Entities

Federally Funded Research and Development Centers (FFRDCs) and Government entities (e.g., Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations and cannot propose to this BAA in any capacity unless they meet the following conditions: (1) FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector; and (2) FFRDCs must provide a letter on official letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and their compliance with the associated FFRDC sponsor agreement's terms and conditions. This information is required for FFRDCs proposing to be prime contractors or subawardees. Government entities must clearly demonstrate that the work is not otherwise available from the private sector and provide written documentation citing the specific statutory authority and contractual authority, if relevant, establishing their ability to propose to Government solicitations. At the present time, DARPA does not consider 15 U.S.C. § 3710a to be sufficient legal authority to show eligibility. While 10 U.S.C. § 2539b may be the appropriate statutory starting point for some entities, specific supporting regulatory guidance, together with evidence of agency approval, will still be required to fully establish eligibility. DARPA will consider FFRDC and Government entity eligibility submissions on a case-by-case basis; however, the burden to prove eligibility for all team members rests solely with the proposer.

3.1.2. Non-U.S. Organizations

Non-U.S. organizations are/or individuals may participate to the extent that such participants comply with any necessary nondisclosure agreements, security regulations, export control laws, and other governing statutes applicable under the circumstances. See Section 4.2 "Security and Proprietary Issues" regarding the proposers capabilities to perform research and development at the classification level they propose.

3.1.3. Procurement Integrity, Standards of Conduct, Ethical Considerations, and Organizational Conflicts of Interest

Current federal employees are prohibited from participating in particular matters involving conflicting financial, employment, and representational interests (18 U.S.C. §§ 203, 205, and 208). Once the proposals have been received, and prior to the start of proposal evaluations, the Government will assess potential conflicts of interest and will promptly notify the proposer if any appear to exist. The Government assessment does NOT affect, offset, or mitigate the proposer's responsibility to give full notice and planned mitigation for all potential organizational conflicts, as discussed below.

Without prior approval or a waiver from the DARPA Director, in accordance with FAR 9.503, a contractor cannot simultaneously provide scientific, engineering, technical assistance (SETA) or similar support and also be a technical performer. As part of the proposal submission, all members of the proposed team (prime proposers, proposed subawardees, and consultants) must affirm whether they (their organizations and individual team members) are providing SETA or similar

support to any DARPA technical office(s) through an active contract or subcontract. All affirmations must state which office(s) the proposer, subawardees, consultant, or individual supports and identify the prime contract number(s). All facts relevant to the existence or potential existence of organizational conflicts of interest (FAR 9.5) must be disclosed. The disclosure must include a description of the action the proposer has taken or proposes to take to avoid, neutralize, or mitigate such conflict. If in the sole opinion of the Government after full consideration of the circumstances, a proposal fails to fully disclose potential conflicts of interest and/or any identified conflict situation cannot be effectively mitigated, the proposal will be rejected without technical evaluation and withdrawn from further consideration for award.

If a prospective proposer believes a conflict of interest exists or may exist (whether organizational or otherwise) or has questions on what constitutes a conflict of interest, the proposer should send his/her contact information and a summary of the potential conflict via email to the BAA email address before time and effort are expended in preparing a proposal and mitigation plan.

3.2. COST SHARING/MATCHING

Cost-sharing proposals are encouraged, but not required. Information about cost-sharing can be found here: http://www.darpa.mil/work-with-us/contract-management

While cost sharing is not required it will be carefully considered where there is an applicable statutory condition relating to the selected funding instrument (e.g., for any Other Transactions under the authority of 10 U.S.C. § 2371). Cost sharing is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

4. Application and Submission Information

4.1. ADDRESS TO REQUEST APPLICATION PACKAGE

This solicitation contains all information required to submit a proposal. No additional forms, kits, or other materials are needed. This notice, with the classified addendum, constitutes the total solicitation. No additional information is available, except as provided at FBO.gov or Grants.gov, nor will a formal Request for Proposal (RFP) or additional solicitation regarding this announcement be issued. Requests for the same will be disregarded.

4.2. CONTENT AND FORM OF APPLICATION SUBMISSION

4.2.1. Proprietary and Security Information

DARPA policy is to treat all submissions as source selection information (see FAR 2.101 and 3.104), and to disclose their contents only for the purpose of evaluation. Restrictive notices notwithstanding, during the evaluation process, submissions may be handled by support contractors for administrative purposes and/or to assist with technical evaluation. All DARPA

support contractors performing this role are expressly prohibited from performing DARPA-sponsored technical research and are bound by appropriate nondisclosure agreements.

Submissions will not be returned. The original of each submission received will be retained at DARPA and all other non-required copies destroyed. A certification of destruction may be requested, provided the formal request is received at this office within 5 days after notification that a proposal was not selected.

4.2.1.1 Proprietary Information

Proposers are responsible for clearly identifying proprietary information. Submissions containing proprietary information must have the cover page and each page containing such information clearly marked with a label such as "Proprietary" or "Company Proprietary." Note, "Confidential" is a classification marking used to control the dissemination of U.S. Government National Security Information as dictated in Executive Order 13526 and should not be used to identify proprietary business information.

4.2.1.2 Security Information

Classified submissions shall be transmitted in accordance with the following guidance. Additional information on the subjects discussed in this section may be found at http://www.dss.mil/.

If a submission contains Classified National Security Information as defined by Executive Order 13526, the information must be appropriately and conspicuously marked with the proposed classification level and declassification date. Similarly, when the classification of a submission is in question, the submission must be appropriately and conspicuously marked with the proposed classification level and declassification date. Submissions requiring DARPA to make a final classification determination shall be marked as follows:

"CLASSIFICATION DETERMINATION PENDING. Protect as though classified (insert the recommended classification level, e.g., Top Secret, Secret or Confidential)"

NOTE: Classified submissions must indicate the classification level of not only the submitted materials, but also the classification level of the anticipated award.

Proposers submitting classified information must have, or be able to obtain prior to contract award, cognizant security agency approved facilities, information systems, and appropriately cleared/eligible personnel to perform at the classification level proposed. All proposer personnel performing Information Assurance (IA)/Cybersecurity related duties on classified Information Systems shall meet the requirements set forth in DoD Manual 8570.01-M (Information Assurance Workforce Improvement Program).

Proposers choosing to submit classified information from other collateral classified sources (i.e., sources other than DARPA) must ensure (1) they have permission from an authorized individual at the cognizant Government agency (e.g., Contracting Officer, Program Manager); (2) the

proposal is marked in accordance with the source Security Classification Guide (SCG) from which the material is derived; and (3) the source SCG is submitted along with the proposal.

DARPA anticipates that submissions received under this BAA will be unclassified. However, should a proposer wish to submit classified information, an *unclassified* email must be sent to the BAA mailbox requesting submission instructions from the Technical Office PSO.

Security classification guidance and direction via a Security Classification Guide (SCG) and/or DD Form 254, "DoD Contract Security Classification Specification," will not be provided at this time, since DARPA is soliciting ideas only. If a determination is made that the award instrument may result in access to classified information, a SCG and/or DD Form 254 will be issued by DARPA and attached as part of the award.

4.2.2. Submission Information

The typical proposal should express a consolidated effort in support of one or more related technical concepts or ideas. Disjointed efforts should not be included into a single proposal.

Restrictive notices notwithstanding, proposals may be handled, for administrative purposes only, by a support contractor. This support contractor is prohibited from competition in DARPA technical research and is bound by appropriate nondisclosure requirements.

Proposals not meeting the format described in the BAA may not be reviewed.

For Proposers Submitting Full Proposals through DARPA's BAA Submission Portal:

Full Proposals sent in response to DARPA-BAA-16-24 may be submitted via DARPA's BAA Website (https://baa.darpa.mil). Visit the website to complete the two-step registration process. Submitters will need to register for an Extranet account (via the form at the URL listed above) and wait for two separate e-mails containing a username and temporary password. After accessing the Extranet, submitters may then create an account for the DARPA BAA website (via the "Register your Organization" link along the left side of the homepage), view submission instructions, and upload/finalize the abstract. Proposers using the DARPA BAA Website may encounter heavy traffic on the submission deadline date; it is highly advised that submission process be started as early as possible.

All unclassified concepts submitted electronically through DARPA's BAA Website must be uploaded as zip files (.zip or .zipx extension). The final zip file should be no greater than 50 MB in size. Only one zip file will be accepted per submission. Classified submissions and proposals requesting assistance instruments (grants or cooperative agreements) should NOT be submitted through DARPA's BAA Website (https://baa.darpa.mil), though proposers will likely still need to visit https://baa.darpa.mil to register their organization (or verify an existing registration) to ensure the BAA office can verify and finalize their submission.

Technical support for BAA Website may be reached at <u>BAAT Support@darpa.mil</u>, and is typically available during regular business hours, (9:00 AM- 5:00 PM EST Monday – Friday).

Proposers using the DARPA BAA Website may encounter heavy traffic on the submission deadline date; it is highly advised that submission process be started as early as possible.

For Proposers Requesting Grants or Cooperative Agreements:

Proposers requesting grants or cooperative agreements may submit proposals through one of the following methods: (1) hard copy mailed directly to DARPA; or (2) electronic upload per the instructions at http://www.grants.gov/applicants/apply-for-grants.html. Grant or cooperative agreement proposals may not be submitted through any other means. If proposers intend to use Grants.gov as their means of submission, then they must submit their entire proposal through Grants.gov; applications cannot be submitted in part to Grants.gov and in part as a hard-copy. Proposers using the Grants.gov do not submit paper proposals in addition to the Grants.gov electronic submission.

Grants.gov requires proposers to complete a one-time registration process before a proposal can be electronically submitted. If proposers have not previously registered, this process can take between three business days and four weeks. See the Grants.gov registration checklist at http://www.grants.gov/documents/19/18243/OrganizationRegChecklist.pdf for registration requirements and instructions.

Once Grants.gov has received a proposal submission, Grants.gov will send two email messages to advise proposers as to whether or not their proposals have been validated or rejected by the system; IT MAY TAKE UP TO TWO DAYS TO RECEIVE THESE EMAILS. The first email will confirm receipt of the proposal by the Grants.gov system; this email only confirms receipt, not acceptance, of the proposal. The second will indicate that the application has been successfully validated by the system prior to transmission to the grantor agency or has been rejected due to errors. If the proposal is validated, then the proposer has successfully submitted their proposal. If the proposal is rejected, the proposed must be corrected and resubmitted before DARPA can retrieve it. If the solicitation is no longer open, the rejected proposal cannot be resubmitted. Once the proposal is retrieved by DARPA, the proposer will receive a third email from Grants.gov. To avoid missing deadlines, proposers should submit their proposals in advance of the final proposal due date with sufficient time to receive confirmations and correct any errors in the submission process through Grants.gov. For more information on submitting proposals to Grants.gov, visit the Grants.gov submissions page at:

http://www.grants.gov/web/grants/applicants/apply-for-grants.html

Upload two separate documents, Volume I, Technical and Management Proposal and Volume II, the Cost Proposal as attachments to the application package. **No other Grants.gov forms are required.** Please note that Grants.gov does not accept zipped or encrypted proposals. More detailed instructions for using Grants.gov can be found on the Grants.gov website.

Proposers electing to submit grant or cooperative agreement proposals as hard copies must complete the SF 424 R&R form (Application for Federal Assistance, Research and Related) available on the Grants.gov website

http://apply07.grants.gov/apply/forms/sample/RR_SF424_2_0-V2.0.pdf. Technical support for Grants.gov submissions may be reached at 1-800-518-4726 or support@grants.gov.

Please note that submitters to Grants.gov will still need to visit https://baa.darpa.mil to register their organization concurrently to ensure the BAA office can verify and finalize their submission.

All administrative correspondence and questions on this solicitation, including requests for information on how to submit a proposal to this BAA, should be directed to one of the administrative addresses below; e-mail is preferred.

BAA Administrator

E-mail: DARPA-BAA-16-24@darpa.mil

DARPA/BTO

ATTN: DARPA-BAA-16-24 675 North Randolph Street Arlington, VA 22203-2114

Office Website: http://www.darpa.mil/about-us/offices/bto

Solicitations Page: http://www.darpa.mil/work-with-us/opportunities

DARPA intends to use electronic mail for correspondence regarding DARPA-BAA-16-24. Proposals may not be submitted by fax or e-mail; any so sent will be disregarded. DARPA encourages use of the Internet for retrieving the BAA and any other related information that may subsequently be provided.

4.2.3. Restrictive Markings on Proposals

All proposals should clearly indicate limitations on the disclosure of their contents. Proposers who include in their proposals data that they do not want disclosed to the public for any purpose, or used by the Government except for evaluation purposes, shall-

(1) Mark the title page with the following legend:

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed-in whole or in part-for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this proposer as a result of, or in connection with, the submission of this data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets [insert numbers or other identification of sheets]; and

(2) Mark each sheet of data it wishes to restrict with the following legend:

"Use or disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal."

Markings like "Company Confidential" or other phrases that may be confused with national security classifications shall be avoided.

4.3. FORMATTING CHARACTERISTICS

4.3.1. Proposal Format

NOTE (classification and handling markings): Confidential, Secret and Top Secret are classification markings used to control the dissemination of US Government National Security Information (NSI) as dictated in Executive Order 13526 - "Classified National Security Information". When referencing business proprietary information in a response to this BAA, please refrain from using any combination of the NSI caveats unless the content is classified.

Proposers are limited to only 1 full proposal submission addressing both TA1 and TA2, based on the requirements listed below. *Proposers who submit a proposal that addresses only one TA will be considered non-responsive to the solicitation.* All full proposals must be in the format given below. Nonconforming proposals may be rejected without review. Proposals shall consist of two volumes. All pages shall be printed on 8-1/2 by 11 inch paper with type not smaller than 12 point. Smaller font may be used for figures, tables and charts. The page limitation for full proposals includes all figures, tables, and charts. Volume I, Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished) which document the technical ideas and approach upon which the proposal is based. The Bibliography, Key References, Bio-sketches, and Letters of Support (optional) are not included in the page counts given below. The submission of other supporting materials along with the proposals is strongly discouraged and will not be considered for review. **Proposers must adhere to page count limitations for the sections indicated below.** A submission letter is required and is not included in the page count. Volume I should include the following components:

a. Volume I, Technical and Management Proposal

Section I. Administrative

- **A.** Cover Sheet (LABELED "PROPOSAL: VOLUME I"):
- 1. BAA number (DARPA-BAA-16-24);
- **2.** Technical area;
- **3.** Lead organization (prime contractor);
- **4.** Type of organization, selected from among the following categories: "LARGE BUSINESS," "SMALL DISADVANTAGED BUSINESS," "OTHER SMALL BUSINESS," "HBCU," "MI," "OTHER EDUCATIONAL," OR "OTHER NONPROFIT";
- **5.** Proposer's reference number (if any);
- **6.** Other team members (if applicable) and type of business for each;
- **7.** Proposal title;
- **8.** Technical point of contact (Program Manager or Principle Investigator) to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax, e-mail;

- **9.** Contracting Officer or Grant Officer to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax, e-mail;
- **10.** Award instrument requested: cost-plus-fixed-free (CPFF), cost-contract—no fee, firm-fixed-price, grant, cooperative agreement, other transaction, or other type (specify);
- 11. Place(s) and period(s) of performance;
- **12.** Proposal validity period;
- 13. DUNS number (http://www.dnb.com/get-a-duns-number.html);
- **14.** Taxpayer ID number (https://www.irs.gov/Individuals/International-Taxpayers/Taxpayer-Identification-Numbers-TIN;
- 15. CAGE code (https://www.dlis.dla.mil/bincs/FAQ.aspx);

Information on award instruments is available at http://www.darpa.mil/work-with-us/contract-management.

B. Official Transmittal Letter.

Section II. Detailed Proposal Information

A. Executive summary (Maximum 3 pages):

Summary of innovative claims for the proposed research. This section should succinctly describe the uniqueness and benefits of the proposed approach relative to the current state-of-art alternate approaches. Clearly describe the scientific and technical goals, challenges, approach, key innovations, and expected impact of the proposed effort. Articulate your objectives without jargon. Include answers to the following questions:

- **a.** What are you proposing to do? What is the expected outcome?
- **b.** What is innovative in your approach? How is your approach better than the current state-of-the-art, alternative approaches, and previous efforts? Be quantitative. Why do you think your approach will succeed? Summarize scientific rationale supporting your approach.
- **c.** What are the risks and payoffs? What are the key technical challenges in your approach and how do you plan to overcome these?
- **d.** If you are successful, who or what will be affected and what will be the impact? Include expected quantitative and qualitative outcomes in terms of the knowledge revealed or technologies utilized.
- **e.** How much will it cost, and how long will it take to complete the major tasks? Critically evaluate the expected impact of your work relative to the cost.

B. Scientific/Technical Approach and Plan (Maximum 40 pages):

Detailed scientific/technical rationale and description of the planned approach and execution plan. The technical plan should demonstrate a deep understanding of the scientific challenges and present a credible (even if risky) plan to achieve the program goals. The technical approach should address all applicable proposal content instructions in Sections 1.1 - 1.3. Include

comparisons with other ongoing research indicating advantages and disadvantages of the proposed effort. Discuss the proposed research team's previous accomplishments and work in closely related research areas. Proposers should address the state-of-the-art technology and current limitations.

- 1. For each primary objective (*i.e.* task), describe the following:
- **a.** Goal: Succinctly describe the task/objective and what will be accomplished if successful.
- **b. Personnel:** Identify the personnel responsible for the task/objective (e.g. "led by Jane Smith with support from one graduate student at 50% effort").
- **c. Approach:** Describe the scientific and technical approach. Hypotheses should be articulated clearly and include a rigorous test plan with quantitative metrics to yield unambiguous outcomes. Experimental designs and procedures must be described thoroughly, including aspects such as equipment, behavioral paradigms, animal models, approximate numbers of subjects, software, analysis plan, etc. Figures and diagrams that help illustrate the experimental design may be included.
- **d. Rationale:** Provide a clear rationale for the approach, including a justification for the feasibility of the proposed task. *Proposers are highly encouraged to include supporting data when available, even if preliminary.* Figures included within the proposal should be accompanied by a brief description of how data was collected, what analysis was performed, what the results mean, and why the result supports the feasibility of the proposed task.
- **e. Schedule:** Include a narrative overview of the timeline of the task/objective. Intermediate milestones and final completion criteria should be identified along with the quantitative metrics that will be used to evaluate progress.
- **f.** Challenges and Risks: Articulate the scientific and technical challenges and risks facing this effort. Include a risk mitigation plan including possible solutions for overcoming potential hurdles or alternative approaches.

2. Summary Materials:

- **a. Overall Timeline:** Include a one-page high-level graphical (Gantt or flow chart style) timeline of the outlined tasks/objectives described in the Scientific/Technical Approach and Plan.
- **Management Plan:** Include an organization chart for the entire team which includes, as applicable: (1) the programmatic relationship of team member; (2) the unique capabilities of team members; (3) the task responsibilities of team members; (4) the teaming strategy among the team members; and (5) the key personnel along with the amount of effort to be expended by each person during each year.
- **c. Facilities:** Include a description of the facilities that would be used for the proposed effort. Detail support enhancing that of Section II, including formal teaming agreements which are required to execute this program.
- C. Statement of Work (SOW), Milestones, and Deliverables (Does not count towards page limit):

The Government requires proposers to complete an editable MS Word SOW template that covers much of the details discussed below; download and fully-complete the template provided in **Attachment 2** posted with the subject BAA.

The SOW must be read as a stand-alone document without references to text or figures included in Section B. Each Phase of the program should be defined separately. Dependencies between tasks and/or subtasks should be identified clearly. No proprietary information should be included within the document.

Provide the following for each task/subtask:

- **a.** A general description of the scientific or technical objective of the task/subtask.
- **b.** A brief but detailed description of the technical approach to be taken to accomplish the task/subtask, including succinct explanation and justification for the chosen methodologies.
- **c.** Identification of the primary organization responsible for task execution (prime, sub, team member, by name, etc.).
- **d.** The completion criteria for each task/subtask, i.e. a product, event, deliverable, measurable milestone, or demonstration that defines its completion. Whenever possible, completion should be assessed through quantitative metrics.
- **e.** Define all deliverables (reporting, data, reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities.
- **f.** Estimates of cost for each task/activity in each year of the effort delineated by the primes and major subcontractors, total cost, and any company cost share.
- **g.** Schedule for all measurable milestones and deliverables should capture key development points in tasks and should be clearly articulated and defined in time relative to start of effort (relative to months after contract start MAC). The milestones must not include proprietary information.
- **D. Summary Graphic(s)** (Does not count towards page limit):

Power Point slide(s) summarizing the proposed effort's vision, goals, impact, scientific/technical approach, and milestone schedule. Download and use the template provided in **Attachment 3** posted with the subject BAA. Submit the PowerPoint file in addition to Volume I and II of your proposal.

Section III. Additional Information (Does not count towards page limit)

- (1) Bibliography (required): list of references cited in the body of the proposal. There is no limit to the number of references that can be cited in this section.
- (2) Key References (optional): a brief bibliography of relevant technical papers and research notes (published and unpublished) that are most relevant in supporting the technical ideas of the proposal and/or document the key technical ideas on which the proposal is based. Include no more than 10 publications in your list. This section can include published or unpublished papers and research notes. If a reference is unpublished, please attach it to the proposal.

- (3) A resume or "Bio-sketch" of all key personnel; NIH style bio-sketches are preferred.
- (4) Letters of Support (optional): Proposers may wish to provide letters of support from key personnel or other collaborators.

4.4.2.2 Volume II, Cost Proposal – {No Page Limit}

All proposers, including FFRDCs, must submit the following:

Cover sheet to include:

- **1.** BAA number;
- **2.** Technical area;
- **3.** Lead Organization Submitting proposal;
- **4.** Type of organization, selected among the following categories: "LARGE BUSINESS", "SMALL DISADVANTAGED BUSINESS", "OTHER SMALL BUSINESS", "HBCU", "MI", "OTHER EDUCATIONAL", OR "OTHER NONPROFIT";
- **5.** Proposer's reference number (if any);
- **6.** Other team members (if applicable) and type of business for each;
- **7.** Proposal title;
- **8.** Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
- **9.** Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), and electronic mail (if available);
- **10.** Award instrument requested: cost-plus-fixed-free (CPFF), cost-contract—no fee, cost sharing contract no fee, or other type of procurement contract (*specify*), or other transaction;
- 11. Place(s) and period(s) of performance;
- 12. Total proposed cost separated by basic award and option(s) (if any);
- 13. Name, address, and telephone number of the proposer's cognizant Defense Contract Management Agency (DCMA) administration office (*if known*);
- 14. Name, address, and telephone number of the proposer's cognizant Defense Contract Audit Agency (DCAA) audit office (*if known*);
- **15.** Date proposal was prepared;
- 16. DUNS number (http://www.dnb.com/get-a-duns-number.html);
- **17.** Taxpayer ID number (https://www.irs.gov/Individuals/International-Taxpayers/Taxpayer-Identification-Numbers-TIN;
- 18. CAGE code (https://www.dlis.dla.mil/bincs/FAQ.aspx);
- **19.** Proposal validity period

Note that nonconforming proposals may be rejected without review.

NOTE: **Attachment 1**, the Cost Volume Proposer Checklist, must be included with the coversheet of the Cost Proposal

Proposers without an accounting system considered adequate for determining accurate costs must complete an SF 1408 if a cost type contract is to be negotiated. To facilitate this

process, proposers should complete the SF 1408 found at:

http://www.gsa.gov/portal/forms/download/115778 and submit the completed form with the proposal. To complete the form, check the boxes on the second page, then provide a narrative explanation of your accounting system to supplement the checklist on page one. For more information, please see:

http://www.dcaa.mil/preaward accounting system adequacy checklist.html.

The Government encourages proposers to complete an editable MS excel budget template that covers items 1.i, 1.iv, 2, 3, 4, and 5 discussed below. This template document is provided as **Attachment 4** to this BAA. If you choose to use **Attachment 4**, submit the MS Excel template in addition to Volume I and II of your proposal. Volume II must include all other items discussed below that are not covered by the editable MS excel budget template. Proposers are welcome to utilize an alternative format, provided the information requested below is clearly and effectively communicated.

- (1) total program cost broken down by major cost items to include:
 - i. direct labor, including individual labor categories or persons, with associated labor hours and numbered direct labor rates
 - ii. If consultants are to used, proposer must provide consultant agreement or other document which verifies the proposed loaded daily/hourly rate
 - **iii.** Indirect costs including Fringe Benefits, Overhead, General and Administrative Expense, Cost of Money, etc. (Must show base amount and rate)
 - iv. Travel Number of trips, number of days per trip, departure and arrival destinations, number of people, etc.
 - v. Other Direct Costs Should be itemized with costs or estimated costs. Backup documentation will be submitted to support proposed costs. An explanation of any estimating factors, including their derivation and application, must be provided. Please include a brief description of the proposers' procurement method to be used;
 - (2) major program tasks by phase;
- (3) an itemization of major subcontracts and equipment purchases, to include: a cost proposal as detailed as the Proposer's cost proposal;
- (4) an itemization of any information technology (IT) purchase, as defined in FAR Part 2.101;
- (5) a summary of projected funding requirements by month;
- **(6)** the source, nature, and amount of any industry cost-sharing. Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each; and
- (7) identification of pricing assumptions of which may require incorporation into the resulting award instrument (e.g., use of Government Furnished Property/Facilities/Information, access to Government Subject Matter Expert/s, etc.).

The proposer should include supporting cost and pricing information in sufficient detail to substantiate the summary cost estimates and should include a description of the method used to estimate costs and supporting documentation. Per FAR 15.403-4, certified cost or pricing data shall be required if the proposer is seeking a procurement contract award per the referenced threshold, unless the proposer requests an exception from the requirement to submit cost or pricing

data. Certified cost or pricing data" are not required if the proposer proposes an award instrument other than a procurement contract (e.g., a grant, cooperative agreement, or Other Transaction.)

The prime proposer is responsible for compiling and providing all subcontractor proposals for the Procuring Contracting Officer (PCO). Subcontractor proposals should include Interdivisional Work Transfer Agreements (ITWA) or similar arrangements. Where the effort consists of multiple portions which could reasonably be partitioned for purposes of funding, these should be identified as options with separate cost estimates for each. NOTE: for IT and equipment purchases, include a letter stating why the proposer cannot provide the requested resources from its own funding.

All proprietary subcontractor proposal documentation, prepared at the same level of detail as that required of the prime. The prime and subcontractor proposals should be uploaded together if possible to DARPA's BAA Website (https://baa.darpa.mil/). If the subcontractor proposal contains proprietary information not releasable to the prime, the subcontractor may upload their proposal separately but identify the proposal as a subcontract proposal and provide the name and proposal title of the prime contractor. Subcontractor proposals submitted by hard copy can be submitted in a sealed envelope by the prime or directly by the subcontractor. If submitted directly by the subcontractor the subcontractor must identify the proposal as a subcontract proposal and provide the name and proposal title of the prime proposer. Subcontractors must provide the same number of hard copies and/or electronic proposals as is required of the prime proposer.

All proposers requesting an 845 Other Transaction for Prototypes (OT) agreement must include a detailed list of milestones. Each such milestone must include the following: milestone description, completion criteria, due date, and payment/funding schedule (to include, if cost share is proposed, contractor and Government share amounts). It is noted that, at a minimum, such milestones should relate directly to accomplishment of program technical metrics as defined in the BAA and/or the proposer's proposal. Agreement type, fixed price or expenditure based, will be subject to negotiation by the Agreements Officer; however, it is noted that the Government prefers use of fixed price milestones with a payment/funding schedule to the maximum extent possible. Do not include proprietary data. If the proposer requests award of an 845 OT agreement as a nontraditional defense contractor, as so defined in the OSD guide entitled "Other Transactions (TO) Guide For Prototype Projects" dated January 2001 amended) (as (http://www.acq.osd.mil/dpap/Docs/otguide.doc), information must be included in the cost proposal to support the claim. Additionally, if the proposer requests award of an 845 OT agreement, without the required one-third (1/3) cost share, information must be included in the cost proposal supporting that there is at least one non-traditional defense contractor participating to a significant extent in the proposed prototype project. For information on 845 Other Transaction for Prototypes (OT) agreements, refer to http://www.darpa.mil/work-with-us/contractmanagement.

Per Section 8123 of the Department of Defense Appropriations Act, 2015 (Division C of the Consolidated and Further Continuing Appropriations Act, 2015, Pub. L. 113-235), all grant awards must be posted on a public website in a searchable format. To facilitate this task, proposers requesting grant awards must submit a maximum one (1) page abstract that may be publicly posted to comply with the requirement of Section 8123. This abstract should explain the project or program to the public and should only contain information that the proposer

confirms is releasable to the public; DO NOT INCLUDE ANY PROPRIETARY INFORMATION OR INFORMATION THAT CANNOT BE DISPLAYED ON A PUBLIC WEBSITE. The proposer should sign the bottom of the abstract confirming the information in the abstract is approved for public release. Proposers are advised to provide both a signed PDF copy, as well as an editable (e.g., Microsoft word) copy. Abstracts contained in grant proposals that are not selected for award will not be publicly posted.

4.4. SUBMISSION DATES AND TIMES

4.4.1. Full Proposal Submission Deadline

The full proposals must be submitted to DARPA/BTO on or before 4:00 PM, Eastern Time, June 2, 2016 in order to be considered during selections. Proposals submitted after the deadline will not be accepted or reviewed. The actual amount of resources available under this BAA will depend on the quality of proposals received and availability of funds.

Failure to comply with the submission procedures may result in the submission not being evaluated. DARPA will acknowledge receipt of complete submissions via email and assign control numbers that should be used in all further correspondence regarding proposals.

DARPA will routinely post consolidated Question and Answer lists in response to any relevant BAA clarification question(s) before final full proposals are due. In order to receive a response to your question, submit your question by May 18, 2016 to DARPA-BAA-16-24@darpa.mil.

4.5. FUNDING RESTRICTIONS

For contracts and Other Transaction Agreements, preaward costs will not be reimbursed unless a preaward cost agreement is negotiated prior to award. For Grants and Cooperative Agreement, preaward costs are permitted to the extent authorized by the DoD Grants and Agreements Regulations (DoDGARs) unless otherwise notified by the Contracting Officer.

5. Application Review Information

5.1. EVALUATION CRITERIA

Proposals will be evaluated using the following criteria, listed in descending order of importance: Overall Scientific and Technical Merit (5.1.1); Potential Contribution and Relevance to the DARPA Mission (5.1.2); Cost Realism (5.1.3).

5.1.1. Overall Scientific and Technical Merit

The proposed technical approach is feasible, achievable, complete and supported by a proposed technical team that has the expertise and experience to accomplish the proposed tasks.

5.1.2. Potential Contribution and Relevance to the DARPA Mission

The potential contributions of the proposed effort are relevant to the national technology base. Specifically, DARPA's mission is to maintain the technological superiority of the U.S. military and prevent technological surprise from harming our national security by sponsoring revolutionary, high-payoff research that bridges the gap between fundamental discoveries and their application.

5.1.3. Cost Realism

The proposed costs are realistic for the technical and management approach and accurately reflect the technical goals and objectives of the solicitation. The proposed costs are consistent with the proposer's Statement of Work and reflect a sufficient understanding of the costs and level of effort needed to successfully accomplish the proposed technical approach. The costs for the prime proposer and proposed subawardees are substantiated by the details provided in the proposal (e.g., the type and number of labor hours proposed per task, the types and quantities of materials, equipment and fabrication costs, travel and any other applicable costs).

It is expected that the effort will leverage all available relevant prior research in order to obtain the maximum benefit from the available funding. For efforts with a likelihood of commercial application, appropriate direct cost sharing may be a positive factor in the evaluation. DARPA recognizes that undue emphasis on cost may motivate proposers to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. DARPA discourages such cost strategies.

5.2. REVIEW AND SELECTION PROCESS

DARPA will conduct a scientific/technical review of each conforming proposal. Proposals will not be evaluated against each other since they are not submitted in accordance with a common work statement. DARPA's intent is to review proposals as soon as possible after they arrive; however, proposals may be reviewed periodically for administrative reasons.

Award(s) will be made to proposers whose proposals are determined to be the most advantageous to the Government, all factors considered, including the potential contributions of the proposed work to the overall research program and the availability of funding for the effort.

It is the policy of DARPA to ensure impartial, equitable, comprehensive proposal evaluations and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals. Pursuant to FAR 35.016, the primary basis for selecting proposals for acceptance shall be technical, importance to agency programs, and fund availability. In order to provide the desired evaluation, qualified Government personnel will conduct reviews and (if necessary) convene panels of experts in the appropriate areas.

For evaluation purposes, a proposal is the document described in "Proposal Information", Section 4.4.2. Other supporting or background materials submitted with the proposal will be considered for the reviewer's convenience only and not considered as part of the proposal.

Restrictive notices notwithstanding, proposals may be handled for administrative purposes by support contractors. These support contractors are prohibited from competition in DARPA technical research and are bound by appropriate non-disclosure requirements.

Subject to the restrictions set forth in FAR 37.203(d), input on technical aspects of the proposals may be solicited by DARPA from non-Government consultants /experts who are strictly bound by the appropriate non-disclosure requirements.

6. Award Administration Information

6.1. SELECTION NOTICES

As soon as the evaluation of a proposal is complete, the proposers will be notified that: 1) the proposal has been selected for funding pending contract negotiations, or 2) the proposal has not been selected. These official notifications will be sent via email to the Technical POC identified on the proposal coversheet.

6.2. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

6.2.1. Meeting and Travel Requirements

There will be a program kickoff meeting and all key participants are required to attend. Performers should also anticipate regular program-wide PI meetings and periodic site visits at the Program Manager's discretion. Proposers shall include within the content of their proposal details and costs of any travel or meetings they deem to be necessary throughout the course of the effort, to include periodic status reviews by the government.

6.2.2. Human Subjects Research

All research selected for funding involving human subjects, to include use of human biological specimens and human data, must comply with the federal regulations for human subjects protection. Further, research involving human subjects that is conducted or supported by the DoD must comply with 32 CFR 219, Protection of Human Subjects (and DoD Instruction 3216.02, Protection of Human Subjects and Adherence to Ethical Standards in DoD-Supported Research (http://www.dtic.mil/whs/directives/corres/pdf/321602p.pdf).

Institutions awarded funding for research involving human subjects must provide documentation of a current Assurance of Compliance with Federal regulations for human subjects protection, such as a Department of Health and Human Services, Office of Human Research Protection Federal Wide Assurance (http://www.hhs.gov/ohrp). All institutions engaged in human subjects research, to include subawardees, must also hold a valid Assurance. In addition, all personnel involved in human subjects research must provide documentation of completion of human subjects research training.

For all proposed research that will involve human subjects in the first year or phase of the project, the institution must provide evidence of or a plan for review by an Institutional Review Board (IRB) upon final proposal submission to DARPA as part of their proposal, prior to being selected for funding. The IRB conducting the review must be the IRB identified on the institution's Assurance of Compliance with human subjects protection regulations. The protocol, separate from

the proposal, must include a detailed description of the research plan, study population, risks and benefits of study participation, recruitment and consent process, data collection, and data analysis. It is recommended that you consult the designated IRB for guidance on writing the protocol. The informed consent document must comply with federal regulations (32 CFR 219.116). A valid Assurance of Compliance with human subjects protection regulations along with evidence of completion of appropriate human subjects research training by all investigators and personnel involved with human subjects research should accompany the protocol for review by the IRB.

In addition to a local IRB approval, a headquarters-level human subjects administrative review and approval is required for all research conducted or supported by the DoD. The Army, Navy, or Air Force office responsible for managing the award can provide guidance and information about their component's headquarters-level review process. Note that confirmation of a current Assurance of Compliance with human subjects protection regulations and appropriate human subjects research training is required before headquarters-level approval can be issued.

The time required to complete the IRB review/approval process varies depending on the complexity of the research and the level of risk involved with the study. The IRB approval process can last between one and three months, followed by a DoD review that could last between three and six months. Ample time should be allotted to complete the approval process. DoD/DARPA funding cannot be used towards human subjects research until ALL approvals are granted.

6.2.3. Animal Use

Award recipients performing research, experimentation, or testing involving the use of animals shall comply with the rules on animal acquisition, transport, care, handling, and use as outlined in: (i) 9 CFR parts 1-4, Department of Agriculture rules that implement the Animal Welfare Act of 1966, as amended, (7 U.S.C. § 2131-2159); (ii) National Institutes of Health Publication No. 86-23, "Guide for the Care and Use of Laboratory Animals" (8th Edition); and (iii) DoD Instruction 3216.01, "Use of Animals in DoD Programs."

For projects anticipating animal use, proposals should briefly describe plans for Institutional Animal Care and Use Committee (IACUC) review and approval. Animal studies in the program will be expected to comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals, available at http://grants.nih.gov/grants/olaw/olaw.htm.

All award recipients must receive approval by a DoD-certified veterinarian, in addition to an IACUC approval. No animal studies may be conducted using DoD/DARPA funding until the United States Army Medical Research and Materiel Command (USAMRMC) Animal Care and Use Review Office (ACURO) or other appropriate DoD veterinary office(s) grant approval. As a part of this secondary review process, the award recipient will be required to complete and submit an ACURO Animal Use Appendix, which may be found at https://mrmc-www.army.mil/index.cfm?pageid=Research_Protections.acuro&rn=1.

6.2.4. Export Control

Per DFARS 225.7901-4, all procurement contracts, other transactions and other awards, as deemed appropriate, resultant from this solicitation will include the DFARS Export Control clause (252.225-7048).

6.2.5. 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. Each proposer who submits a contract proposal and includes subcontractors is required to submit a subcontracting plan in accordance with FAR 19.702(a) (1) and should do so with their proposal. The plan format is outlined in FAR 19.704.

6.2.6. Electronic and Information Technology

All electronic and information technology acquired through this solicitation must satisfy the accessibility requirements of Section 508 of the Rehabilitation Act (29 U.S.C.§ 794d) and FAR 39.2. Each proposer who submits a proposal involving the creation or inclusion of electronic and information technology must ensure that Federal employees with disabilities will have access to and use of information that is comparable to the access and use by Federal employees who are not individuals with disabilities and members of the public with disabilities seeking information or services from DARPA will have access to and use of information and data that is comparable to the access and use of information and data by members of the public who are not individuals with disabilities.

6.2.7. Employment Eligibility Verification

As per FAR 22.1802, recipients of FAR-based procurement contracts must enroll as federal contractors in E-verify and use the system to verify employment eligibility of all employees assigned to the award. All resultant contracts from this solicitation will include FAR 52.222-54, "Employment Eligibility Verification." This clause will not be included in grants, cooperative agreements, or Other Transactions.

6.2.8. System for Award Management (SAM) and Universal Identifier Requirements

Unless the proposer is exempt from this requirement, as per FAR 4.1102 or 2 CFR 25.110 as applicable, all proposers must be registered in the System for Award Management (SAM) and have a valid Data Universal Numbering System (DUNS) number prior to submitting a proposal. All proposers must maintain an active registration in SAM with current information at all times during which they have an active Federal award or proposal under consideration by DARPA. All proposers must provide the DUNS number in each proposal they submit.

Information on SAM registration is available at www.sam.gov.

6.2.9. Reporting Executive Compensation and First-Tier Subcontract Awards

FAR clause 52.204-10, "Reporting Executive Compensation and First-Tier Subcontract Awards," will be used in all procurement contracts valued at \$25,000 or more. A similar award term will be used in all grants and cooperative agreements.

6.2.10. Updates of Information Regarding Responsibility Matters

Per FAR 9.104-7(c), FAR clause 52.209-9, Updates of Publicly Available Information Regarding Responsibility Matters, will be included in all contracts valued at \$500,000 or more where the contractor has current active Federal contracts and grants with total value greater than \$10,000,000.

6.2.11. Representations by Corporations Regarding an Unpaid Delinquent Tax Liability or a Felony Conviction under any Federal Law

The following representation will be included in all awards:

- (a) In accordance with section 101(a) of the Continuing Appropriations Act, 2016 (Pub. L. 114-53) and any subsequent FY 2016 appropriations act that extends to FY 2016 funds the same restrictions as are contained in sections 744 and 745 of division E, title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235), none of the funds made available by this or any other Act may be used to enter into a contract with any corporation that
 - (1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless the agency has considered suspension or debarment of the corporation and made a determination that this further action is not necessary to protect the interests of the Government; or
 - (2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless the agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

(b) The Offeror represents that –

(1) It is [] is not [] a corporation that has any unpaid Federal tax liability that has been
assessed, for which all judicial and administrative remedies have been exhausted or have
lapsed, and that is not being paid in a timely manner pursuant to an agreement with the
authority responsible for collecting the tax liability,

(2) It is [] is not [] a corporation that was convicted of a felony criminal violation under a Federal law within the preceding 24 months.

6.2.12. Cost Accounting Standards (CAS) Notices and Certification

As per FAR 52.230-2, any procurement contract in excess of the referenced threshold resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR 99), except those contracts which are exempt as specified in 48 CFR 9903.201-1. Any proposer submitting a proposal which, if accepted, will result in a CAS compliant contract, must submit representations and a Disclosure Statement as required by 48 CFR 9903.202 detailed in FAR 52.230-2. The disclosure forms may be found at http://www.whitehouse.gov/omb/procurement casb.

6.2.13. Controlled Unclassified Information (CUI) on Non-DoD Information Systems

Controlled Unclassified Information (CUI) refers to unclassified information that does not meet the standards for National Security Classification but is pertinent to the national interests of the United States or to the important interests of entities outside the Federal Government and under law or policy requires protection from unauthorized disclosure, special handling safeguards, or prescribed limits on exchange or dissemination. All non-DoD entities doing business with DARPA are expected to adhere to the following procedural safeguards, in addition to any other relevant Federal or DoD specific procedures, for submission of any proposals to DARPA and any potential business with DARPA:

- Do not process DARPA CUI on publicly available computers or post DARPA CUI to publicly available webpages or websites that have access limited only by domain or Internet protocol restriction.
- Ensure that all DARPA CUI is protected by a physical or electronic barrier when not under direct individual control of an authorized user and limit the transfer of DARPA CUI to subawardees or teaming partners with a need to know and commitment to this level of protection.
- Ensure that DARPA CUI on mobile computing devices is identified and encrypted and all communications on mobile devices or through wireless connections are protected and encrypted.
- Overwrite media that has been used to process DARPA CUI before external release or disposal.

6.2.14. Safeguarding of Covered Defense Information and Cyber Incident Reporting

Per DFARS 204.7304, DFARS 252.204-7012, "Safeguarding of Covered Defense Information and Cyber Incident Reporting," applies to this solicitation and all FAR-based awards resulting from this solicitation.

6.2.15. Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements

(a) In accordance with section 101(a) of the Continuing Appropriations Act, 2016 (Pub. L. 114-53) and any subsequent FY 2016 appropriations act that extends to FY 2016 funds the same restrictions as are contained in section 743 of division E, title VII, of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L. 113-235), none of the funds appropriated (or otherwise made available) by this or any other Act may be used for a contract with an entity

that requires employees or subcontractors of such entity seeking to report fraud, waste, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or contactors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

- (b) The prohibition in paragraph (a) of this provision does not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information.
- (c) Representation. By submission of its offer, the Offeror represents that it does not require employees or subcontractors of such entity seeking to report fraud, waste, or abuse to sign or comply with internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or contactors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a Federal department or agency authorized to receive such information.

6.3. REPORTING

The number and types of reports will be specified in the award document, but will include as a minimum monthly financial status reports and quarterly technical status reports. The reports shall be prepared and submitted in accordance with the procedures contained in the award document and mutually agreed on before award. Reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics. A Final Report that summarizes the project and tasks will be required at the conclusion of the performance period for the award, notwithstanding the fact that the research may be continued under a follow-on vehicle. Reference 4.4.1.6 for a sample list for complying with this request.

6.4. ELECTRONIC SYSTEMS

6.4.1. Representations and Certifications

In accordance with FAR 4.1201, prospective proposers shall complete electronic annual representations and certifications at http://orca.bpn.gov.

6.4.2. Wide Area Work Flow (WAWF)

Unless using another approved electronic invoicing system, performers will be required to submit invoices for payment directly via the Internet/WAWF at http://wawf.eb.mil. Registration to WAWF will be required prior to any award under this BAA.

6.4.3. i-EDISON

The award document for each proposal selected for funding will contain a mandatory requirement for patent reports and notifications to be submitted electronically through i-Edison (http://sedison.info.nih.gov/iEdison).

7. Agency Contacts

Administrative, technical or contractual questions should be sent via e-mail to <u>DARPA-BAA-16-24@darpa.mil</u>. All requests must include the name, email address, and phone number of a point of contact.

Points of Contact
The BAA Coordinator for this effort may be reached at:

DARPA-BAA-16-24@darpa.mil.

DARPA/BTO

ATTN: DARPA-BAA-16-24

675 North Randolph Street

Arlington, VA 22203-2114

8. Other Information

8.1. INTELLECTUAL PROPERTY

8.1.1. Procurement Contract Proposers

8.1.1.1 Noncommercial Items (Technical Data and Computer Software)

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS, shall identify all noncommercial technical data, and noncommercial computer software that it plans to generate, develop, and/or deliver under any proposed award instrument in which the Government will acquire less than unlimited rights, and to assert specific restrictions on those deliverables. Proposers shall follow the format under DFARS 252.227-7017 for this stated purpose. In the event that proposers do not submit the list, the Government will assume that it automatically has "unlimited rights" to all noncommercial technical data and noncommercial computer software generated, developed, and/or delivered under any award instrument. If mixed funding is anticipated in the development of noncommercial technical data, and noncommercial computer software generated, developed, and/or delivered under any award instrument, then proposers should identify the data and software in question, as subject to Government Purpose Rights (GPR). In accordance with DFARS 252.227-7013 Rights in Technical Data -Noncommercial Items, and DFARS 252.227-7014 Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation, the Government will automatically assume that any such GPR restriction is limited to a period of five (5) years in accordance with the applicable DFARS clauses, at which time the Government will acquire "unlimited rights" unless the parties agree otherwise. Proposers are advised that the Government will use the list during the source selection evaluation process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE." It is noted an assertion of "NONE" indicates that the Government has "unlimited rights" to all noncommercial technical data and noncommercial computer software delivered under the award instrument, in accordance with the DFARS provisions cited above. Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

A sample list for complying with this request is as follows:

NONCOMMERCIAL				
Technical Data	Summary of Intended	Basis for Assertion	Asserted Rights	Name of Person Asserting
Computer Software	Use in the Conduct of		Category	Restrictions
To be Furnished	the Research			
With Restrictions				
(LIST)	(NARRATIVE)	(LIST)	(LIST)	(LIST)

8.1.1.2 Commercial Items (Technical Data and Computer Software)

Proposers responding to this BAA requesting a procurement contract to be issued under the FAR/DFARS, shall identify all commercial technical data, and commercial computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government's use of such commercial technical data and/or commercial computer software. In the event that proposers do not submit the list, the Government will assume that there are no restrictions on the Government's use of such commercial items. The Government may use the list during the source selection evaluation process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE." Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

A sample list for complying with this request is as follows:

COMMERCIAL				
Technical Data	Summary of Intended	Basis for Assertion	Asserted Rights	Name of Person Asserting
Computer Software	Use in the Conduct of		Category	Restrictions
To be Furnished	the Research			
With Restrictions				
(LIST)	(NARRATIVE)	(LIST)	(LIST)	(LIST)

8.1.2. Non-Procurement Contract Proposers - Noncommercial and Commercial Items (Technical Data and Computer Software)

Proposers responding to this BAA requesting an Other Transaction for Prototype shall follow the applicable rules and regulations governing that instrument, but in all cases should appropriately identify any potential restrictions on the Government's use of any Intellectual Property contemplated under that award instrument. This includes both Noncommercial Items and Commercial Items. Although not required, proposers may use a format similar to that described in Paragraphs 1.a and 1.b above. The Government may use the list during the source selection evaluation process to evaluate the impact of any identified restrictions, and may request additional information from the proposer, as may be necessary, to evaluate the proposer's assertions. If no restrictions are intended, then the proposer should state "NONE." Failure to provide full information may result in a determination that the proposal is not compliant with the BAA – resulting in nonselectability of the proposal.

8.1.3. All Proposers – Patents

Include documentation proving your ownership of or possession of appropriate licensing rights to all patented inventions (or inventions for which a patent application has been filed) that will be utilized under your proposal for the DARPA program. If a patent application has been filed for an invention that your proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, you may provide only the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: 1) a representation that you own the invention, or 2) proof of possession of appropriate licensing rights in the invention.

8.1.4. All Proposers-Intellectual Property Representations

Provide a good faith representation that you either own or possess appropriate licensing rights to all other intellectual property that will be utilized under your proposal for the DARPA program. Additionally, proposers shall provide a short summary for each item asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research.