Broad Agency Announcement

Intrinsic Cognitive Security (ICS)
INFORMATION INNOVATION OFFICE

HR001124S0002

October 16, 2023

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PART I: OVERVIEW INFORMATION

- **Federal Agency Name** – Defense Advanced Research Projects Agency (DARPA), Information Innovation Office (I2O)
- **Funding Opportunity Title** – Intrinsic Cognitive Security (ICS)
- **Announcement Type** – Initial Announcement
- **Funding Opportunity Number** – HR001124S0002
- **Assistance Listing Number** – 12.910 Research and Technology Development
- **Dates**
    - Posting Date: October 16, 2023
    - Proposers Day: October 20, 2023
    - Abstract Due Date and Time: November 2, 2023 12:00 PM (ET) Eastern Time
    - Questions Due: November 20, 2023, 12:00PM (ET)
    - Proposal Due Date and Time: December 20, 2023, 12:00 PM

- Anticipated individual awards – DARPA anticipates multiple awards in technical area (TA) 1 and one award in TA2.

- Total Funding Available for Award - The anticipated award amount for a TA1 performer will range between $8M-$10M. The anticipated award amount for a TA2 performer will range from $3M-$5M.

- Types of instruments that may be awarded – Procurement Contract, Cooperative Agreement or Other Transactions (OT).

- Agency contact
    - Points of Contact

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PART II: FULL TEXT OF ANNOUNCEMENT

I. Funding Opportunity Description

This publication constitutes a Broad Agency Announcement (BAA) as contemplated in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016 and 2 C.F.R. § 200.203. Any resultant award negotiations will follow all pertinent laws and regulations, and any negotiations and/or awards for procurement contracts will use procedures under FAR 15.4, Contract Pricing, as specified in the BAA.

The Defense Advanced Research Projects Agency (DARPA) is soliciting innovative proposals in the following areas of interest: computational science to build tactical mixed reality systems that protect human users against cognitive attack. Proposed research should investigate innovative approaches that enable revolutionary advances in science, devices, or systems. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice.

A. Program Overview

The Intrinsic Cognitive Security (ICS) program develops computational science to build tactical mixed reality systems that protect human users against cognitive attacks. The core technical hypothesis of the program is that formal methods can be extended with cognitive guarantees and models to protect mixed reality users from cognitive attacks. Mixed reality (MR) integrates virtual and real worlds in real-time and will be ubiquitous in future military missions, including missions involving dismounted soldiers. Users of MR systems will be vulnerable to a wide variety of adversary attacks that exploit the intimate connection between users and MR equipment, such as information flooding to increase equipment latency and induce physical illness, planting real-world objects to overwhelm displays, subverting a personal area network to sow confusion, injecting virtual data to distract personnel, using objects to overwhelm a user with confusing false alarms, assessing user status through an eye tracker, and other potential attacks.

Formal methods are rigorous, mathematics-based approaches to provide guarantees about computer-based systems. Formal methods used in the design of security-critical systems can guarantee the absence of exploitable system weaknesses. Cognitive models represent aspects of human perception, action, memory, and reasoning. The ICS program will extend formal methods by explicitly creating and analyzing cognitive and other models as part of MR system development to protect the warfighter from adversary attacks.

MR systems today are deployed on a few DoD missions in which better performance justifies high component and engineering costs. DoD missions will increasingly deploy highly capable and less expensive commercial components. One MR platform under U.S. Army development uses enhanced and ruggedized commercial components to improve soldier decision-making and target engagement. MR-enabled capabilities imagined or currently under development include soldier squad coordination, real-time low-light/infrared radiation/X-ray overlays, real-time

mentoring, radio traffic visualization, weapon targeting, target selection and coordination, remote medical assistance, combat diving situational awareness, and navigation aids.

Commercial MR systems today apply cognitive engineering principles during system development, but those principles are not used to ensure how MR systems operate when facing an adversary intent on interfering with a mission. Some potential user cognitive effects have been identified in virtual settings – such as manipulating emotion, inducing cybersickness, causing confusion, reducing trust in equipment, and assessing anxiety – but commercial MR systems designed to work in a benign and uncontested operating environment lack user protections. Traditional methods used in current DoD systems to address sensor and cybersecurity threats do not address user cognitive effects. As commercial MR technologies are increasingly adapted for diverse DoD missions, protection for users is needed.

Formal methods have not been widely used before to protect MR users, but the cognitive engineering field provides principles upon which models and guarantees can be formulated. The ICS program proves guarantees relevant to MR user attacks and protections based on models relevant to MR system use. Guarantees about adversary attacks and associated protections formalize needed system properties and are informed in part by the many ways in which MR systems have been known to fail. Modeling user behavior in the MR domain formalizes understanding of how people behave when using immersive systems. Models of human behavior relevant to mitigating MR system attacks can be built by adapting and formalizing the emerging understanding of human behavior in mixed reality and in related domains, and can involve both certainties and probabilities. For example, user physiology effects have been studied in the stimulation effects of virtual reality games and other health issues; user perception effects have been studied in night vision goggles and other products; user attention effects have been studied in the design of aircraft flight decks; user confidence effects have been studied in self-driving cars; and user status effects have been studied to provide commercial MR systems privacy.

Models of sufficient fidelity to make proofs of guarantees useful also must not be unnecessarily complex. For example, a model of physiology that estimates likelihood of nausea based on the user's exposure to excessive display lag or dynamic visual content could be used to prove performance requirements for an MR system that protects most people against attacks causing cybersickness. However, models that explain the biological basis for cybersickness may not be applicable to mixed reality system design. A model of the key decision-making points of a particular mission could be useful for reasoning about user distraction while executing that mission. However, a detailed model of the human attention system is likely unnecessary to support needed guarantees. The development of implementable guarantees that address specific MR vulnerabilities and the appropriate models to efficiently support establishment of those guarantees are the focuses of the program.

Proposers to the ICS program will identify one or more example missions. A mission is a task that a mixed reality system helps a user to achieve. An ideal ICS program mission can be rapidly prototyped using readily-available hardware and software, has identified potential vulnerabilities, and can be related to a potential DoD use of mixed reality. Guarantees will be useful in the construction of mixed reality systems that achieve a mission because they will drive system requirements that protect mixed reality users. Guarantees in the ICS program will be proven

using models and demonstrated to be implementable, meaning that the assumptions embedded in guarantees will be shown to be incorporable in prototypes.

The Government anticipates guarantees and associated models will address mixed reality user issues in five categories.

1. *Physiology* includes issues that cause acute or chronic health effects on users. Mixed reality equipment that leads to user nausea, dizziness, headaches, and long-term negative health impacts are examples in this category.

2. *Perception* includes issues that lead users to misapprehend information. Using virtual information to mask important real-world events, interfering with users accurately knowing their location, and causing users to mistakenly assess real-world occurrences are examples in this category.

3. *Attention* includes issues that degrade user mission performance through confusing or distracting information. Distracting a user at a key mission moment with unimportant alarms or highlighting irrelevant information are examples in this category.

4. *Confidence* includes issues that cause users to doubt virtual world or real-world information. Presenting a user with inconsistent data or overwhelming with information that causes users to turn off equipment are examples in this category.

5. *Status* includes issues that allow an adversary to inappropriately leverage data that the user has shared with the system. Sharing sensitive data such as location or pupil width are examples in this category.

These categories involve diverse issues, and guarantees and associated models are anticipated to be largely unrelated to each other, particularly those from different categories. Guarantees and associated models in distinct categories are also anticipated to be expressed in distinct modeling languages, because the challenges are dissimilar and models will be specific to the guarantees to be established. For example, a guarantee in the physiology category that relates aspects of equipment performance with likelihood of cybersickness would need to be established using a model of the circumstances that trigger users to become nauseated. As another example, a guarantee in the status category that keeps user pupil diameter from being unnecessarily shared would be established using a model of a mixed reality system's information flow. A guarantee in the attention category that limits distraction at key mission points requires a model of a mission that provides what those key mission points are. It is expected that proposers will apply a variety of languages and tools to address these diverse challenges. It is not anticipated that performers will relate models supporting different guarantees to one another.

The Government anticipates that the ICS program will adapt existing languages and tools rather than invent entirely new techniques. The term "formal methods" in the ICS program (defined above) is broad; modeling, specification, and reasoning approaches need to be mathematically rigorous and meet the specification and proof needs of the program and will be chosen by the performers. Some guarantees will involve probabilities rather than certainties. For example, a

user may become distracted regardless of a mixed reality system's operation, so it is not possible to build a mixed reality system that absolutely ensures that a mixed reality user remains on task. Performers may use models that are known to work in most cases, or provide guarantees that explicitly involve probabilities, so long as they advance the overall goal of reducing mixed reality vulnerabilities in the context of the overall ICS approach.

Establishment of protection guarantees based on models provides a rigorous basis from which to build protected MR systems. Adversary exploitation of security vulnerabilities associated with widespread MR use is a potential technological surprise. Methods for developing protected MR systems will be developed by the ICS program before MR systems lacking protections are pervasive and essential. This program will show how to protect personnel and enable MR adoption in the DoD.

Technical Areas:

The program has two technical areas (TAs):

- TA1: Mixed Reality Cognition
- TA2: Evaluation

There are multiple points of essential collaboration in the program, and the Government expects all performers to collaborate effectively. Proposers should read the descriptions of both TAs and the Program Structure and Metrics sections to ensure a full understanding of the program context, structure, and anticipated relationships required among performers. To facilitate the open exchange of information, all program performers will have Associate Contractor Agreement (ACA) language included in their award. See Section VIII for further information. No organization will be awarded both a TA1 and TA2 contract as either a prime contractor or as a subcontractor.

TA1: Mixed reality cognition

TA1 teams must address both TA1.1 and TA1.2.

TA1.1: Cognitive guarantees - The goal of TA1.1 is to create cognitive guarantees that secure users of mixed reality systems and overcome several current challenges: 1) current lack of guarantees that address mixed reality vulnerabilities; 2) need to express guarantees in languages suitable for proofs from models; and 3) need for guarantees to be implementable on mixed reality systems.

Example approaches to these challenges include:

- Applying cognitive engineering principles to identify negative attack effects and mitigations;
- Formulating guarantees that relate operation of mixed reality equipment to attack effects using existing formal methods languages;
- Formalizing guarantees using specification languages supportable by cognitive models; and

- Demonstrating in prototypes that guarantees can drive system requirements.

TA1.2: Cognitive models - The goal of TA1.2 is to build cognitive models for reasoning about users of mixed reality systems overcoming several challenges: 1) current lack of cognitive models relevant to mixed reality system vulnerabilities; 2) need to create models with sufficient fidelity with human behaviors; and 3) need for analyzable mathematical models that support automated reasoning about guarantees.

Example approaches to these challenges include:

- Constructing models that support establishing specific guarantees using engineering-relevant elements of the cognitive stack;
- Using languages that enable existing formal methods reasoning tools and developing reasoning frameworks that enable mixed reality guarantee proofs; and
- Validating models against existing cognitive engineering principles and performing experiments as needed to complete them.

These challenges are important and illustrative, but are not exhaustive, so proposals should clearly articulate other challenges considered in the proposal and the methods to address them. Proposers should not limit themselves to the example approaches and should propose novel approaches for addressing the program challenges. The proposals should explain, presenting any preliminary results as evidence, how the proposed approaches are likely to be successful in terms of the ability to meet the program metrics.

A strong TA1 proposal will describe the following:

- One or more missions that can be rapidly prototyped using readily-available hardware and software, have identified potential vulnerabilities that will be mitigated consistent with program guarantees, and are suggestive of potential DoD use of mixed reality.
- Guarantees that will be formalized to address mixed reality vulnerabilities, are drawn from all or nearly all mixed reality issue categories, and have an associated innovative technical plan that identifies the language or other method that will be adapted for expressing them.
- Models that help establish the guarantees, an innovative technical plan for how the models will be represented and used to establish associated guarantees, and a plan for assuring the fidelity of the models using existing literature or experimentation.
- Any required human subject experiments and a plan for writing required human subjects documentation and securing local institutional review board (IRB) and DoD Human Research Protection Office (HRPO) approval.
- Prototype or prototypes that will be used to establish that the guarantees are realizable in a functioning system and the commercially available platform or platforms and software infrastructure to be used.
- Execution team that has the diverse skills needed to perform effectively as a TA1 team.
- The extent to which the proposed work advances the program-wide metrics and the overall program goal.
- A plan for interacting with a TA2 performer to enable effective evaluations.

TA2. Evaluation – The goal of this TA is to evaluate the efficacy of models, proofs, and guarantees. This TA will:

- Validate that TA1-provided models are high-fidelity by comparing against new and existing studies used in their development;
- Validate TA1-provided guarantee proofs by using automated reasoning tools; and
- Validate TA1-provided prototype implementations are consistent with the assumptions of proven guarantees.

TA2 will also refine the proposed program metrics (listed in Section C), identify baselines, and evaluate the program-developed technologies to support the proposed metrics.

A strong TA2 proposal will describe the following:

- Methods for conducting evaluations for alignment of prototypes with guarantee assumptions.
- Technical approach, including proposed criteria, by which diverse models can be judged to possess sufficient fidelity.
- Personnel with computing expertise to curate and maintain proofs developed using diverse methods and tools.
- Personnel with ability to assess justification of models based on literature and experimentation.
- A plan for interacting with TA1 performers to enable effective evaluations.

B. Program Structure

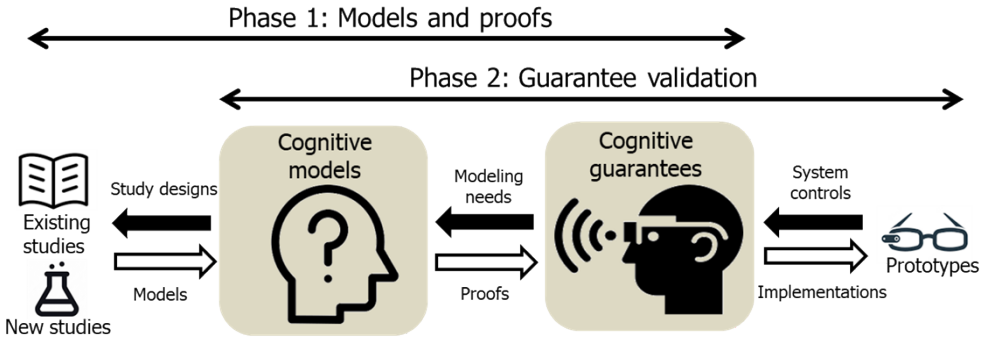

Figure 1. Program design

The ICS program has two phases, as indicated in Figure 1.

The primary focus of Phase 1 is the development of proved guarantees and supporting models. Guarantees are developed to describe desirable properties of mixed reality systems. Models are developed to enable proofs of the guarantees, and many models are anticipated to be cognitive models. Technical approaches should leverage existing languages and proof systems as much as possible. Models are developed based on existing studies and as-needed new studies.

Phase 2 continues the work of Phase 1 with the development of guarantees and models, but the primary focus of Phase 2 is to validate the usefulness of the guarantees in mixed reality systems. Performers will develop prototypes to demonstrate how guarantees are used to lessen vulnerabilities in working systems. The ICS program's systems are expected to be low-maturity demonstration prototypes built using commercially available hardware and software and are intended to demonstrate how guarantees can be incorporated into system implementations.

The program is a 36-month effort divided into two phases, as shown in Figure 2. Phase 1 and Phase 2 are each 18 months. Pre-authorization of performers before award finalization is anticipated to speed documentation and approval of IRB/HSR protocols, as indicated in the program schedule. Phase 1 and Phase 2 will end with an assessment and demonstration meeting, which will provide an opportunity to evaluate the progress made against the program objectives listed in Table 1. Proposers should submit a detailed schedule of logically sequenced tasks and subtasks that in sum constitute a constructive plan for achieving the proposed technical objectives while appropriately managing risk. Schedules will be synchronized across performers, as required, and monitored and reviewed throughout the ICS program's period of performance. For budgeting purposes, use July 1, 2024, as a Phase 1 kick-off date for both TAs.

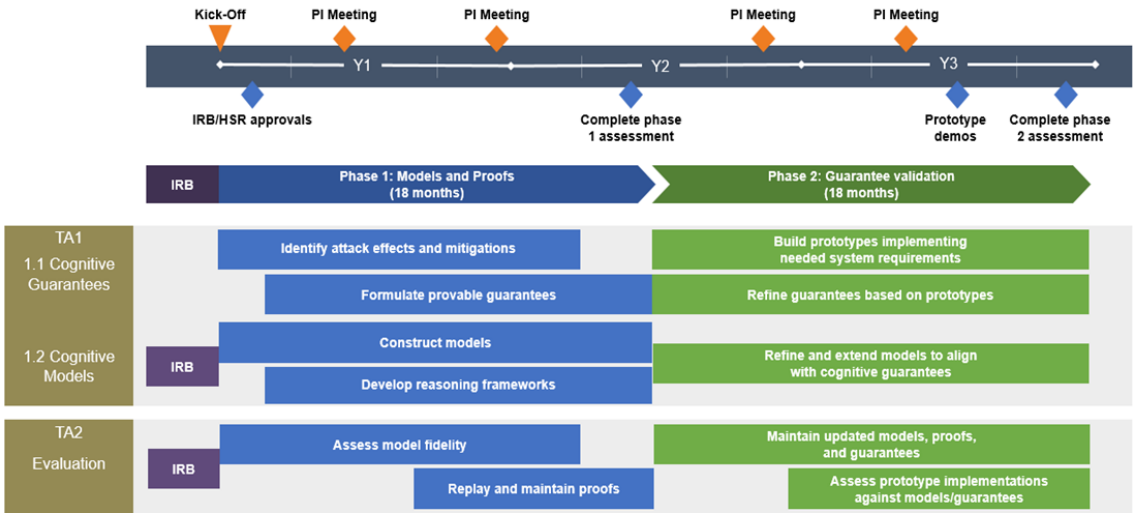

Figure 2. Schedule

The Government will specify the locations for Principal Investigator (PI) meetings during program performance. There will be two PI meetings during each phase. Each phase will end with an assessment and demonstration meeting. PI meeting locations are likely to be spread across performer locations, and the proposers should plan to host at least one PI meeting over the duration of the program. The goals of the PI meetings will be to present new research findings and accomplishments, review plans for the next period, discuss implementation milestones, and resolve any programmatic, budgeting, or logistics issues.

In addition to these program-wide events, the Government team will conduct site visits and will hold monthly teleconference meetings with each PI to enhance communications with the

Government team.

For travel planning and costing, assume seven (7) trips during the entire two (2) phases (2024-2027) per the program schedule shown above, alternating between Washington, DC and San Diego, CA, with each trip requiring 3 days and 2 nights.

C. Program Metrics

In order for the Government to evaluate the effectiveness of a proposed solution in achieving the stated program objectives, proposers should note the following program metrics that will serve as the basis for determining whether satisfactory progress is being made to warrant continued funding of the program. Although the following program metrics are specified, proposers should note that the Government has identified these goals with the intention of bounding the scope of effort, while affording the maximum flexibility, creativity, and innovation in proposing solutions to the stated problem.

Proposals should cite the quantitative and qualitative success criteria that the proposed effort will achieve by the time of each Phase's program metric measurement. Success is measured in both phases by the number of provable guarantees and validated models. Phase 2 will additionally measure the extent to which the protections guaranteed through analysis of models can be implemented in operating prototypes. The detailed metrics for the entire program (i.e., not for each performer) are provided in Table 1. "Category" in Table 1 refers to types of cognitive guarantees and models: physiology, perception, attention, confidence, and status.

Capability	Metric	Phase 1: Models and proofs	Phase 2: Guarantee validation
Cognitive models	Number of cognitive models validated to be supported by new and existing studies	10 (average 2 per category)	15 (average 3 per category)
Proved cognitive guarantees	Number of proved and validated guarantees	8 (80% of models)	14 (90%+ of models)
Relevant cognitive guarantees	Number of proved and validated guarantees implemented in a prototype	-	5 (average 1 per type)

Table 1. Program Metrics

D. Deliverables

All performers will be required to provide the following deliverables:

- Technical papers covering work funded by the ICS program;
- Source code, build scripts, and any toolchains required to compile, interpret, or execute code; algorithm and interface description documents; user guides; any data developed on

the program or necessary to replicate results; and documentation, assumptions, and limitations for all software developed under this program, to include guarantees, models, proofs, and prototypes;

- Slide Presentations. Annotated slide presentations shall be submitted within one month after the program kick-off meeting and after each program event (program reviews, PI meetings, and technical interchange meetings);
- Quarterly Progress Reports. A quarterly progress report describing technical progress made, resources expended, major risks, planned activities, trip summaries, changes to key personnel, and any potential issues or problem areas that require the attention of the Government team shall be provided within 15 days after the end of each quarter;
- Monthly Progress Reports. A monthly progress report in the form of a PowerPoint document describing technical progress, planned activities for the next month, and any technical, financial, and programmatic issues shall be provided and presented in a videoconference with DARPA;
- Monthly financial status reports;
- A Phase 1 Final Report that concisely summarizes the effort conducted within that phase; and
- A Final Technical Report that concisely summarizes the effort of the program.

E. Intellectual Property

The program will emphasize creating and leveraging open-source technology and architecture. Intellectual property rights asserted by proposers are strongly encouraged to be aligned with open-source regimes.

A key goal of the program is to facilitate rapid innovation by providing a base for future users or developers of program technologies and deliverables. Therefore, it is desired that all noncommercial software (including source code), software documentation, hardware designs and documentation, and technical data generated by the program be provided as deliverables to the Government with unlimited rights, as lesser rights may adversely impact the lifecycle costs of affected items, components, or processes.

II. Award Information

A. General Award Information

Multiple awards are anticipated. The 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, as applicable.

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 (see Section IV.B.3.d.., "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/or cost/price within a reasonable time, and the proposer fails to timely provide requested additional information. Proposals identified for negotiation may result in a procurement contract, 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.

Proposers looking for innovative, commercial-like contractual arrangements are encouraged to consider requesting Other Transactions. To understand the flexibility and options associated with Other Transactions, consult http://www.darpa.mil/work-with-us/contract-management#OtherTransactions.

In accordance with 10 U.S.C. § 4022(f), the Government may award a follow-on production contract or Other Transaction (OT) for any OT awarded under this solicitation if: (1) that participant in the OT, or a recognized successor in interest to the OT, successfully completed the entire prototype project provided for in the OT, as modified; and (2) the OT provides for the award of a follow-on production contract or OT to the participant, or a recognized successor in interest to the OT.

In all cases, the Government contracting officer shall have sole discretion to select award instrument type, regardless of instrument type proposed, and to negotiate all instrument terms and conditions with selectees. 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

B. 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 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 solicitation, the Government expects that program goals as described herein may be met by proposers intending to perform fundamental research and does not anticipate applying publication restrictions of any kind to individual awards for fundamental research that may result from this solicitation. Notwithstanding this statement of expectation, the Government is not prohibited from considering and selecting research proposals that, while perhaps not qualifying as fundamental research under the foregoing definition, still meet the solicitation criteria for submissions. If proposals are selected for award that offer other than a fundamental research solution, the Government will either work with the proposer to modify the proposed statement of work to bring the research back into line with fundamental research or else the proposer will agree to restrictions in order to receive an award.

University or non-profit research institution performance under this solicitation will include effort categorized as fundamental research. In addition to Government support for free and open scientific exchanges and dissemination of research results in a broad and unrestricted manner, the academic or non-profit research performer or recipient, regardless of tier, acknowledges that such research may have implications that are important to U.S. national interests and must be protected against foreign influence and exploitation. As such, the academic or non-profit research performer or recipient agrees to comply with the following requirements:

(a) The University or non-profit research institution performer or recipient must establish and maintain an internal process or procedure to address foreign talent programs, conflicts of commitment, conflicts of interest, and research integrity. The academic or non-profit research performer or recipient must also utilize due diligence to identify Foreign Components or participation by Senior/Key Personnel in Foreign Government Talent Recruitment Programs and agree to share such information with the Government upon request.

    i. The above described information will be provided to the Government as part of the proposal response to the solicitation and will be reviewed and assessed prior to award. Generally, this information will be included in the Research and Related Senior/Key Personnel Profile (Expanded) form (SF-424) required as part the proposer's submission through Grants.gov.

        1. Instructions regarding how to fill out the SF-424 and its biographical sketch can be found through Grants.gov.

    ii. In accordance with USD(R&E) direction to mitigate undue foreign influence in DoD-funded science and technology, DARPA will assess all Senior/Key Personnel proposed to support DARPA grants and cooperative agreements for potential undue foreign influence risk factors relating to professional and financial activities. This will be done by evaluating information provided via the SF-424, and any accompanying or referenced documents, in order to identify and assess any associations or affiliations the Senior/Key Personnel may have with foreign strategic competitors or countries that have a history of intellectual property theft, research misconduct, or history of targeting U.S. technology for unauthorized transfer. DARPA's evaluation takes into consideration the entirety of the Senior/Key Personnel's SF-424, current and pending support, and biographical

sketch, placing the most weight on the Senior/Key Person's professional and financial activities over the last 4 years. The majority of foreign entities lists used to make these determinations are publicly available. The DARPA Countering Foreign Influence Program (CFIP) "Senior/Key Personnel Foreign Influence Risk Rubric" details the various risk ratings and factors. The rubric can be seen at the following link:
https://www.darpa.mil/attachments/092021DARPACFIPRubric.pdf

iii. Examples of lists that DARPA leverages to assess potential undue foreign influence factors include, but are not limited to:

1. Executive Order 13959 "Addressing the Threat From Securities Investments That Finance Communist Chinese Military Companies": https://www.govinfo.gov/content/pkg/FR-2020-11-17/pdf/2020-25459.pdf
2. The U.S. Department of Education's College Foreign Gift and Contract Report: College Foreign Gift Reporting (ed.gov)
3. The U.S. Department of Commerce, Bureau of Industry and Security, List of Parties of Concern: https://www.bis.doc.gov/index.php/policy-guidance/lists-of-parties-of-concern
4. Georgetown University's Center for Security and Emerging Technology (CSET) Chinese Talent Program Tracker: https://chinatalenttracker.cset.tech
5. Director of National Intelligence (DNI) "World Wide Threat Assessment of the US Intelligence Community": 2021 Annual Threat Assessment of the U.S. Intelligence Community (dni.gov)
6. Various Defense Counterintelligence and Security Agency (DCSA) products regarding targeting of US technologies, adversary targeting of academia, and the exploitation of academic experts: https://www.dcsa.mil/

(b) DARPA's analysis and assessment of affiliations and associations of Senior/Key Personnel is compliant with Title VI of the Civil Rights Act of 1964. Information regarding race, color, or national origin is not collected and does not have bearing in DARPA's assessment.

(c) University or non-profit research institutions with proposals selected for negotiation that have been assessed as having high or very high undue foreign influence risk, will be given an opportunity during the negotiation process to mitigate the risk. DARPA reserves the right to request any follow-up information needed to assess risk or mitigation strategies.

i. Upon conclusion of the negotiations, if DARPA determines, despite any proposed mitigation terms (e.g. mitigation plan, alternative research personnel), the participation of any Senior/Key Research Personnel still represents high risk to the program, or proposed mitigation affects the Government's confidence in proposer's capability to successfully complete the research (e.g., less qualified Senior/Key Research Personnel) the Government may determine not to award the proposed effort. Any decision not to award will be predicated upon reasonable

disclosure of the pertinent facts and reasonable discussion of any possible alternatives while balancing program award timeline requirements.

(d) Failure of the academic or non-profit research performer or recipient to reasonably exercise due diligence to discover or ensure that neither it nor any of its Senior/Key Research Personnel involved in the subject award are participating in a Foreign Government Talent Program or have a Foreign Component with an a strategic competitor or country with a history of targeting U.S. technology for unauthorized transfer may result in the Government exercising remedies in accordance with federal law and regulation.

i. If, at any time, during performance of this research award, the academic or non-profit research performer or recipient should learn that it, its Senior/Key Research Personnel, or applicable team members or subtier performers on this award are or are believed to be participants in a Foreign Government Talent Program or have Foreign Components with a strategic competitor or country with a history of targeting U.S. technology for unauthorized transfer , the performer or recipient will notify the Government Contracting Officer or Agreements Officer within 5 business days.

1. This disclosure must include specific information as to the personnel involved and the nature of the situation and relationship. The Government will have 30 business days to review this information and conduct any necessary fact-finding or discussion with the performer or recipient.

2. The Government's timely determination and response to this disclosure may range anywhere from acceptance, to mitigation, to termination of this award at the Government's discretion.

3. If the University receives no response from the Government to its disclosure within 30 business days, it may presume that the Government has determined the disclosure does not represent a threat.

ii. The performer or recipient must flow down this provision to any subtier contracts or agreements involving direct participation in the performance of the research.

(e) Definitions

i. Senior/Key Research Personnel

1. This definition would include the Principal Investigator or Program/Project Director and other individuals who contribute to the scientific development or execution of a project in a substantive, measurable way, whether or not they receive salaries or compensation under the award. These include individuals whose absence from the project would be expected to impact the approved scope of the project.

2. Most often, these individuals will have a doctorate or other professional degrees, although other individuals may be included within this definition on occasion.

ii. Foreign Associations/Affiliations

1. Association is defined as collaboration, coordination or interrelation, professionally or personally, with a foreign government-connected entity where no direct monetary or non-monetary reward is involved.
2. Affiliation is defined as collaboration, coordination, or interrelation, professionally or personally, with a foreign government-connected entity where direct monetary or non-monetary reward is involved.

iii. Foreign Government Talent Recruitment Programs

1. In general, these programs will include any foreign-state-sponsored attempt to acquire U.S. scientific-funded research or technology through foreign government-run or funded recruitment programs that target scientists, engineers, academics, researchers, and entrepreneurs of all nationalities working and educated in the U.S.
2. Distinguishing features of a Foreign Government Talent Recruitment Program may include:
    a. Compensation, either monetary or in-kind, provided by the foreign state to the targeted individual in exchange for the individual transferring their knowledge and expertise to the foreign country.
    b. In-kind compensation may include honorific titles, career advancement opportunities, promised future compensation or other types of remuneration or compensation.
    c. Recruitment, in this context, refers to the foreign-state-sponsor's active engagement in attracting the targeted individual to join the foreign-sponsored program and transfer their knowledge and expertise to the foreign state. The targeted individual may be employed and located in the U.S. or in the foreign state.
    d. Contracts for participation in some programs that create conflicts of commitment and/or conflicts of interest for researchers. These contracts include, but are not limited to, requirements to attribute awards, patents, and projects to the foreign institution, even if conducted under U.S. funding, to recruit or train other talent recruitment plan members, circumventing merit-based processes, and to replicate or transfer U.S.-funded work in another country.
    e. Many, but not all, of these programs aim to incentivize the targeted individual to physically relocate to the foreign state. Of particular concern are those programs that allow for continued employment at U.S. research facilities or receipt of U.S. Government research funding while concurrently receiving compensation from the foreign state.
3. Foreign Government Talent Recruitment Programs DO NOT include:
    a. Research agreements between the University and a foreign entity, unless that agreement includes provisions that create situations of concern addressed elsewhere in this section,

b. Agreements for the provision of goods or services by commercial vendors, or

c. Invitations to attend or present at conferences.

iv. Conflict of Interest

1. A situation in which an individual, or the individual's spouse or dependent children, has a financial interest or financial relationship that could directly and significantly affect the design, conduct, reporting, or funding of research.

v. Conflict of Commitment

1. A situation in which an individual accepts or incurs conflicting obligations between or among multiple employers or other entities.
2. Common conflicts of commitment involve conflicting commitments of time and effort, including obligations to dedicate time in excess of institutional or funding agency policies or commitments. Other types of conflicting obligations, including obligations to improperly share information with, or withhold information from, an employer or funding agency, can also threaten research security and integrity and are an element of a broader concept of conflicts of commitment.

vi. Foreign Component

1. Performance of any significant scientific element or segment of a program or project outside of the U.S., either by the University or by a researcher employed by a foreign organization, whether or not U.S. government funds are expended.
2. Activities that would meet this definition include, but are not limited to:
    a. Involvement of human subjects or animals;
    b. Extensive foreign travel by University research program or project staff for the purpose of data collection, surveying, sampling, and similar activities;
    c. Collaborations with investigators at a foreign site anticipated to result in co-authorship;
    d. Use of facilities or instrumentation at a foreign site;
    e. Receipt of financial support or resources from a foreign entity; or
    f. Any activity of the University that may have an impact on U.S. foreign policy through involvement in the affairs or environment of a foreign country.
3. Foreign travel is not considered a Foreign Component.

vii. Strategic Competitor

1. A nation, or nation-state, that engages in diplomatic, economic or technological rivalry with the United States where the fundamental strategic interests of the U.S are under threat.

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 determine whether the proposed research shall be considered fundamental and to select the award instrument type. Appropriate language will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate. This language can be found at http://www.darpa.mil/work-with-us/additional-baa.

For certain research projects, it may be possible that although the research to be performed by a potential awardee is non-fundamental research, its proposed subawardee's effort may be fundamental research. It is also possible that the research performed by a potential awardee is fundamental research while its proposed subawardee's effort may be non-fundamental research. In all cases, it is the potential awardee's responsibility to explain in its proposal which proposed efforts are fundamental research and why the proposed efforts should be considered fundamental research.

III. Eligibility Information

A. Eligible Applicants

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

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

a) FFRDCs

FFRDCs are subject to applicable direct competition limitations and cannot propose to this solicitation 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. (2) FFRDCs must provide a letter, on official letterhead from their sponsoring organization, that (a) cites the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and (b) certifies the FFRDC's compliance with the associated FFRDC sponsor agreement's terms and conditions. These conditions are a requirement for FFRDCs proposing to be awardees or subawardees.

b) Government Entities

Government Entities (e.g., Government/National laboratories, military educational institutions, etc.) are subject to applicable direct competition limitations. 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 and compete with industry. This information is required for Government Entities proposing to be awardees or subawardees.

c) Authority and Eligibility

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.§ 4892 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.

2. Other Applicants

Non-U.S. organizations and/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.

B. Organizational Conflicts of Interest

FAR 9.5 Requirements

In accordance with FAR 9.5, proposers are required to identify and disclose all facts relevant to potential OCIs involving the proposer's organization and *any* proposed team member (subawardee, consultant). Under this Section, the proposer is responsible for providing this disclosure with each proposal submitted to the solicitation. The disclosure must include the proposer's, and as applicable, proposed team member's OCI mitigation plan. The OCI mitigation plan must include a description of the actions the proposer has taken, or intends to take, to prevent the existence of conflicting roles that might bias the proposer's judgment and to prevent the proposer from having unfair competitive advantage. The OCI mitigation plan will specifically discuss the disclosed OCI in the context of each of the OCI limitations outlined in FAR 9.505-1 through FAR 9.505-4.

Agency Supplemental OCI Policy

In addition, DARPA has a supplemental OCI policy that prohibits contractors/performers from concurrently providing Scientific Engineering Technical Assistance (SETA), Advisory and Assistance Services (A&AS) or similar support services and being a technical performer. Therefore, as part of the FAR 9.5 disclosure requirement above, a proposer must affirm whether the proposer or *any* proposed team member (subawardee, consultant) is providing SETA, A&AS, or similar support to any DARPA office(s) under: (a) a current award or subaward; or (b) a past award or subaward that ended within one calendar year prior to the proposal's submission date.

If SETA, A&AS, or similar support is being or was provided to any DARPA office(s), the proposal must include:

- The name of the DARPA office receiving the support;
- The prime contract number;

- Identification of proposed team member (subawardee, consultant) providing the support; and
- An OCI mitigation plan in accordance with FAR 9.5.

Government Procedures

In accordance with FAR 9.503, 9.504 and 9.506, the Government will evaluate OCI mitigation plans to avoid, neutralize or mitigate potential OCI issues before award and to determine whether it is in the Government's interest to grant a waiver. The Government will only evaluate OCI mitigation plans for proposals that are determined selectable under the solicitation evaluation criteria and funding availability.

The Government may require proposers to provide additional information to assist the Government in evaluating the proposer's OCI mitigation plan.

If the Government determines that a proposer failed to fully disclose an OCI; or failed to provide the affirmation of DARPA support as described above; or failed to reasonably provide additional information requested by the Government to assist in evaluating the proposer's OCI mitigation plan, the Government may reject the proposal and withdraw it from consideration for award.

C. Cost Sharing/Matching

Cost sharing is not required; however, it will be carefully considered where there is an applicable statutory condition relating to the selected funding instrument. Cost sharing is encouraged where there is a reasonable probability of a potential commercial application related to the proposed research and development effort.

For more information on potential cost sharing requirements for Other Transactions for Prototype, see http://www.darpa.mil/work-with-us/contract-management#OtherTransactions.

D. Other Eligibility Criteria

The Government discourages proposers from submitting multiple prime contractor proposals for the same TA. While proposers may submit proposals for both TAs, proposers selected for TA2 as a prime contractor cannot be selected for any portion of TA1 unless there is a clear deconfliction between the proposing teams. This policy is to avoid OCI situations between the TAs and to ensure objective evaluation results. The decision as to which proposal to consider for award is at the discretion of the Government.

IV. Application and Submission Information

A. Address to Request Application Package

This announcement, any attachments, and any references to external websites herein constitute the total solicitation. If proposers cannot access the referenced material posted in the announcement found at www.darpa.mil, contact the BAA Coordinator listed herein.

B. Content and Form of Application Submission

All submissions, including abstracts and proposals must be written in English with type not smaller than 12-point font. Smaller font may be used for figures, tables, and charts. Copies of all documents submitted must be clearly labeled with the DARPA BAA number, proposer organization, and proposal title/proposal short title. All monetary references shall be in U.S. Dollars.

1. Abstracts Format

Proposers are strongly encouraged to submit an abstract in advance of a full proposal. The abstract is a concise version of the proposal comprising a maximum of 5 pages including all figures, tables, and charts. The required cover sheet, and optional submission letter, table of contents, or appendices are not included in the page count.

The suggested abstract components are:

A. Cover Sheet (required): Include the administrative and technical points of contact (title, name, address, phone, e-mail, lead organization). Also include the BAA number, title of the proposed project (not the BAA title), Technical Area, subcontractors, estimated cost, duration of the project, and the label "ABSTRACT."
B. Executive Summary: Clearly describe what is being proposed and what difference it will make (qualitatively and quantitatively).
C. Technical Plan: Outline and address all technical challenges inherent in the approach and possible solutions for overcoming potential problems. Describe milestones and how they will be achieved, including (for TA1 performers) anticipated guarantees, models, and prototypes.
D. Management and Capabilities Plan: Identify the principal investigator, provide a brief summary of expertise of the team, including subcontractors and key personnel, and include relevant expertise to create computational science to build tactical mixed reality systems that protect against cognitive attack
E. Cost and Schedule: Provide a cost estimate for resources over the proposed timeline of the project, broken down by phase and major cost items (e.g., labor, materials, etc.). Include cost estimates for each potential subcontractor (it may be a rough order of magnitude).
F. Executive Summary Slide: The slide template is provided as Appendix 1 to the BAA posted at https://SAM.gov.

2. Proposals Format

All proposals should be in the format given below. 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. Proposals shall consist of two volumes: 1) Volume I, Technical and Management Proposal (composed of 3 parts), and 2) Volume II, Cost Proposal. The maximum page count for Volume I is 25 pages, and excludes the cover page,

summary slide, official transmittal letter, and any table of contents or appendices, but does include figures, tables, and charts. Page counts indicated below for specific sections are suggestions and may be ignored.

NOTE: Non-conforming submissions that do not follow the instructions herein may be rejected without further review.

a) Volume I, Technical and Management Proposal

(1) Section I: Administrative

(a) Cover Sheet to Include

(1) BAA number (HR001124S0002)
(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 organization 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), electronic mail (if available);
(10) Total funds requested from DARPA, and the amount of cost share (if any); AND
(11) Date proposal was submitted.

(b) Official transmittal letter

(2) Section II: Summary of Proposal

A. {1 page}- Executive Summary
B. {2 pages} Innovative claims for the proposed research. This section is the centerpiece of the proposal and should succinctly describe the uniqueness and benefits of the proposed approach relative to current state-of-art alternate approaches.
C. {2 pages} Technical rationale, technical approach, and constructive plan for accomplishment of technical goals in support of innovative claims and deliverable creation. (This section should be supplemented by a more detailed plan in Section III of the Technical and Management Proposal.)
D. A summary slide of the proposed effort, in PowerPoint format, should be submitted with the proposal. Submit this PowerPoint file in addition to Volumes 1 and 2. The format for the summary slide is included as Appendix 1 to this BAA and does not count against the page limit.

(3) Section III: Detailed Proposal Information

A. {10 pages} Detailed technical approach enhancing and completing the Summary of Proposal.
B. {1 page} Comparison with other ongoing research indicating advantages and disadvantages of the proposed effort.
C. {2 pages} A clearly defined organization chart for the program team which includes, as applicable: (1) the programmatic relationship of team member; (2) the unique capabilities of team members; (3) the task of 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.

Note: It is recommended that the SOW should be developed so that each phase of the program and pre-contract work on HSR/IRB is separately defined. Also, it is recommended that work directed at each of the five categories of guarantees/models outlined on Page 6 is separately defined.

D. {3 pages} Statement of Work (SOW) – Clearly define the technical tasks/subtasks to be performed, their durations, and dependencies among them. For each task/subtask, provide:
    - A general description of the objective (for each defined task/activity);
    - A detailed description of the approach to be taken to accomplish each defined task/activity;
    - Identification of the primary organization responsible for task execution (prime, sub, team member, by name, etc.);
    - The completion criteria for each task/activity – a product, event or milestone that defines its completion.
    - Define all deliverables (reporting, data, reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities; and
    - Clearly identify any tasks/subtasks (to be performed by either an awardee or sub awardee) that will be accomplished on-campus at a university, if applicable.
E. {1 page} Provide description of milestone, cost, and accomplishments.
F. {2 pages} Deliverables associated with the proposed research and the plans and capability to accomplish technology transition and commercialization. Include in this section all proprietary claims to the results, prototypes, intellectual property, or systems supporting and/or necessary for the use of the research, results, and/or prototype. If there are no proprietary claims, this should be stated. For forms to be completed regarding intellectual property, see Section IV.B.3.j of this BAA. There is no page limit for the listed forms.
G. {1 page} Discussion of proposer's previous accomplishments and work in closely related research areas.

b) Volume II, Cost Proposal

All proposers, including FFRDCs, must submit the following:

1. Cover sheet to include:
   (1) BAA number (HR001124S0002);
   (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 organization 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-fee (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify), cooperative agreement, 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) Unique Entity Identifier (UEI) number;
   (17) Taxpayer Identification Number (TIN);
   (18) Commercial and Government Entity (CAGE) Code;
   (19) Sub awardee information; and
   (20) Proposal validity period.

2. Additional Cost Proposal Information

(a) Supporting Cost and Pricing Data

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.

(b) Cost Breakdown Information and Format

Detailed cost breakdown to include:

- Total program costs broken down by major cost items (direct labor, including labor categories; subcontracts; materials; other direct costs; overhead charges, etc.) and further broken down by task and phase
- Major program tasks by fiscal year
- An itemization of major subcontracts and equipment purchases.
- Documentation supporting the reasonableness of the proposed equipment costs (vendor quotes, past purchase orders/purchase history, detailed engineering estimates, etc.) shall be provided.
- An itemization of any information technology (IT) purchase, as defined by FAR 2.101 – Documentation supporting the reasonableness of the proposed equipment costs (vendor quotes, past purchase orders/purchase history, detailed engineering estimates, etc.) shall be provided, including a letter stating why the proposer cannot provide the requested resources from its own funding for prime and all sub-awardees.
- A summary of projected funding requirements by month
- The source, nature, and amount of any industry cost-sharing
- 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 experts, etc.)

Tables included in the cost proposal in editable (e.g., MS Excel) format with calculation formulas intact. NOTE: If PDF submissions differ from the Excel submission, the PDF will take precedence.

The Government requires that proposers* use the provided MS Excel™ DARPA Standard Cost Proposal Spreadsheet in the development of their cost proposals. A customized cost proposal spreadsheet may be an attachment to this solicitation. If not, the spreadsheet can be found on the DARPA website at http://www.darpa.mil/work-with-us/contract-management (under "Resources" on the right-hand side of the webpage). All tabs and tables in the cost proposal spreadsheet should be developed in an editable format with calculation formulas intact to allow traceability of the cost proposal. This cost proposal spreadsheet should be used by the prime organization and all subcontractors. In addition to using the cost proposal spreadsheet, the cost proposal still must include all other items required in this announcement that are not covered by the editable spreadsheet. Subcontractor cost proposal spreadsheets may be submitted directly to the Government by the proposed subcontractor via e-mail to the address in Part I of this solicitation. **Using the provided cost proposal spreadsheet will assist the Government in a rapid analysis of your proposed costs and, if your proposal is selected for a potential award, speed up the negotiation and award execution process**.
*University proposers requesting a grant, cooperative agreement, or Other Transaction for Research do not need to use the MS Excel™ DARPA Standard Cost Proposal Spreadsheet. Instead, a proposed budget and justification may be provided using the SF-424 Research & Related Budget forms provided via https://www.grants.gov.

NOTE: The cost proposal spreadsheet is a supplement to, and not a substitution for, the Cost Volume. The Cost Volume should be submitted as previously outlined.

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 and is granted an exception from the requirement to submit cost or pricing data. Certified cost or pricing data is not required if the proposer proposes an award instrument other than a procurement contract (e.g., cooperative agreement, or other transaction.)

(c) Subaward Proposals

The proposer is responsible for compiling and providing all subaward proposals for the Procuring Contracting Officer (PCO)/ Agreements Officer (AO), as applicable. Subaward 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.

All proprietary subaward proposal documentation, prepared at the same level of detail as that required of the proposer's proposal and which cannot be uploaded with the proposal, shall be provided to the Government either by the proposer or by the sub awardee organization when the proposal is submitted. Subaward proposals submitted to the Government by the proposer's awardee should be submitted electronically to ICS@darpa.mil, and the proposed awardee will not be allowed to view. The sub awardee must provide the same number of electronic copies to the PCO/ AO as is required of the awardee. See Section IV.B.4. b. of this BAA for proposal submission information.

(d) Other Transaction Requests

All proposers requesting an OT must include a detailed list of milestones. Each milestone must include the following:

- milestone description,
- completion criteria,
- due date, and
- payment/funding schedule (to include, if cost share is proposed, awardee and Government share amounts).

It is noted that, at a minimum, milestones should relate directly to accomplishment of program technical metrics as defined in the BAA and/or the proposer's proposal. Agreement type, expenditure or fixed-price based, will be subject to negotiation by the Agreements Officer. Do not include proprietary data.

3. Additional Proposal Information

a) Proprietary Markings

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"." 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.

b) Security Information

(1) Program Security Information

(a) Program Security

Proposers should include with their proposal any proposed solution(s) to program security requirements unique to this program. Common program security requirements include but are not limited to: operational security (OPSEC) contracting/sub-contracting plans; foreign participation or materials utilization plans; program protection plans (which may entail the following) manufacturing and integration plans; range utilization and support plans (air, sea, land, space, and cyber); data dissemination plans; asset transportation plans; classified test activity plans; disaster recovery plans; classified material / asset disposition plans and public affairs / communications plans.

(2) Controlled Unclassified Information (CUI)

For unclassified proposals containing controlled unclassified information (CUI), applicants will ensure personnel and information systems processing CUI security requirements are in place.

(a) CUI Proposal Markings

If an unclassified submission contains CUI or the suspicion of such, as defined by Executive Order 13556 and 32 C.F.R. Part 2002, the information must be appropriately and conspicuously marked CUI in accordance with DoDI 5200.48. Identification of what is CUI about this DARPA program will be detailed in a DARPA CUI Guide and will be provided as an attachment to the BAA or may be provided at a later date.

(b) CUI Submission Requirements

Unclassified submissions containing CUI may be submitted via DARPA's BAA Website (https://baa.darpa.mil) in accordance with Part II Section IV of this BAA.

(c) Proposers submitting proposals involving the pursuit and protection of DARPA information designated as CUI must have, or be able to acquire prior to contract award, an information system authorized to process CUI information in accordance with (IAW) NIST SP 800-171 and DoD Instruction (DoDI) 8582.01.

(d) Unclassified Submissions

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 Program Security Officer (PSO). If a determination is made that the award instrument may result in access to classified information, a Security Classification Guide (SCG) and/or DD Form 254 will be issued by DARPA and attached as part of the award.

c) Disclosure of Information and Compliance with Safeguarding Covered Defense Information Controls

The following provisions and clause apply to all solicitations and contracts; however, the definition of "controlled technical information" clearly exempts work considered fundamental research and therefore, even though included in the contract, will not apply if the work is fundamental research.
DFARS 252.204-7000, "Disclosure of Information"
DFARS 252.204-7008, "Compliance with Safeguarding Covered Defense Information Controls"
DFARS 252.204-7012, "Safeguarding Covered Defense Information and Cyber Incident Reporting"
The full text of the above solicitation provision and contract clauses can be found at http://www.darpa.mil/work-with-us/additional-baa#NPRPAC.
Compliance with the above requirements includes the mandate for proposers to implement the security requirements specified by National Institute of Standards and Technology (NIST) Special Publication (SP) 800-171, "Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations" (see https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-171r2.pdf) and DoDI 8582.01 that are in effect at the time the solicitation is issued.
For awards where the work is considered fundamental research, the contractor will not have to implement the aforementioned requirements and safeguards. However, should the nature of the work change during performance of the award, work not considered fundamental research will be subject to these requirements.

d) Representations and Certifications

In accordance with FAR 4.1102 and 4.1201, proposers requesting a procurement contract must complete electronic annual representations and certifications at https://www.sam.gov/.
In addition, all proposers are required to submit for all award instrument types supplementary DARPA-specific representations and certifications at the time of proposal submission. See http://www.darpa.mil/work-with-us/reps-certs for further information on required representation and certification depending on your requested award instrument.
A small business joint venture offeror must submit, with its offer, the representation required in paragraph (c) of FAR solicitation provision 52.212-3, Offeror Representations and Certifications-Commercial Products and Commercial Services, and paragraph (c) of FAR solicitation provision 52.219-1, Small Business Program Representations, in accordance with 52.204-8(d) and 52.212-3(b) for the following categories: (A) Small business; (B) Service-disabled veteran-owned small business; (C) Women-owned small business (WOSB) under the

WOSB Program; (D) Economically disadvantaged women-owned small business under the WOSB Program; or (E) Historically underutilized business zone small business.

e) Human Subjects Research (HSR)/Animal Use

Proposers that anticipate involving human subjects or animals in the proposed research must comply with the approval procedures detailed at http://www.darpa.mil/work-with-us/additional-baa, to include providing the information specified therein as required for proposal submission.

f) Approved Cost Accounting System Documentation

Proposers that do not have a Cost Accounting Standards (CAS) complaint accounting system considered adequate for determining accurate costs that are negotiating a cost- type procurement contract must complete a Standard Form, (SF 1408). For more information on CAS compliance, see http://www.dcaa.mil. To facilitate this process, proposers should complete the SF 1408 found at https://www.gsa.gov/system/files/SF1408-14e.pdf and submit the completed form with the proposal.

g) Small Business Subcontracting Plan

Pursuant to Section 8(d) of the Small Business Act (15 U.S.C. § 637(d)) and FAR 19.702(a)(1), each proposer who submits a proposal for a procurement contract and includes subcontractors might be required to submit a subcontracting plan with their proposal. The plan format is outlined in FAR 19.704.

h) Section 508 of the Rehabilitation Act (29 U.S.C. § 749d)/FAR 39.2

All electronic and information technology acquired or created through this BAA must satisfy the accessibility requirements of Section 508 of the Rehabilitation Act (29 U.S.C. § 749d)/FAR 39.2.

i) Intellectual Property

All proposers must provide a good faith representation that the proposer either owns or possesses the appropriate licensing rights to all intellectual property that will be utilized under the proposed effort.

(1) For Procurement Contracts

Proposers responding to this BAA requesting procurement contracts will need to complete the certifications at Defense Federal Acquisition Regulation Supplement (DFARS) 252.227-7017. See http://www.darpa.mil/work-with-us/additional-baa for further information. If no restrictions are intended, the proposer should state "none." The table below captures the requested information:

Technical Data Computer Software To be	Summary of Intended Use in	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions

Furnished with Restrictions	the Conduct of the Research			
(LIST)	(NARRATIVE)	(LIST)	(LIST)	(LIST)

(2) For All Non-Procurement Contracts

Proposers responding to this BAA requesting a Cooperative Agreement, Research Other Transactions, or Other Transaction for Prototypes shall follow the applicable rules and regulations governing these various award instruments, but, in all cases, should appropriately identify any potential restrictions on the Government's use of any Intellectual Property contemplated under the award instrument in question. This includes both Noncommercial Items and Commercial Items. Proposers are encouraged use a format similar to that described in Paragraph (1) above. If no restrictions are intended, then the proposer should state "NONE."

j) System for Award Management (SAM) and Universal Identifier Requirements

All proposers must be registered in SAM unless exempt per FAR 4.1102. FAR 52.204-7, "System for Award Management" and FAR 52.204-13, "System for Award Management Maintenance" are incorporated into this solicitation. See http://www.darpa.mil/work-with-us/additional-baa for further information.
International entities can register in SAM by following the instructions in this link: https://www.fsd.gov/sys_attachment.do?sys_id=c08b64ab1b4434109ac5ddb6bc4bcbb8.

4. Submission Information

For abstract and proposal submission dates, see Part 1., Overview Information. Submissions received after these dates and times may not be reviewed.

Abstracts must be received via DARPA's BAA Website (https://baa.darpa.mil) on or before the submission date stated in Part 1., Overview Information.

The proposal must be received via DARPA's BAA Website (https://baa.darpa.mil) on or before the submission date December 20, 2023, 12:00 PM in order to be considered during the initial round of selections; however, proposals received after this deadline may be received and evaluated up to six months (180 calendar days) from date of posting on the System for Award Management, Contract Opportunities (https://SAM.gov) or Grants.gov (http://www.grants.gov). Proposals submitted after the due date specified in the BAA, but before the solicitation closing date, may be selected. Proposers are warned that the likelihood of available funding is greatly reduced for proposals submitted after the initial closing date deadline.

DARPA will acknowledge receipt of all submissions and assign an identifying control number that should be used in all further correspondence regarding the submission. DARPA intends to use electronic mail correspondence regarding HR001124S0002. Submissions may not be submitted by fax or e-mail; any submission received through fax or e-mail will be disregarded.

Submissions will not be returned. An electronic copy 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 by DARPA within five (5) business days after notification that a proposal was not selected.

Since proposers may encounter heavy traffic on the web server, it is highly recommended that proposers not wait until the day proposals are due to request an account and/or upload the submission. Full proposals should not be submitted via e-mail. Any full proposals submitted by e-mail will not be accepted or evaluated.

a) Abstract Submission

Refer to Section VI.A.1. for DARPA response to abstract submissions.

b) Proposal Submission

Refer to Section VI.A.2. for how DARPA will notify proposers as to whether or not their proposal has been selected for potential award.

(1) For Proposers Requesting Cooperative Agreements

Proposers requesting cooperative agreements must submit proposals through one of the following methods: (1) electronic upload per the instructions at https://www.grants.gov/applicants/apply-for-grants.html (DARPA-preferred); or (2) hard-copy mailed directly to DARPA. 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 Grants.gov do not submit hard-copy proposals in addition to the Grants.gov electronic submission.

Submissions: In addition to the volumes and corresponding attachments requested elsewhere in this solicitation, proposers must also submit the three forms listed below.

Form 1: SF 424 Research and Related (R&R) Application for Federal Assistance, available on the Grants.gov website at https://apply07.grants.gov/apply/forms/sample/RR_SF424_2_0-V2.0.pdf. *This form must be completed and submitted.*

To evaluate compliance with Title IX of the Education Amendments of 1972 (20 U.S.C. § 1681 et.seq.), the Department of Defense (DoD) is collecting certain demographic and career information to be able to assess the success rates of women who are proposed for key roles in applications in science, technology, engineering or mathematics disciplines. In addition, the National Defense Authorization Act (NDAA) for FY 2019, Section 1286, directs the Secretary of Defense to protect intellectual property, controlled information, key personnel, and information about critical technologies relevant to national security and limit undue influence, including foreign talent programs by countries that desire to exploit United States' technology within the DoD research, science and technology, and innovation enterprise. This requirement is necessary for all research and research-related educational activities. The DoD is using the two forms below to collect the necessary information to satisfy these requirements. Detailed instructions for each form are available on Grants.gov.

Form 2: The Research and Related Senior/Key Person Profile (Expanded) form, available on the Grants.gov website at https://apply07.grants.gov/apply/forms/sample/RR_KeyPersonExpanded_3_0-V3.0.pdf, will be used to collect the following information for all senior/key personnel, including Project Director/Principal Investigator and Co-Project Director/Co-Principal Investigator, whether or not the individuals' efforts under the project are funded by the DoD. The form includes 3 parts: the main form administrative information, including the Project Role, Degree Type and Degree Year; the biographical sketch; and the current and pending support. The biographical sketch and current and pending support are to be provided as attachments:

- Biographical Sketch: Mandatory for Project Directors (PD) and Principal Investigators (PI), optional, but desired, for all other Senior/Key Personnel. The biographical sketch should include information pertaining to the researchers:
    - Education and Training.
    - Research and Professional Experience.
    - Collaborations and Affiliations (for conflict of interest).
    - Publications and Synergistic Activities.
- Current and Pending Support: Mandatory for all Senior/Key Personnel including the PD/PI. This attachment should include the following information:
    - A list of all current projects the individual is working on, in addition to any future support the individual has applied to receive, regardless of the source.
    - Title and objectives of the other research projects.
    - The percentage per year to be devoted to the other projects.
    - The total amount of support the individual is receiving in connection to each of the other research projects or will receive if other proposals are awarded.
    - Name and address of the agencies and/or other parties supporting the other research projects
    - Period of performance for the other research projects.

Additional senior/key persons can be added by selecting the "Next Person" button at the bottom of the form. Note that, although applications without this information completed may pass Grants.gov edit checks, if DARPA receives an application without the required information, DARPA may determine that the application is incomplete and may cause your submission to be rejected and eliminated from further review and consideration under the solicitation. DARPA reserves the right to request further details from the applicant before making a final determination on funding the effort.

Form 3: Research and Related Personal Data, available on the Grants.gov website at https://apply07.grants.gov/apply/forms/sample/RR_PersonalData_1_2-V1.2.pdf. *Each applicant must complete the name field of this form, however, provision of the demographic information is voluntary. Regardless of whether the demographic fields are completed or not, this form must be submitted with at least the applicant's name completed.*

Grants.gov Submissions: Grants.gov requires proposers to complete a one-time registration process before a proposal can be electronically submitted. First time registration can take between three business days and four weeks. For more information about registering for Grants.gov, see http://www.darpa.mil/work-with-us/additional-baa.

Unclassified full proposals sent in response to this BAA may be submitted via DARPA's BAA Website (https://baa.darpa.mil). Note: If an account has recently been created for the DARPA BAA Website, this account may be reused. Accounts are typically disabled and eventually deleted following 75-90 days of inactivity – if you are unsure when the account was last used, it is recommended that you create a new account. If no account currently exists for the DARPA BAA Website, 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. The "Password Reset" option at the URL listed above can be used if the password is not received in a timely fashion. 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 proposal. Note: Even if a submitter's organization has an existing registration, each user submitting a proposal must create their own Organization Registration.

All unclassified proposals submitted electronically through DARPA's BAA Website must be uploaded as zip archives (i.e., files with a .zip or .zipx extension). The final zip archive should be no greater than 100 MB in size. Only one zip archive will be accepted per submission – subsequent uploads for the same submission will overwrite previous uploads, and submissions not uploaded as zip archives will be rejected by DARPA.

Proposers using the DARPA BAA Website may encounter heavy traffic on the submission deadline date; proposers should start this process as early as possible. Technical support for DARPA's BAA Website may be reached at BAAT_Support@darpa.mil, and is typically available during regular business hours (9:00 AM – 5:00 PM Eastern Time).

5. Funding Restrictions

Not Applicable.

6. Frequently Asked Questions (FAQ)

DARPA will post a consolidated Frequently Asked Questions (FAQ) document. To access the posting go to: http://www.darpa.mil/work-with-us/opportunities. Under the HR001124S0002 summary will be a link to the FAQ. Submit your question/s by E-mail to ICS@darpa.mil. Questions must be received by the FAQ/Questions due date listed in Part 1, Overview Information.

7. Other Submission Requirements

Not Applicable

V. Application Review Information

A. Evaluation Criteria

Proposals will be evaluated using the following criteria, listed in descending order of importance:

1. Overall Scientific and Technical Merit

The proposed technical approach is innovative, feasible, achievable, and complete.

The proposed technical team has the expertise and experience to accomplish the proposed tasks. Task descriptions and associated technical elements provided are complete and in a logical sequence with all proposed deliverables clearly defined such that a final outcome that achieves the goal can be expected as a result of award. The proposal identifies major technical risks and planned mitigation efforts are clearly defined and feasible.

The proposal clearly explains the technical approach(es) that will be employed to meet or exceed each program goal and metric listed in Section I.C. and provides ample justification as to why the approach(es) is feasible. The Government will also consider the structure, clarity, and responsiveness to the Statement of Work; the quality of proposed deliverables; and the linkage of the Statement of Work, technical approach(es), risk mitigation plans, costs, and deliverables of the prime awardee and all sub awardees through a logical, well structured, and traceable technical plan.

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 make pivotal early technology investments that create or prevent strategic surprise for U.S. National Security.

In addition, the evaluation will take into consideration the extent to which the proposed intellectual property (IP) rights structure will potentially impact the Government's ability to transition the technology.

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 and the basis for the estimates).

The effort leverages all available relevant prior research in order to obtain the maximum benefit from the available funding. Aggressive pricing strategies (such as providing cost sharing or low-overhead OTs) that maximize the use of available funding for direct support of program research activities will be a positive factor in the evaluation.

B. Review of Proposals

1. Review Process

It is the policy of DARPA to ensure impartial, equitable, comprehensive proposal evaluations based on the evaluation criteria listed in Section V.A. and to select the source (or sources) whose offer meets the Government's technical, policy, and programmatic goals.

DARPA will conduct a scientific/technical review of each conforming proposal. Conforming proposals comply with all requirements detailed in this solicitation; proposals that fail to do so may be deemed non-conforming and may be removed from consideration. 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, consistent with instructions and evaluation criteria specified in the BAA herein, and availability of funding.

2. Handling of Source Selection 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. 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.

3. Federal Awardee Performance and Integrity Information (FAPIIS)

Per 41 U.S.C. § 2313, as implemented by FAR 9.103 and 2 C.F.R. § 200.205, prior to making an award above the simplified acquisition threshold, DARPA is required to review and consider any information available through the designated integrity and performance system (currently

FAPIIS). Awardees have the opportunity to comment on any information about themselves entered in the database, and DARPA will consider any comments, along with other information in FAPIIS or other systems prior to making an award.

4. Countering Foreign Influence Program (CFIP)

DARPA's CFIP is an adaptive risk management security program designed to help protect the critical technology and performer intellectual property associated with DARPA's research projects by identifying the possible vectors of undue foreign influence. The CFIP team will create risk assessments of all proposed Senior/Key Personnel selected for negotiation of a fundamental research grant or cooperative agreement award. The CFIP risk assessment process will be conducted separately from the DARPA scientific review process and adjudicated prior to final award.

VI. Award Administration Information

A. Selection Notices and Notifications

1. Abstracts

DARPA will respond to abstracts with a statement as to whether DARPA is interested in the idea. If DARPA does not recommend the proposer submit a full proposal, DARPA will provide feedback to the proposer regarding the rationale for this decision. Regardless of DARPA's response to an abstract, proposers may submit a full proposal. DARPA will review all conforming full proposals using the published evaluation criteria and without regard to any comments resulting from the review of an abstract.

2. Proposals

As soon as the evaluation of a proposal is complete, the proposer will be notified that (1) the proposal has been selected for funding pending award negotiations, in whole or in part, or (2) the proposal has not been selected. These official notifications will be sent via email to the Technical Point of Contact (POC) and/or Administrative POC identified on the proposal coversheet.

B. Administrative and National Policy Requirements

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.

2. Solicitation Provisions and Award Clauses, Terms and Conditions

Solicitation clauses in the FAR and DFARS relevant to procurement contracts and FAR and DFARS clauses that may be included in any resultant procurement contracts are incorporated herein and can be found at http://www.darpa.mil/work-with-us/additional-baa.

3. Controlled Unclassified Information (CUI) and Controlled Technical Information (CTI) on Non-DoD Information Systems

Further information on Controlled Unclassified Information identification, marking, protecting, and control, to include processing on Non-DoD Information Systems, is incorporated herein and can be found at http://www.darpa.mil/work-with-us/additional-baa.

4. Terms and Conditions

For terms and conditions specific to grants and/or cooperative agreements, see the DoD General Research Terms and Conditions (latest version) at http://www.onr.navy.mil/Contracts-Grants/submit-proposal/grants-proposal/grants-terms-conditions and the supplemental DARPA-specific terms and conditions at http://www.darpa.mil/work-with-us/contract-management#GrantsCooperativeAgreements.

C. Reporting

The number and types of reports will be specified in the award document, but will include at a minimum monthly technical and financial 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. A final report that summarizes the project and tasks will be required at the conclusion of the period of performance for the award.

D. Electronic Systems

1. Wide Area Work Flow (WAWF)

Performers will be required to submit invoices for payment directly to https://piee.eb.mil/, unless an exception applies. Performers must register in WAWF prior to any award under this BAA.

2. 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 (https://public.era.nih.gov/iedison).

E. DARPA Embedded Entrepreneur Initiative (EEI)

Awardees pursuant to this solicitation may be eligible to participate in the DARPA Embedded Entrepreneurship Initiative (EEI) during the award's period of performance. EEI is a limited scope program offered by DARPA, at DARPA's discretion, to a small subset of awardees. The

goal of DARPA's EEI is to increase the likelihood that DARPA-funded technologies take root in the U.S. and provide new capabilities for national defense. EEI supports DARPA's mission "to make pivotal investments in breakthrough technologies and capabilities for national security" by accelerating the transition of innovations out of the lab and into new capabilities for the Department of Defense (DoD). EEI investment supports development of a robust and deliberate Go-to-Market strategy for selling technology product to the government and commercial markets and positions DARPA awardees to attract U.S. investment. The following is for informational and planning purposes only and does not constitute solicitation of proposals to the EEI.

There are three elements to DARPA's EEI: (1) A Senior Commercialization Advisor (SCA) from DARPA who works with the Program Manager (PM) to examine the business case for the awardee's technology and uses commercial methodologies to identify steps toward achieving a successful transition of technology to the government and commercial markets; (2) Connections to potential industry and investor partners via EEI's Investor Working Groups; and (3) Additional funding on an awardee's contract for the awardee to hire an embedded entrepreneur to achieve specific milestones in a Go-to-Market strategy for transitioning the technology to products that serve both defense and commercial markets. This embedded entrepreneur's qualifications should include business experience within the target industries of interest, experience in commercializing early-stage technology, and the ability to communicate and interact with technical and non-technical stakeholders. Funding for EEI is typically no more than $250,000 per awardee over the duration of the award. An awardee may apportion EEI funding to hire more than one embedded entrepreneur, if achieving the milestones requires different expertise that can be obtained without exceeding the awardee's total EEI funding. The EEI effort is intended to be conducted concurrent with the research program without extending the period of performance.

EEI Application Process:
After receiving an award under the solicitation, awardees interested in being considered for EEI should notify their DARPA Program Manager (PM) during the period of performance. Timing of such notification should ideally allow sufficient time for DARPA and the awardee to review the awardee's initial transition plan, identify milestones to achieve under EEI, modify the award, and conduct the work required to achieve such milestones within the original award period of performance. These steps may take 18-24 months to complete, depending on the technology. If the DARPA PM determines that EEI could be of benefit to transition the technology to product(s) the Government needs, the PM will refer the performer to DARPA Commercial Strategy.

DARPA Commercial Strategy will then contact the performer, assess fitness for EEI, and in consultation with the DARPA technical office, determine whether to invite the performer to participate in the EEI. Factors that are considered in determining fitness for EEI include DoD/Government need for the technology; competitive approaches to enable a similar capability or product; risks and impact of the Government's being unable to access the technology from a sustainable source; Government and commercial markets for the technology; cost and affordability; manufacturability and scalability; supply chain requirements and barriers; regulatory requirements and timelines; Intellectual Property and Government Use Rights, and available funding.

Invitation to participate in EEI is at the sole discretion of DARPA and subject to program balance and the availability of funding. EEI participants' awards may be subsequently modified bilaterally to amend the Statement of Work to add negotiated EEI tasks, provide funding, and specify a milestone schedule which will include measurable steps necessary to build, refine, and execute a Go-to-Market strategy aimed at delivering new capabilities for national defense. Milestone examples are available at: https://www.darpa.mil/work-with-us/contract-management

Awardees under this solicitation are eligible to be considered for participation in EEI, but selection for award under this solicitation does not imply or guarantee participation in EEI.

VII. Agency Contacts

Administrative, technical, or contractual questions should be sent via email to ICS@darpa.mil. 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 ICS@darpa.mil.
The Technical POC for this effort is:

Dr. Matthew Wilding, DARPA/I2O
ATTN: HR001124S0002
675 North Randolph Street
Arlington, VA 22203-2114

For information concerning agency level protests see http://www.darpa.mil/work-with-us/additional-baa#NPRPAC.

VIII. Other Information

Proposers Day
A Proposers Day for this effort will be held on October 20, 2023 at Executive Conference Center, located at 4075 Wilson Blvd, Arlington, Virginia, 22203. The Special Notice regarding this Proposers Day can be found at <https://creative.gryphontechnologies.com/darpa/i2o/ics/pd/>. For further information regarding the Intrinsic Cognitive Security (ICS) Proposers Day, including slides from the event, please see http://www.darpa.mil/work-with-us/opportunities under HR001124S0002.

Associate Contractor Agreement (ACA)
This same or similar language will be included in procurement contract awards against HR001124S0002. Awards other than FAR based contracts will contain similar agreement language:

(a) It is recognized that success of the ICS research effort depends in part upon the open exchange of information between the various Associate Contractors involved in the effort. This language is intended to ensure that there will be appropriate coordination and integration of work

by the Associate Contractors to achieve complete compatibility and to prevent unnecessary duplication of effort. By executing this contract, the Contractor assumes the responsibilities of an Associate Contractor. For the purpose of this ACA, the term Contractor includes subsidiaries, affiliates, and organizations under the control of the contractor (e.g., subcontractors).

(b) Work under this contract may involve access to proprietary or confidential data from an Associate Contractor. To the extent that such data is received by the Contractor from any Associate Contractor for the performance of this contract, the Contractor hereby agrees that any proprietary information received shall remain the property of the Associate Contractor and shall be used solely for the purpose of the ICS research effort. Only that information which is received from another contractor in writing and which is clearly identified as proprietary or confidential shall be protected in accordance with this provision. The obligation to retain such information in confidence will be satisfied if the Contractor receiving such information utilizes the same controls as it employs to avoid disclosure, publication, or dissemination of its own proprietary information. The receiving Contractor agrees to hold such information in confidence as provided herein so long as such information is of a proprietary/confidential or limited rights nature.

(c) The Contractor hereby agrees to closely cooperate as an Associate Contractor with the other Associate Contractors on this research effort. This involves as a minimum:

(1) maintenance of a close liaison and working relationship;

(2) maintenance of a free and open information network with all Government-identified associate Contractors;

(3) delineation of detailed interface responsibilities;

(4) entering into a written agreement with the other Associate Contractors setting forth the substance and procedures relating to the foregoing, and promptly providing the Agreements Officer/Procuring Contracting Officer with a copy of same; and,

(5) receipt of proprietary information from the Associate Contractor and transmittal of Contractor proprietary information to the Associate Contractors subject to any applicable proprietary information exchange agreements between associate contractors when, in either case, those actions are necessary for the performance of either.

(d) In the event that the Contractor and the Associate Contractor are unable to agree upon any such interface matter of substance, or if the technical data identified is not provided as scheduled, the Contractor shall promptly notify the DARPA ICS Program Manager. The Government will determine the appropriate corrective action and will issue guidance to the affected Contractor.

(e) The Contractor agrees to insert in all subcontracts hereunder which require access to proprietary information belonging to the Associate Contractor, a provision which shall conform substantially to the language of this ACA, including this paragraph (e).

(f) Associate Contractors for the Program Name research effort include:

Contractor	Technical Area

Information for University Performers

In order to ensure that U.S. scientific and engineering students will be able to continue to make strategic technological advances, DARPA is committed to supporting the work and study of Ph.D. students and post-doctoral researchers that began work under a DARPA-funded program awarded through an assistance instrument. Stable and predictable federal funding enables these students to continue their scientific and engineering careers.

To that end, should a DARPA funded program awarded through a grant or cooperative agreement with a university or a Research Other Transaction pursuant to 10 U.S.C. § 4021 where the university is a participant end (due to termination or down-select) before the planned program completion, DARPA may continue to fund, for no more than two semesters (or equivalent), the documented costs to employ or sponsor Ph.D. students and/or post-doctoral researchers. Should such a circumstance arise, the following will take place:

1) The Government will provide appropriate notification to the University participant by the Agreements Office or through the prime performer.
2) The University must make reasonable efforts to find alternative research or employment opportunities for these students and researchers.
3) Before any costs will be paid, the University must submit documentation describing their due diligence efforts in finding alternative arrangements that is certified by a University official.
4) In addition to this documentation, the affected students and researchers must submit statements of work describing what research activities they will pursue during the period of funding and the final deliverable they will submit when the funding is complete.
5) In determining these costs, DARPA will rely on information from the University's original proposal unless specific circumstances warrant requesting updated proposals. In no circumstances will this funding be provided when the program is ended because of suspected or actual fraud or negligence.

DARPA Down-Select Definition:

DARPA often structures programs in phases or options that include specific objectives and a designated period of performance. This may result in potentially issuing multiple awards to maximize the number of innovative approaches. This approach allows the Government to monitor progress and enables programmatic decision points based, at a minimum, against stated evaluation criteria, metrics, funding availability, and program goals and objectives. As a result, select performers may advance via award of a subsequent phase or through exercise of a planned option period.

All responsible sources capable of satisfying the Government's needs may submit a proposal that shall be considered by DARPA. Historically Black Colleges and Universities, Small Businesses, Small Disadvantaged Businesses and Minority Institutions are encouraged to submit proposals and join others in submitting proposals; however, no portion of this announcement will be set aside for these organizations' participation due to the impracticality of reserving discrete or severable areas of this research for exclusive competition among these entities.

IX. APPENDIX 1 – PROPOSAL SUMMARY SLIDE

FP-001 – Prime Contractor
PI: Title Firstname Lastname (xx% LOE)
Subcontractors:
Title: Proposal Title

TA#

Summary of proposed overall technical approach:
- How does the approach address the key challenges of the program?
- What is unique about your approach? Why will it succeed?

Replace this image with a
GRAPHIC
representative of the proposed technical approach

Cost Summary	Phase 0	Phase 1	Phase 2	Total
Proposed	$	$	$	$

Technical Rationale:
- What are you trying to do? Articulate your objectives using absolutely no jargon.
- Summarize how you plan to accomplish technical goals and program metrics stated in the BAA.
- How will progress be measured?
- What are the major technical risk elements and the plan to address/mitigate them?

Other Relevant Information:
- Is any work expected to be fundamental research?
- Foreign persons proposed? (if yes, how many)
- Intellectual Property (IP) or Data Rights Assertions?
- Government Furnished Equipment/Materials/Information (GFE/GFM/GFI) requested?
- Human Subject Research (HSR) proposed?

Distribution Statement

1