



Broad Agency Announcement

Lagrange

Defense Sciences Office

HR001117S0039

June 7, 2017

Table of Contents

I. Funding Opportunity Description4
 A. Introduction4
 B. Background4
 C. Program Description/Scope4
 D. Program Structure5
 E. Mathematical and Algorithmic Development6
 F. Schedule/Milestones8
 G. Deliverables9
 H. Data Management Plan (DMP)9
 II. Award Information11
 A. General Award Information11
 B. Fundamental Research12
 III. Eligibility Information12
 A. Eligible Applicants12
 B. Organizational Conflicts of Interest13
 C. Cost Sharing/Matching14
 IV. Application and Submission Information15
 A. Address to Request Application Package15
 B. Content and Form of Application Submission15
 C. Submission Dates and Times17
 D. Funding Restrictions18
 E. Other Submission Requirements18
 V. Application Review Information21
 A. Evaluation Criteria21
 B. Review and Selection Process22
 C. Federal Awardee Performance and Integrity Information (FAPIIS)23
 VI. Award Administration Information23
 A. Selection Notices23
 B. Administrative and National Policy Requirements23
 C. Reporting27
 VII. Agency Contacts27
 VIII. Other Information28
 A. Frequently Asked Questions (FAQs)28
 B. Collaborative Efforts/Teaming28
 C. Proposers Day28

ATTACHMENT 1: ABSTRACT SLIDE TEMPLATE

ATTACHMENT 2: ABSTRACT TEMPLATE – TECHNICAL DESCRIPTION & COST

ATTACHMENT 3: PROPOSAL SLIDE TEMPLATES

ATTACHMENT 4: PROPOSAL TEMPLATE – VOL. 1 TECHNICAL & MANAGEMENT

ATTACHMENT 5: PROPOSAL TEMPLATE – VOL. 2 COST

ATTACHMENT 6: PROPOSAL TEMPLATE – VOL. 3 ADMIN. & NATIONAL POLICY REQUIREMENTS

PART I: OVERVIEW INFORMATION

- **Federal Agency Name:** Defense Advanced Research Projects Agency (DARPA), Defense Sciences Office (DSO)
- **Funding Opportunity Title:** Lagrange
- **Announcement Type:** Initial Announcement
- **Funding Opportunity Number:** HR001117S0039
- **Catalog of Federal Domestic Assistance (CFDA) Number(s):** 12.910 Research and Technology Development
- **Dates** (All times listed herein are Eastern Time.)
 - Posting Date: June 7, 2017
 - Proposers Day: June 19, 2017. See Section VIII.C.
 - Teaming Profile Submission Deadline: June 21, 2017, 3:00 p.m.
 - Abstract Due Date: July 6, 2017, 4:00 p.m.
 - FAQ Submission Deadline: August 23, 2017, 4:00 p.m.
 - Full Proposal Due Date: August 30, 2017, 4:00 p.m.
- **Anticipated Individual Awards:** DARPA anticipates multiple awards for this program.
- **Types of Instruments that May be Awarded:** Procurement contracts, cooperative agreements or other transactions.
- **Agency contacts**
 - **Technical POC:** Fariba Fahroo, Program Manager, DARPA/DSO
 - **BAA Email:** Lagrange@darpa.mil
 - **BAA Mailing Address:**
DARPA/DSO
ATTN: HR001117S0039
675 North Randolph Street
Arlington, VA 22203-2114
 - **DARPA/DSO Opportunities Website:** <http://www.darpa.mil/work-with-us/opportunities>
- **Teaming Information:** See Section VIII.B for information on teaming opportunities.
- **Frequently Asked Questions (FAQ):** FAQs for this solicitation may be viewed on the DARPA/DSO Opportunities Website. See Section VIII.A for further information.

PART II: FULL TEXT OF ANNOUNCEMENT

I. Funding Opportunity Description

This Broad Agency Announcement (BAA) constitutes a public notice of a competitive funding opportunity as described in Federal Acquisition Regulation (FAR) 6.102(d)(2) and 35.016 as well as 2 CFR § 200.203. Any resultant negotiations and/or awards will follow all laws and regulations applicable to the specific award instrument(s) available under this BAA, e.g., FAR 15.4 for procurement contracts.

A. Introduction

The Defense Sciences Office at the Defense Advanced Research Projects Agency (DARPA) is soliciting innovative research proposals to develop novel mathematical methods, on both the theoretical and algorithmic fronts, which will solve high-dimensional, dynamic, data-driven optimization and decision-making problems. Proposed research should fully address challenges that arise from the nonlinear, nonconvex, hybrid (continuous, discrete) nature of underlying modeling and optimization of realistic complex application problems. Specifically excluded is research that offers existing solutions and optimization methods for application areas, however complex or relevant the proposer feels they might be to DoD needs.

B. Background

Optimization as a mathematical field is relevant to many application areas such as logistics, planning, engineering design, data analytics, and data-driven systems. In recent years, it has enjoyed significant success in the development of algorithmic tools to numerically solve problems that could not previously be solved analytically. Despite these gains, more research is needed to make optimization methods and algorithms scalable and applicable to the large-scale complex problems that are of interest to DoD and industry.

Modeling of realistic, large-scale dynamical systems requires theoretical and algorithmic tools to deal with the high-dimensionality and high computational cost, which increases exponentially for optimization and design tasks. Realistic and essential operations need state of the art optimization techniques that could address uncertainties in requirements, needs for dynamic re-planning, and real-time decision making with imperfect data.

To address these challenges, the Lagrange program will develop methodologies that will bridge discrete optimization and continuous optimization. Emerging problems of interest require combining tools from data-driven modeling and optimization, infinite dimensional optimization, algebraic geometry, computational geometry, geometric probability theory, and algorithmic advances combining statistics and optimization. Lagrange aims to develop novel mathematical frameworks and algorithms in the context of a specified realistic application area with the requisite complexity.

C. Program Description/Scope

Lagrange is seeking new mathematical approaches to optimization enriched by insights from different mathematical fields to offer transformative ideas in representing and handling the

uncertain, dynamic, multiscale, and high dimensional optimization problems. Bringing together different fields such as geometry, algebra, statistics, and dynamics can lead to new optimization methods that are able to handle the multi-component, multi-scale, temporal, and uncertain features of the problems being studied. Optimization methodologies developed in the program should be able to dynamically adapt to changing environments, requirements, and increasing/decreasing information in the context of the novel and demanding application area chosen. Lagrange is not interested in supporting projects that offer existing solution methods specifically tuned to solving an application problem. Specifically excluded are purely heuristic optimization methods and existing linear, quadratic, and more generally convex optimization methods that are already available in software for solving an application problem. The expected outcomes of the program include: 1) new mathematical frameworks and solution methods for large-scale optimization of complex systems, and 2) algorithms that could be implemented on computing platforms that would utilize parallelizability and scalability.

D. Program Structure

Lagrange will be a single phase, 18-month program addressing mathematical development of optimization and computational techniques, which would advance optimal decision-making that adapts to real-time changing requirements or environments. It is envisioned that the program will be comprised of multi-disciplinary teams focusing on a feasible application problem following an aggressive work schedule and with rigorous metrics to determine success.

Due to the multi-disciplinary nature of the program's goals, DARPA anticipates that teams will have expertise spanning optimization, statistics and machine learning, computational mathematics, and application domains. Smaller teams with no more than three to four performers and solid team management plans are preferred, but DARPA is open to proposals from single (individual) investigators or larger teams (more than four team members). Single investigators must be able to meet all of the requirements described herein¹ while proposals from larger teams must include a rationale for the team size.

Mathematical development should be formulated and described in the context of a challenging but feasible application area (as described in Section I.E) in order to push research beyond incremental advancements. Initial development of methods will be done during the first six months of the program, and progress will be demonstrated in the context of the application. In addition to developing methodologies able to handle the chosen application area, performers will also work on extending their methodologies to tackle realistic, high-dimensional systems during the remaining months of the effort. Throughout the program, progress will be measured against metrics and milestones as proposed by the performer to determine if the developed methods are promising.

Because the novelty of the mathematical approaches as well as the relevance and complexity of the proposed problem spaces are key elements of the program, the strength of the responses to the proposal requirements outlined in Section I.E.1 will be the major consideration for assessment of proposals.

¹ See Section VIII.B for information on potential teaming opportunities.

E. Mathematical and Algorithmic Development

In the last few years, there has been tremendous theoretical and algorithmic progress in convex optimization, but many applications of interests are naturally posed as non-convex optimization problems. Recent treatment of nonconvex problems rely on convex relaxation but these relaxation techniques still suffer from lack of computational scalability. Other methods rely on discrete optimization techniques, leading to NP-hard formulations. Lagrange is seeking methodologies beyond current convex relaxation methods to advance scalability of algorithms for more general classes of problems that require real-time optimization. Fresh ideas from computational geometry and geometric probability theory, such as geometric partition of state space, have proved effective in dealing with scalability. Realistic scenarios in optimization and decision-making have to deal with uncertainties in the requirements and operational constraints, needing dynamic updates for the cost, constraints and state variables in the presence of updating data or information. Classical stochastic optimization relies on predetermined assumptions about the distribution of the quantities of interest, making it unsuitable towards areas where uncertainty plays a large part. Data-driven approaches exploring proper sampling of data sets and computationally tractable methods of approximating distributions would be of interest.

Formulation and development of optimization ideas should be in the context of a well-defined application area chosen by the proposing team. DARPA is interested in application areas that are complex, high dimensional, and are not able to be optimized with current methods due to intractability or lack of scalability. This integration of theory within an application is designed to push the field to consider problems that are more realistic where demands on the complexity of the models and operations are much higher than those considered in typically canonical or benchmark problems. As stated above, quality and sophistication of the proposed application area as well as novelty of methods to identify new areas in the optimization landscape will be key considerations in the evaluation of proposals. Techniques may be in the context of (but not restricted to) a given application problem, but should not be problem- or domain-specific. Applying existing ideas to an application, or incremental improvements to known techniques to a new problem, are specifically out-of-scope.

1. Proposal Requirements

The program is seeking approaches to a wide range of optimization problems exemplified by a chosen application area. All proposals must provide detailed, technical responses addressing the following:

a. Description of problem space

The problem space is broad and could be selected from areas such as logistics, engineering design, image processing, distributed control and ISR, multi-agent planning, network design, machine learning, game theory, etc. The chosen problem must be complex (high-dimensional, nonlinear, hybrid, stochastic, etc.) and solutions should not be obtained by merely using current techniques or additional computational resources. The solution cannot be limited to one methodology and could potentially require many different modeling and optimization methodologies (e.g., continuous, combinatorial, mixed-integer programming, etc.). Proposers are encouraged to treat the choice and design of application objectives creatively as DARPA is interested in how emerging computational techniques and proposed optimization research will

enable reformulation of known problems or shifts/reductions in complexity. It is expected that this treatment will also increase the impact on the application space, providing advanced, user-friendly, and reliable optimization techniques. The area chosen must benefit from the novel mathematical optimization development proposed and the proposal should include answers to the following questions:

- What problem area is going to be addressed?
- What are the current challenges in the stated optimization problem?
- How general is the problem space within the existing optimization divisions?
- Does the problem have the potential of broader applicability?

b. Description of the optimization and modeling strategy

Research plans for a complex problem area will have clearly stated metrics and milestones in an increasing order of complexity of both the underlying models and the optimization methodology. For example, a proposed problem space with a specific optimization methodology could consider a certain number of variables with simplified models within the first six months of the project, but propose methodologies that could extend to nonconvex, nonlinear problems with a much larger number of variables in the following months. Proposers should describe their approaches in dealing with high-dimensionality and computational cost of their proposed problems and offer specific milestones for success.

c. Comparison of proposed approaches to the state of the art

This comparison must be done in terms of clearly stated metrics such as computational advantages in scalability, convergence, and provable bounds in optimality.

d. Generalizability of applicability of optimization methods

Proposals must clearly express and justify the applicability of methodologies across a broad range of problems beyond the proposed applications.

e. Implementation of the algorithms

Proposals need to offer possible speed-up strategies for their algorithms (e.g., parallelizability, use of alternative computing substrates, etc.). They also need to state how the computational gains are going to be realized (e.g., by advancement in algorithmic, hardware or both).

f. Risks and risk-mitigating strategies

Proposals must describe potential risks within the proposed methods; these could involve difficulty obtaining data, incompatibility of data from different sources, applicability of methods to special circumstances only, or more. Risk-mitigating strategies should also be discussed.

g. Metrics to measure progress

Lagrange will be looking for innovative research to develop novel mathematical approaches using insights from many different mathematical fields. To facilitate this, proposing teams are

expected to develop work plans/schedules that include metrics and milestones focusing on demonstrating solid progress at regular intervals throughout the program. Use of the following questions as guidelines in determining metrics and milestones is recommended:

- How will the performance, accuracy, and stability of the proposed methods be quantified and demonstrated throughout the program? Are there quantifiable benchmarks against which methods can be compared?
- What are the application-dependent metrics to gauge progress towards solving the specific proposed problem?
- What are the application-independent metrics to demonstrate generalizability of proposed methodologies across a wider class of optimization problems?
- What will be the end product of the project, and how will the individual components fit together as they are developed?
- What are the milestones and goals of each task in the project?
- What are the major milestones (e.g., theorems, codes, algorithms, software, results, etc.) for each quarter of the program?
- What is a major milestone and demonstration of progress at both 6 and 12 months that will indicate overall progress and successes?

Proposed metrics for success must be appropriate for the chosen application area. Metrics should include clearly described tasks and milestones that go beyond the state of the art.

h. Team management plan

Since teams are anticipated to be multi-disciplinary, proposals must address how team members will communicate with each other throughout the program and share results within their team. It must also clearly state how the different contributions from each team member come together towards the goal of the program.

F. Schedule/Milestones

Proposers must provide a technical and programmatic strategy (i.e., work plan) that conforms to the entire 18-month program schedule and presents an aggressive plan to fully address all program goals, metrics, milestones and deliverables. The task structure must be consistent across the proposed schedule, Statement of Work, and cost volume. For planning and budgetary purposes, proposers should assume a program start date of January 1, 2018.

All proposals must include the following meetings and travel in the proposed schedule and costs:

- Principal Investigator (PI) meetings will be held approximately every six months, with locations split between Arlington, Virginia, and other locations in the US. For budgeting purposes, plan for four two-day meetings (which includes the kickoff meeting) over the course of 18 months: two meetings in the Arlington area and two meetings on the west coast. The review at the 6-month mark will serve to check on the progress of the teams on a feasible application problem. It will also be the initial checkpoint to see if the results could be applicable to a broader range of optimization problems. The 12-month review

will serve to check on the advancement of the developed optimization tools to handle substantial complexity. By the 18-month program review, teams should be able to demonstrate full theoretical and computational development of optimization methodologies with implementation on the real scope/scale application problem.

- Individual teleconferences will be scheduled every six weeks with each performer team and the Government team for progress reporting as well as problem identification and mitigation. Proposers should also anticipate at least one site visit by the DARPA Program Manager during which they will have the opportunity to demonstrate progress towards agreed-upon milestones.

G. Deliverables

Performers will be expected to provide at a minimum the following deliverables:

- Comprehensive quarterly technical reports due within ten days of the end of the given quarter, describing progress made on the specific milestones as laid out in the SOW.
- PI meeting materials (slides, reports, etc.) due one week before the start of the PI meeting.
- A list of publications and conferences attended resulting from this research.
- A project completion report submitted within 30 days of the end of the period of performance, summarizing the research done.
- Other negotiated deliverables specific to the objectives of the individual efforts. These may include registered reports, experimental protocols, publications, intermediate and final versions of software libraries, code, and APIs, including documentation and user manuals, and/or a comprehensive assemblage of design documents, models, modeling data and results, and model validation data.
- Reporting as outlined in Section VI.C.

H. Data Management Plan (DMP)

This BAA requires a Data Management Plan (DMP) be included as part of the proposal submission. DARPA/DSO's view of what constitutes the scope of applicable data products to be covered in a DMP is quite broad, potentially encompassing all digital activity related to a project. DARPA's approach to an effective and practical DMP is predicated with two goals:

First, data is increasingly the key product of research and engineering endeavors. To ensure the reproducibility of results and the accessibility of program accomplishments to future users, we require proposers document the necessary and sufficient scope of data that may be applicable to these goals. Performers will be expected to document both the proprietary and non-proprietary products of the program (including raw unprocessed data, rarified data sets, test data, experimental designs, software source code and executables, build scripts, process sequence, programmatic communication and other collaboration activities, as well as other data) to ensure the retention and potential reusability of this information.

Second, when possible, DARPA may also share some or all of the program-generated data with

the broader research community as open data (with permission to access, reuse, and redistribute under appropriate licensing terms) to the extent permitted by applicable law and regulations (e.g., privacy, security, rights in data, and export control). The complete scope of program-generated data described above may go considerably beyond the scope of data to be made public. Hence, it is expected that as part of a DMP proposers delineate their specific data products that are suitable for public release and how they intend to capture and represent this information. In this way, it is DARPA's intention to enable reproducibility of results and establish (or contribute to) digital collections that can advance this and other scientific fields. Note that this provision is not meant to require disclosure of otherwise proprietary internal component or process intellectual property, but to ensure all performers can meet the overall program objectives.

A DMP should include enough detail to ensure that the data products delivered to DARPA (or made public) are adequate for use by an independent third party in recreation and verification of the scientific results. For example, proposed DMPs should address the following:

- Plans for data capture and sharing, including the extent and specific mechanisms to be used during the period of performance for the program;
- Any data management standards, including meta-data standards, and/or community best practices that may apply;
- A data inventory, with rough estimates of data kinds and assets; formats; sizes (e.g., KB, MB, GB, TB), etc. Kinds of data might include:
 - Data sets: experimental, test, and measurement data;
 - Narratives: observational logs, journals, collaborations;
 - Analyses;
 - Decisions: alternatives, exploration branches, determinations
 - Design of experiments and simulations: setup, ingest, outputs;
 - Codes (with build scripts, development history and versions), software (executables with source), algorithms, data consumed or produced by software;
 - Models or simulations (computational or mathematical);
 - Bibliographies and citations used by your research
 - Recordings of various physical phenomena (including images, videos, sensor data, etc.)
- Methods for addressing and protecting sensitive data, to include participant anonymity, privacy or data redaction;
- Anticipated current or future data quality issues;
- How the DMP enhances validation and reproducibility of results;
- How the DMP may support future scientific discoveries and engineering innovation;
- Which elements of the DMP constitute deliverables as part of the program execution plan; and,
- Proposer's access to (and proposed use of) institutional, organizational, or scientific community repositories and archives.

With this approach to DMPs, performers are only asked to explicitly document program data, how much there will be and how they intend to manage it as they execute the program. As this is effort that is required to execute the program, DARPA does not expect the existence of a DMP to produce additional cost burden on performers for data management requirements during or after

the period of performance.

II. Award Information

A. General Award Information

DARPA anticipates multiple awards.

The level of funding for individual awards made under this BAA will depend on the quality of the proposals received and the availability of funds. Awards will be made to proposers² whose proposals are determined to be the most advantageous to the Government, all evaluation factors considered. See Section V for further information.

The Government reserves the right to:

- select for negotiation all, some, one, or none of the proposals received in response to this solicitation;
- make awards without discussions with proposers;
- conduct discussions with proposers if it is later determined to be necessary;
- segregate portions of resulting awards into pre-priced options;
- accept proposals in their entirety or to select only portions of proposals for award;
- fund awards in increments with options for continued work at the end of one or more phases;
- request additional documentation once the award instrument has been determined (e.g., representations and certifications); and
- remove proposers from award consideration should the parties fail to reach agreement on award terms within a reasonable time or the proposer fails to provide requested additional information in a timely manner.

Proposals identified for negotiation may result in a procurement contract, cooperative agreement, or other transaction (OT), depending upon the nature of the work proposed, the required degree of interaction between parties, 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 www.darpa.mil/work-with-us/contract-management#OtherTransactions.

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,

² As used throughout this BAA, “proposer” refers to the lead organization on a submission to this BAA. The proposer is responsible for ensuring that all information required by a BAA--from all team members--is submitted in accordance with the BAA. “Awardee” refers to anyone who might receive a prime award from the Government, including recipients of procurement contracts, cooperative agreements, or Other Transactions. “Subawardee” refers to anyone who might receive a subaward from a prime awardee (e.g., subawardee, consultant, etc.).

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 BAA, 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 BAA. 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 BAA 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.

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. Appropriate clauses will be included in resultant awards for non-fundamental research to prescribe publication requirements and other restrictions, as appropriate. This clause can be found at 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 restricted research, their subawardee’s effort may be fundamental research. In those cases, it is the awardee’s responsibility to explain in their proposal why its subawardee’s effort is fundamental research.

III. Eligibility Information

A. Eligible Applicants

All responsible sources capable of satisfying the Government's needs may submit a proposal

DARPA's consideration.

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 BAA in any capacity unless they meet the following conditions: (1) FFRDCs must clearly demonstrate that the proposed work is not otherwise available from the private sector. (2) FFRDCs must provide a letter on official letterhead from their sponsoring organization citing the specific authority establishing their eligibility to propose to Government solicitations and compete with industry, and their compliance with the associated FFRDC sponsor agreement's terms and conditions. This information is required for FFRDCs proposing to be 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. 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. § 2539b may be the appropriate statutory starting point for some entities, specific supporting regulatory guidance, together with evidence of agency approval, will still be required to fully establish eligibility. DARPA will consider FFRDC and Government entity eligibility submissions on a case-by-case basis; however, the burden to prove eligibility for all team members rests solely with the proposer.

2. Foreign Participation

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. For classified submissions, this includes mitigating any Foreign Ownership Control and Influence (FOCI) issues prior to transmitting the submission to DARPA. Additional information on these subjects can be found at http://www.dss.mil/isp/foci/foci_faqs.html.

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 BAA. 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 BAA 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 (e.g., OTs under the authority of 10 U.S.C. § 2371).

IV. Application and Submission Information

Prior to submitting a full proposal, proposers are *strongly encouraged* to first submit an abstract as described below. This process allows a proposer to ascertain whether the proposed concept is: (1) applicable to the Lagrange BAA and (2) currently of interest. For the purposes of this BAA, applicability is defined as follows:

- The proposed concept is applicable to the Lagrange program as described herein.
- The proposed concept investigates an innovative approach that enables revolutionary advances, i.e., will not primarily result in evolutionary improvements to the existing state of practice. Specifically excluded are:
 - purely heuristic optimization methods and existing linear, quadratic, and more generally convex optimization methods that are already available in software for solving an application problem;
 - applying existing ideas to an application, or incremental improvements to known techniques to a new problem, or existing solutions and optimization methods specifically tuned to solving an application problem.
- The proposer has not already received funding or a positive funding decision for the proposed concept (whether from DARPA or another Government agency).

Abstracts and full proposals that are not found to be applicable to the Lagrange BAA as defined above may be deemed non-conforming³ and removed from consideration. All abstracts and full proposals must provide sufficient information to assess the validity/feasibility of their claims as well as comply with the requirements outlined herein for submission formatting, content and transmission to DARPA. Abstracts and full proposals that fail to do so may be deemed non-conforming and removed from consideration. Proposers will be notified of non-conforming determinations via letter.

A. Address to Request Application Package

This document contains all information required to submit a response to this solicitation. No additional forms, kits, or other materials are needed except as referenced herein. No request for proposal or additional solicitation regarding this opportunity will be issued, nor is additional information available except as provided at the Federal Business Opportunities website (<http://www.fbo.gov>), the Grants.gov website (<http://www.grants.gov/>), or referenced herein.

B. Content and Form of Application Submission

Various templates have been provided as attachments to the BAA posted at <http://www.fbo.gov>. *Use of these templates is mandatory for all submissions to this BAA.* Do not replicate any of these templates using personal or organizational letterhead or formatting (except as directed in the templates) or submit documents as un-editable image files. Document files must be in .pdf, .ppt, .pptx, .odx, .doc, .docx, .xls, or .xlsx formats. All submissions must be written in English and all pages shall be formatted for printing on 8-1/2 by 11-inch paper with 1-inch margins and

³ “Conforming” is defined as having been submitted in accordance with the requirements outlined herein.

font size not smaller than 12-point (8 or 10-point font may be used for figures, tables, and charts). Complete submission packages are defined as follows:

- Abstracts consist of the following files, described in Section IV.B.1 below:
 - One document file (Attachment 2)
 - One PowerPoint slide (Attachment 1)
- Proposals consist of the following files, described in Section IV.B.2 below:
 - Volume 1 - Technical and Management Volume: one document file (Attachment 4) plus PowerPoint slides (Attachment 3) for the Executive Summary, Technical Concept, Schedule/Milestones, and Cost Summary;
 - Volume 2 - Cost Volume: one document file (Attachment 5), one Cost Summary PowerPoint slide (Attachment 3, slide 4), one Excel spreadsheet and any proprietary subcontractor cost proposals; and
 - Volume 3 - Administrative and National Policy Requirements: one document file (Attachment 6).

1. Abstract Information

As stated above, proposers are strongly encouraged to submit an abstract in advance of a full proposal to minimize effort and reduce the potential expense of preparing an out of scope proposal. The abstract provides a synopsis of the proposed project by briefly answering the following questions:

- What is the proposed problem area?
- What are the current challenges in the stated optimization problem?
- How general is the problem space within the existing optimization divisions?
- Does the problem have the potential of broader applicability?

All abstracts must use the templates provided as Attachment 1 (Abstract Summary Slide) and Attachment 2 (Abstract Technical Description and Cost) to the BAA posted at www.fbo.gov. These templates contain content descriptions and format instructions for abstract submissions.

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. Proposers should note that a favorable response to an abstract is not a guarantee that a proposal based on the abstract will ultimately be selected for award negotiation.

While it is DARPA policy to attempt to reply to abstracts within thirty calendar days, proposers to this solicitation may anticipate a response within approximately two weeks. These official notifications will be sent via email to the Technical POC and/or Administrative POC identified on the abstract coversheet.

2. Full Proposal Information

All complete proposal packages must include the parts listed above in Section IV.B. The following templates, which contain proposal content descriptions and instructions, have been provided as attachments to the BAA posted at www.fbo.gov. Use of these templates is mandatory for all proposal submissions to this BAA.

- Attachment 3: Proposal Slide Template
 - Slide 1: Executive Summary
 - Slide 2: Technical Concept
 - Slide 3: Schedule and Milestones
 - Slide 4: Cost Summary
- Attachment 4: Proposal Template – Vol. 1 Technical and Management
- Attachment 5: Proposal Template – Vol. 2 Cost
- Attachment 6: Proposal Template – Vol. 3 Administrative and National Policy Requirements

3. Proprietary Information

Proposers are responsible for clearly identifying proprietary information. Submissions containing proprietary information must have the cover page and each page containing such information clearly marked with a label such as “Proprietary” or “Company Proprietary.” NOTE: “Confidential” is a classification marking used to control the dissemination of U.S. Government National Security Information as dictated in Executive Order 13526 and should not be used to identify proprietary business information. See Section V.B.1 for additional information.

4. Security Information

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 DARPA/DSO Program Security Officer (PSO).

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

C. Submission Dates and Times

Proposers are warned that submission deadlines as outlined herein are in Eastern Time and will be strictly enforced. When planning a response to this solicitation, proposers should take into account that some parts of the submission process may take from one business day to one month to complete (e.g., registering for a DUNS number or TIN).

DARPA will acknowledge receipt of *complete* submissions via email and assign identifying numbers that should be used in all further correspondence regarding those submissions. If no confirmation is received within two business days, please contact the BAA Administrator at Lagrange@darpa.mil to verify receipt.

1. Abstracts

Abstracts must be submitted per the instructions outlined herein *and received by DARPA* no later than the due date and time listed in Part One: Overview Information. Abstracts received after this time and date may not be reviewed.

2. Full Proposals

Complete proposal packages as described above must be submitted per the instructions outlined herein *and received by DARPA* no later than the due date and time listed in Part One: Overview Information. Proposals received after this time and date may not be reviewed.

D. Funding Restrictions

Not applicable.

E. Other Submission Requirements

1. Unclassified Submission Instructions

Proposers must submit all parts of their submission package using the same method; submissions cannot be sent in part by one method and in part by another method nor should duplicate submissions be sent by multiple methods. Email submissions will not be accepted. Failure to comply with the submission procedures outlined herein may result in the submission being deemed non-conforming and withdrawn from consideration.

a. Abstracts

DARPA/DSO will employ an electronic upload submission system (<https://baa.darpa.mil/>) for all UNCLASSIFIED abstracts sent in response to this solicitation. *Abstracts must not be submitted via Grants.gov.*

First time users of the DARPA BAA Submission website must complete a two-step account creation process. The first step consists of registering for an extranet account by going to the URL listed above and selecting the “Account Request” link. Upon completion of the online form, proposers will receive two separate emails; one will contain a user name and the second will provide a temporary password. Once both emails have been received, the second step requires proposers to go back to the submission website and log in using that user name and password. After accessing the extranet, proposers may then create a user account for the DARPA BAA Submission website by selecting the “Register your Organization” link at the top of the page. Once the user account is created, proposers will be able to see a list of solicitations open for submissions, view submission instructions, and upload/finalize their abstract.

Proposers who already have an account on the DARPA BAA Submission website may simply log in at <https://baa.darpa.mil/>, select this solicitation from the list of open DARPA solicitations and proceed with their abstract submission. Note: proposers who have created a DARPA BAA Submission website account to submit to another DARPA Technical Office's solicitations do not need to create a new account to submit to this solicitation.

All abstracts submitted electronically through the DARPA BAA Submission website must meet the following requirements: (1) uploaded as a zip file (.zip or .zipx extension); (2) only contain the document(s) requested herein; (3) only contain unclassified information; and (4) must not exceed 100 MB in size. Only one zip file will be accepted per abstract and abstracts not uploaded as zip files will be rejected by DARPA.

Technical support for the DARPA BAA Submission website is available during regular business hours, Monday – Friday, 9:00 a.m. – 5:00 p.m. Requests for technical support must be emailed to BAAT_Support@darpa.mil with a copy to Lagrange@darpa.mil. Questions regarding submission contents, format, deadlines, etc. should be emailed to Lagrange@darpa.mil. Questions/requests for support sent to any other email address may result in delayed/no response.

Since proposers may encounter heavy traffic on the web server, DARPA discourages waiting until the day abstracts are due to request an account and/or upload the submission.

Note: Proposers submitting an abstract via the DARPA BAA Submission site MUST (1) click the "Finalize" button in order for the submission to upload AND (2) do so with sufficient time for the upload to complete prior to the deadline. Failure to do so will result in a late submission.

b. Proposals Requesting a Procurement Contract or Other Transaction

Proposers requesting procurement contracts or other transactions may submit full proposals through ONE of the following methods: (1) electronic upload (DARPA-preferred); or (2) direct mail/hand-carry.

i. Electronic Upload

DARPA/DSO encourages proposers to submit UNCLASSIFIED proposals via the DARPA BAA Submission website at <https://baa.darpa.mil/>.

First time users of the DARPA BAA Submission website must complete a two-step account creation process. The first step consists of registering for an extranet account by going to the URL listed above and selecting the "Account Request" link. Upon completion of the online form, proposers will receive two separate emails; one will contain a user name and the second will provide a temporary password. Once both emails have been received, the second step requires proposers to go back to the submission website and log in using that user name and password. After accessing the extranet, proposers may then create a user account for the DARPA BAA Submission website by selecting the "Register your Organization" link at the top of the page. Once the user account is created, proposers will be able to see a list of solicitations open for submissions, view submission instructions, and upload/finalize their proposal.

Proposers who already have an account on the DARPA BAA Submission website may simply log in at <https://baa.darpa.mil/>, select this solicitation from the list of open DARPA solicitations

and proceed with their proposal submission. *Note: proposers who have created a DARPA BAA Submission website account to submit to another DARPA Technical Office's solicitations do not need to create a new account to submit to this solicitation.*

All full proposals submitted electronically through the DARPA BAA Submission website must meet the following requirements: (1) uploaded as a zip file (.zip or .zipx extension); (2) only contain the document(s) requested herein; (3) only contain unclassified information; and (4) must not exceed 100 MB in size. Only one zip file will be accepted per full proposal and full proposals not uploaded as zip files will be rejected by DARPA.

Technical support for the DARPA BAA Submission website is available during regular business hours, Monday – Friday, 9:00 a.m. – 5:00 p.m. Requests for technical support must be emailed to BAAT_Support@darpa.mil with a copy to Lagrange@darpa.mil. Questions regarding submission contents, format, deadlines, etc. should be emailed to Lagrange@darpa.mil. Questions/requests for support sent to any other email address may result in delayed/no response.

Since proposers may encounter heavy traffic on the web server, DARPA discourages waiting until the day proposals are due to request an account and/or upload the submission. Note: Proposers submitting a proposal via the DARPA BAA Submission site MUST (1) click the "Finalize" button in order for the submission to upload AND (2) do so with sufficient time for the upload to complete prior to the deadline. Failure to do so will result in a late submission.

ii. Direct Mail/Hand-carry

Proposers electing to submit procurement contract or other transaction proposals via direct mail or hand-carried must provide one paper copy and one electronic copy on CD or DVD of the full proposal package. All parts of the proposal package must be mailed or hand-carried in a single delivery to the address noted in Section VII below.

c. Proposals Requesting a Cooperative Agreement

Proposers requesting cooperative agreements may only submit proposals through ONE of the following methods: (1) electronic upload at Grants.gov (DARPA-preferred); or (2) direct mail/hand-carry to DARPA.

i. Electronic Upload

DARPA encourages cooperative agreement proposers to submit their proposals via electronic upload at <http://www.grants.gov/web/grants/applicants/apply-for-grants.html>. Proposers electing to use this method must complete a one-time registration process on Grants.gov before a proposal can be electronically submitted. *If proposers have not previously registered, this process can take up to four weeks so registration should be done in sufficient time to ensure it does not impact a proposer's ability to meet required submission deadlines.* Registration requirements and instructions are outlined at <http://www.grants.gov/web/grants/register.html>.

Carefully follow the DARPA submission instructions provided with the solicitation application package on Grants.gov. Only the required forms listed therein (e.g., SF-424 and Attachments form) should be included in the submission. *Note: Grants.gov does not accept zipped or encrypted proposals.*

Once Grants.gov has received an uploaded proposal submission, Grants.gov will send two email messages to notify proposers that: (1) the proposal has been received by Grants.gov; and (2) the proposal has been either validated or rejected by the system. *It may take up to two business days to receive these emails.* If the proposal is validated, then the proposer has successfully submitted their proposal. If the proposal is rejected, the submission must be corrected, resubmitted and revalidated before DARPA can retrieve it. If the solicitation is no longer open, the rejected proposal cannot be resubmitted. Once the proposal is retrieved by DARPA, Grants.gov will send a third email to notify the proposer. DARPA will send a final confirmation email as described in Section IV.C.

To avoid missing deadlines, Grants.gov recommends that proposers submit their proposals to Grants.gov 24-48 hours in advance of the proposal due date to provide sufficient time to complete the registration and submission process, receive email notifications and correct errors, as applicable.

Technical support for Grants.gov submissions may be reached at 1-800-518-4726 or support@grants.gov.

ii. Direct Mail/Hand-carry

Proposers electing to submit cooperative agreement proposals via direct mail or hand-carried must provide one paper copy and one electronic copy on CD or DVD of the full proposal package. Proposers must complete the SF 424 R&R form (Application for Federal Assistance, Research and Related) provided at Grants.gov as part of the opportunity application package for this BAA and include it in the proposal submission. All parts of the proposal package must be mailed or hand-carried to the address noted in Section VII below.

V. Application Review Information

A. Evaluation Criteria

Proposals will be evaluated using the following criteria listed in descending order of importance: Overall Scientific and Technical Merit; Metrics and Milestones; Potential Contribution and Relevance to the DARPA Mission; and Cost Realism.

- **Overall Scientific and Technical Merit**

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

- **Metrics and Milestones**

The proposed metrics and milestones are appropriate for the mathematical methods proposed for the chosen application area. There are sufficient checkpoints for progress to determine if tasks are going according to plan, and there are major milestones indicated for certain points in the program as required by Section I.E. The proposed metrics and milestones aggressively pursue development of methods beyond the state of the art in the required timeframe while accurately accounting for anticipated technical risks and mitigation thereof.

- **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.

- **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).

B. Review and Selection Process

DARPA will conduct a scientific/technical review of each conforming proposal. Conforming proposals comply with all requirements detailed in this BAA; 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

The review process identifies proposals that meet the evaluation criteria described above and are, therefore, selectable for negotiation of awards by the Government. DARPA policy is to ensure impartial, equitable, comprehensive proposal evaluations and to select proposals that meet DARPA technical, policy, and programmatic goals. Proposals that are determined selectable will not necessarily receive awards (see Section II). Selections may be made at any time during the period of solicitation. For evaluation purposes, a proposal is defined to be the document and supporting materials as described in Section IV.

1. Handling of Source Selection Information

DARPA policy is to treat all submissions as source selection information (FAR 2.101 and 3.104), and to only disclose their contents to authorized personnel. Restrictive notices notwithstanding, 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), DARPA may also request input on technical aspects of the proposals from other non-Government consultants/experts who are strictly bound by the appropriate non-disclosure requirements.

Submissions will not be returned. The original of each submission received will be retained at DARPA and all other non-required copies destroyed. A certification of destruction may be requested via email to the BAA mailbox, provided the formal request is received within 5 days after being notified of submission status.

C. Federal Awardee Performance and Integrity Information (FAPIIS)

Following the review and selection process described above, but prior to making an award above the simplified acquisition threshold (FAR 2.101), DARPA is required⁴ to review and consider any information available through the designated integrity and performance system (currently FAPIIS). Selectees have the opportunity to comment on any information about themselves entered in the database. DARPA will consider any comments and other information in FAPIIS or other systems prior to making an award.

VI. Award Administration Information

A. Selection Notices

After proposal evaluations are complete, proposers will be notified as to whether their proposal was selected for award negotiation as a result of the review process. Notification will be sent by email to the Technical and Administrative POCs identified on the proposal cover sheet. If a proposal has been selected for award negotiation, the Government will initiate those negotiations following the notification.

B. Administrative and National Policy Requirements

1. Solicitation Provisions and Award Clauses, Terms and Conditions

Solicitation provisions relevant to DARPA BAAs are listed on the Additional BAA Content page on DARPA's website at www.darpa.mil/work-with-us/additional-baa. This page also lists award clauses that, depending on their applicability, may be included in the terms and conditions of awards resultant from DARPA solicitations. This list is not exhaustive and the clauses, terms and conditions included in a resultant award will depend on the nature of the research effort, the specific award instrument, the type of awardee, and any applicable security or publication restrictions.

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

The above information serves to put potential proposers and awardees on notice of proposal requirements and award terms and conditions to which they may have to adhere.

2. 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

⁴ Per 41 U.S.C. 2313, as implemented by FAR 9.103 and 2 CFR § 200.205.

Maintenance” are incorporated into this BAA. See www.darpa.mil/work-with-us/additional-baa for further information.

NOTE: new registrations can take an average of 7-10 business days to process in SAM. SAM registration requires the following information:

- DUNS number
- TIN
- CAGE Code. If a proposer does not already have a CAGE code, one will be assigned during SAM registration.
- Electronic Funds Transfer information (e.g., proposer’s bank account number, routing number, and bank phone or fax number).

3. 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 www.sam.gov/. In addition, resultant procurement contracts will require supplementary DARPA-specific representations and certifications. See www.darpa.mil/work-with-us/additional-baa for further information.

4. Intellectual Property

Proposers should note that the Government does not own the intellectual property or technical data/computer software developed under Government contracts. The Government acquires the right to use the technical data/computer software. Regardless of the scope of the Government’s rights, awardees may freely use their same data/software for their own commercial purposes (unless restricted by U.S. export control laws or security classification). Therefore, technical data and computer software developed under this solicitation will remain the property of the awardees, though DARPA will have, at a minimum, Government Purpose Rights (GPR) to technical data and computer software developed through mixed sponsorship.

If proposers desire to use proprietary computer software or technical data or both as the basis of their proposed approach, in whole or in part, they should: (1) clearly identify such software/data and its proposed particular use(s); (2) explain how the Government will be able to reach its program goals (including transition) within the proprietary model offered; and (3) provide possible nonproprietary alternatives in any area that might present transition difficulties or increased risk or cost to the Government under the proposed proprietary solution. Proposers expecting to use, but not to deliver, commercial open source tools or other materials in implementing their approach may be required to indemnify the Government against legal liability arising from such use.

All references to "Unlimited Rights" or "Government Purpose Rights" are intended to refer to the definitions of those terms as set forth in the Defense Federal Acquisition Regulation Supplement (DFARS) 227.

a. Intellectual Property Representations

All proposers must provide a good faith representation of either ownership or possession of

appropriate licensing rights to all other intellectual property to be used for the proposed project. Proposers must provide a short summary for each item asserted with less than unlimited rights that describes the nature of the restriction and the intended use of the intellectual property in the conduct of the proposed research.

b. Patents

All proposers must include documentation proving ownership or possession of appropriate licensing rights to all patented inventions to be used for the proposed project. If a patent application has been filed for an invention, but it includes proprietary information and is not publicly available, a proposer must provide documentation that includes: the patent number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and summary of the patent title, with either: (1) a representation of invention ownership; or (2) proof of possession of appropriate licensing rights in the invention (i.e., an agreement from the owner of the patent granting license to the proposer).

c. Procurement Contracts

- **Noncommercial Items (Technical Data and Computer Software):** Proposers requesting a procurement contract must list all noncommercial technical data and computer software that it plans to generate, develop, and/or deliver, in which the Government will acquire less than unlimited rights and to assert specific restrictions on those deliverables. In the event a proposer does not submit the list, the Government will assume that it has unlimited rights to all noncommercial technical data and computer software generated, developed, and/or delivered, unless it is substantiated that development of the noncommercial technical data and computer software occurred with mixed funding. If mixed funding is anticipated in the development of noncommercial technical data and computer software generated, developed, and/or delivered, proposers should identify the data and software in question as subject to GPR. In accordance with DFARS 252.227-7013, “Rights in Technical Data - Noncommercial Items,” and DFARS 252.227-7014, “Rights in Noncommercial Computer Software and Noncommercial Computer Software Documentation,” the Government will automatically assume that any such GPR restriction is limited to a period of 5 years, at which time the Government will acquire unlimited rights unless the parties agree otherwise. The Government may use the list during the evaluation process to evaluate the impact of any identified restrictions and may request additional information from the proposer, as may be necessary, to evaluate the proposer’s assertions. Failure to provide full information may result in a determination that the proposal is non-conforming.
- **Commercial Items (Technical Data and Computer Software):** Proposers requesting a procurement contract must list all commercial technical data and commercial computer software that may be included in any noncommercial deliverables contemplated under the research project, and assert any applicable restrictions on the Government’s use of such commercial technical data and/or computer software. In the event a proposer does not submit the list, the Government will assume there are no restrictions on the Government’s use of such commercial

items. The Government may use the list during the evaluation process to evaluate the impact of any identified restrictions and may request additional information from the proposer to evaluate the proposer's assertions. Failure to provide full information may result in a determination that the proposal is non-conforming.

d. Other Types of Awards

Proposers requesting an award instrument other than a procurement contract shall follow the applicable rules and regulations governing those award instruments, but in all cases should appropriately identify any potential restrictions on the Government's use of any intellectual property contemplated under those award instruments. This includes both noncommercial items and commercial items. The Government may use the list as part of the evaluation process to assess the impact of any identified restrictions, and may request additional information from the proposer, to evaluate the proposer's assertions. Failure to provide full information may result in a determination that the proposal is non-conforming.

5. 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 www.darpa.mil/work-with-us/additional-baa, to include providing the information specified therein as required for proposal submission.

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

All proposers and awardees will be subject to the DARPA requirements related to Controlled Unclassified Information on Non-DoD Information Systems as detailed at www.darpa.mil/work-with-us/additional-baa.

7. Electronic Invoicing and Payments

Awardees will be required to submit invoices for payment electronically via Wide Area Work Flow (WAWF) at <https://wawf.eb.mil>, unless an exception applies. Registration in WAWF is required prior to any award under this BAA.

8. Electronic and Information Technology

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) and FAR 39.2.

9. Disclosure of Information and Compliance with Safeguarding Covered Defense Information Controls

Unless a proposer is performing strictly fundamental research, all proposers receiving FAR-based Procurement Contracts under this BAA shall be compliant with the following:

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://doi.org/10.6028/NIST.SP.800-171r1>) that are in effect at the time the BAA is issued, or as authorized by the Contracting Officer, not later than December 31, 2017.

10. Disclosure of Information and Compliance with Safeguarding Covered Defense Information Controls

All proposers are responsible for reviewing the Controlled Unclassified Information on Non-DoD Information Systems section on the DARPA website at <http://www.darpa.mil/work-with-us/additional-baa>.

C. Reporting

1. Technical and Financial Reports

The number and types of technical and financial reports required under the contracted project will be specified in the award document, and will include, as a minimum, monthly financial status reports and a yearly status summary. A final report that summarizes the project and tasks will be required at the conclusion of the performance period for the award. The reports shall be prepared and submitted in accordance with the procedures contained in the award document.

2. Patent Reports and Notifications

All resultant awards will contain a mandatory requirement for patent reports and notifications to be submitted electronically through i-Edison (<https://public.era.nih.gov/iedison>).

VII. Agency Contacts

DARPA will use email for all technical and administrative correspondence regarding this solicitation.

- **Technical POC:** Fariba Fahroo, Program Manager, DARPA/DSO
- **BAA Email:** Lagrange@darpa.mil
- **BAA Mailing Address:**
DARPA/DSO

ATTN: HR001117S0039
675 North Randolph Street
Arlington, VA 22203-2114

- **DARPA/DSO Opportunities Website:** <http://www.darpa.mil/work-with-us/opportunities>

VIII. Other Information

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

A. Frequently Asked Questions (FAQs)

Administrative, technical, and contractual questions should be emailed to Lagrange@darpa.mil. All questions must be in English and must include the name, email address, and the telephone number of a point of contact.

DARPA will attempt to answer questions in a timely manner; however, questions submitted within 7 days of the proposal due date may not be answered. DARPA will post an FAQ list at <http://www.darpa.mil/work-with-us/opportunities>. The list will be updated on an ongoing basis until the BAA expiration date as stated in Part I.

B. Collaborative Efforts/Teaming

DARPA highly encourages teaming before proposal submission and, as such, will facilitate the formation of teams with the necessary expertise. Interested parties should submit a one-page profile including the following information:

- Contact information to include name, organization, email, telephone number, mailing address, organization website (if applicable).
- A brief description of the proposer's technical competencies.
- Desired expertise from other teams/organizations/individuals, if applicable.

All profiles must be emailed to Lagrange@darpa.mil no later than 3:00 p.m. on June 21, 2017. Following the deadline, the consolidated teaming profiles will be sent via email to the proposers who submitted a valid profile. Specific content, communications, networking, and team formation are the sole responsibility of the participants. Neither DARPA nor the DoD endorses the information and organizations contained in the consolidated teaming profile document, nor does DARPA or the DoD exercise any responsibility for improper dissemination of the teaming profiles.

C. Proposers Day

The Lagrange Proposers Day will be held on June 19, 2017. The event will be conducted solely via webcast. Advance registration is required for the webcast. See DARPA-SN-17-50 posted at www.fbo.gov for all details. Viewing the Lagrange Proposers Day webcast is voluntary and is not required to propose to this solicitation.

