

U.S. ARMY RESEARCH OFFICE

In partnership with

The Intelligence Advanced Research Projects Activity (IARPA)

BROAD AGENCY ANNOUNCEMENT for

Rapid Explanation, Analysis and Sourcing Online (REASON) Program



Intelligence Advanced Research Projects Activity

I A R P A

Creating Advantage through Research and Technology



W911NF-23-S-0007

Issued by:

US Army Contracting Command–Aberdeen Proving Ground

Research Triangle Park Division

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I. OVERVIEW OF THE FUNDING OPPORTUNITY

A. Required Overview Content

1. Federal Agency Name(s)

U.S. Army Research Office

Issuing Acquisition Office

U.S. Army Contracting Command-Aberdeen Proving Ground, Research Triangle Park
Division (ACC-APG-RTP Division)

2. Funding Opportunity Title: Rapid Explanation, Analysis and Sourcing Online (REASON) Program

3. Announcement Type

Full Announcement

4. Research Opportunity Number: W911NF-23-S-0007

5. Catalog of Federal Domestic Assistance (CFDA) Number

12.431 – Basic Scientific Research

6. Response Dates

BAA release:

Questions must be submitted by: April 3rd, 2023 5:00 PM Eastern Time to:

dni-iarpa-baa-w911nf-23-s-0007@iarpa.gov

Response to questions expected by: April 14th, 2023

Proposals due by: 5:00 PM Eastern Time on May 8th, 2023

See Section II.D. for additional information.

B. Additional Overview Information

This Broad Agency Announcement (BAA), which sets forth research areas of interest to the Army Research Laboratory-Army Research Office (ARL-ARO) and the Intelligence Advanced Research Projects Activity (IARPA), is issued under paragraph 6.102(d)(2) of the Federal Acquisition Regulation (FAR), and 10 USC 4001 which provides for the competitive selection of basic research proposals. Proposals submitted in response to this BAA and selected for award are considered to be the result of full and open competition and in full compliance with the provision of Public Law 98-369, “The Competition in Contracting Act of 1984” and subsequent amendments.

The Department of Defense (DoD) agencies involved in this Program reserve the right to select for award either all, some, or none of the proposals submitted in response to this announcement. The participating DoD agencies will provide no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of participating DoD agencies to treat all proposals

as sensitive, competitive information and to disclose their contents only for the purposes of evaluation.

This BAA makes frequent use of the terms “Offeror” and “Performer”. They are not interchangeable. An Offeror is an entity who submits a proposal. Statements referring to Offeror or Offerors are therefore directed at those preparing a proposal. A Performer designates an entity engaged in Program work and provides here a useful point of view when describing expected activities of the Program. Statements referring to Performer(s) are thus intended to inform Offerors about the kinds and pace of work those engaged in the Program would be expected to undertake; they are not intended to set or imply requirements for the proposal.

II. DETAILED INFORMATION ABOUT THE FUNDING OPPORTUNITY

A Funding Opportunity Description

1. Program Summary

The Rapid Explanation, Analysis, and Sourcing Online (REASON) Program aims to develop technology that will enable intelligence analysts to substantially increase the quality of argumentation in their analytic reports through more effective use of evidence and reasoning. In the context of an analytic report, evidence is information that supports or opposes a judgment, while reasoning is the stated justification for the judgment. Furthermore, strong reasoning is reasoning that logically substantiates the judgments while weak reasoning is reasoning that either fails to substantiate the judgments or contains logical flaws. The technology developed by the REASON Program will automatically produce comments (feedback and recommendations) on a draft report, highlighting additional relevant evidence, and identify strengths and weaknesses in the draft’s reasoning. Analysts can use the comments to improve their reports.

Argumentation is central to the Intelligence Community (IC) Analytic Standards, which are listed in Intelligence Community Directive (ICD) 203¹. The standards are intended to guide IC analysis and analytic production. The Analytic Tradecraft Standards focus on several aspects of evidence and reasoning, including sourcing, explaining uncertainty, distinguishing between underlying information and assumptions, and logical argumentation. Because evidence and reasoning are crucial components of every analytic report, REASON will have broader application than previous research efforts aimed at helping the IC make accurate forecasts.

Currently, intelligence analysts are encouraged to use structured analytic techniques to boost the quality of argumentation in their reports.^{2,3} Many of these methods require substantial additional quantities of analysts’ time and are therefore not widely used. As contrasted with current applications of structured analytic techniques, REASON technology will automatically produce comments with no additional effort from analysts, who can use any comments they find valuable.

¹ <https://www.dni.gov/files/documents/ICD/ICD%20203%20Analytic%20Standards.pdf>.

² <https://www.cia.gov/static/955180a45afe3f5013772c313b16face/Tradecraft-Primer-apr09.pdf>

³ <https://www.dia.mil/FOIA/FOIA-Electronic-Reading-Room/FileId/161442/>

Some of these comments might be based on the automated application of effective structured analytic techniques, along with additional innovations.

By making specific comments on draft analytic reports, REASON technology will fit into the existing intelligence analysts' workflow. The comments will be analogous to those made by automated spelling and grammar checks, except that REASON's comments will focus on improving argumentation instead of writing.

Offerors shall address all three technical Task Areas (TAs) to meet REASON's goal of developing automated methods to produce comments on draft analytic reports that enable analysts to substantially increase the report's quality of argumentation:

- **Task Area 1 (TA1) – Identify Additional Evidence:** Automatically find relevant supporting and contrary evidence in addition to the evidence used in a draft report.
- **Task Area 2 (TA2) – Identify Reasoning Strengths and Weaknesses:** Automatically find strengths and weaknesses in the reasoning of a draft report.
- **Task Area 3 (TA3) – Produce Comments to Increase Quality of Argumentation:** Based in part on the output of TA1 and TA2, automatically produce comments that enable analysts to substantially improve the argumentation in their reports.

Offerors must propose novel approaches to each of these three TAs, and if selected as a Performer, will be required to create an end-to-end technology that incorporates software components from each TA. Developed capabilities must be compatible with a provided Application Programming Interface (API) to facilitate assessment by independent test and evaluation (T&E) according to program metrics described in Section II.A.7, Program Metrics.

2. Technical Challenges and Objectives

Offerors shall address the following technical challenges and objectives to meet the REASON goals.

Identify Additional Evidence (TA1): The goal of TA1 is to develop technology that automatically identifies additional supporting and contrary evidence when such evidence exists. Successful approaches will produce, in response to a draft analytic report and a corpus of source documents, a prioritized list of up to eight items of additional evidence contained in the corpus but not mentioned in the draft report. (Only the first eight items will be scored). Performer systems will need to determine whether a piece of information is relevant evidence bearing on the analytic question addressed in the draft report and whether it is additional (non-redundant) to the information used in the draft report. Performer systems should identify (where appropriate) contrary as well as supporting evidence, determined by the relationship of the evidence to either the draft's conclusion or the evidence and reasoning within the draft. When there is no non-redundant additional evidence, performer systems should report that.

Identify Reasoning Strengths and Weaknesses (TA2): The goal of TA2 is to develop technology that automatically finds strengths and weaknesses in the reasoning of a draft analytic report. This means that the system will be able to identify reasoning elements in the draft report. For each draft

report, the system will identify up to eight strengths and weaknesses. (Only the first eight items will be scored). Each strength or weakness will point to the appropriate section of the draft report and shall be accompanied by a brief explanation of why it is strong or weak reasoning. A successful system must distinguish between apparent and real strengths and weaknesses in reasoning. If the reasoning in the draft analytic report is sound, the system will report that.

Produce Comments to Increase Quality of Argumentation (TA3): The goal of TA3 is to develop a software application that, with input from TA1 and TA2, automatically produces comments on draft analytic reports that enable analysts to substantially increase the quality of argumentation in the report. TA1 and TA2 provide evidence and reasoning improvement as inputs to TA3, and TA3 builds on these to present useful comments to the analyst. Successful approaches must identify key areas where a draft report can be improved and generate comments based on those, presented in a manner that prompts analysts to use them effectively. The comments may concern individual issues or the overall draft report, including the correctness of the conclusion or the appropriateness of cited evidence; they may address the content or the communication of the report's argument.

The TA3 REASON application deliverable must be compatible with analyst authoring applications, typically Microsoft Word. TA3 encompasses both the software development and the research necessary to draw on TA1 and TA2 inputs and effectively communicate recommendations to the analyst so that they improve the argumentation in their draft report. The TA3 REASON application is the only portion of REASON that analysts will interact with.

REASON will provide comments to analysts in a timely manner once the analyst requests them. There is no formal milestone for response time. However, delays in response times will likely result in less use by test participants and intelligence analysts.

3. Program Phases

The REASON Program is a 42-month effort, comprising two phases. Proposers must submit to both phases or else they will be considered to be non-compliant. Because the goal of the REASON Program is to increase the quality of reports produced on classified systems, deliverables produced by proposers must offer a minimum of Government Purpose Rights that grant the Government intellectual property (IP) rights sufficient to allow the Government to modify and deploy deliverables on classified networks.

In Phase 1 performer systems will be tested comprehensively on unclassified data consisting of draft analytic reports and news reports. In parallel, the REASON independent T&E team will retrain and evaluate performer systems on classified draft analytic reports and source reports. In Phase 2 performer systems will be tested on classified data consisting of draft analytic reports and classified source reports. In each phase performers will develop and be tested on techniques for addressing TA1, TA2, and TA3. Each phase will contain several testing cycles; each cycle will contain approximately 20 challenge problems consisting of an analytic question and a draft report. Challenge problems will become increasingly difficult over the course of a phase.

In each phase TA1 will be evaluated by measuring the performer system's ability to automatically find and rank-order additional evidence. TA2 will be evaluated by measuring the performer

system's ability to automatically find and explain strengths and weaknesses in reasoning. TA3 will be evaluated in two ways:

1. T&E raters will evaluate the comments produced by performer systems – on correctness, appropriateness, and clarity.
2. Final Exam: Human participants will be assigned to use a performer system or to be in a control group. Participants will produce draft reports on assigned analytic questions and have opportunities to revise the reports. The same analytic questions will be posed to experimental conditions using Performer systems and control conditions. The analytic questions will be drawn from a wide variety of topic areas, including political, military, social, economic, environmental, or diplomatic topics. The form in which the analytic question is posed will vary and will emulate the type of taking that is given to IC analysts. Participants assigned to a performer system will work for a set duration to produce a report. During that time, each participant will see the comments that the system produces and may use any of the comments in revising their report. T&E will measure the argumentative quality of finished reports, comparing those produced with the aid of a performer system to those produced by participants in control groups.

Phase 1

Phase 1 shall have a duration of 24 months. The goal of Phase 1 is to develop novel systems to enable analysts working with unclassified data to produce analytic reports of substantially higher quality. Performer research will focus on developing automated methods for processing argumentation (evidence and reasoning) accurately, producing comments that human users find explainable and helpful.

Performer systems' TA1 and TA2 capabilities will be tested over three cycles each, where each cycle includes both unclassified and classified testing. Cycles will become increasingly difficult during the phase: it will become more challenging to find additional evidence and strengths and weaknesses in the reasoning. Performer systems' TA3 capabilities will be tested in one cycle (with unclassified and classified testing) and one final exam using unclassified data. Each of the TA3 cycles will measure systems' ability to produce comments that are correct, appropriate, and clear. The final exam will measure the effect of the system's automatically produced comments on the quality of reports written by human users who produced the draft and can view the comments. The human users will include undergraduate or graduate students in disciplines such as intelligence analysis or international relations.

All Performer work will be unclassified. Performer systems will be tested by cleared T&E personnel on classified data but Performers will not be able to review that classified data. T&E will provide Performers with unclassified summary results from classified testing. In classified testing, Performer systems, operated by cleared T&E personnel in an automated fashion, will need to search, identify, and process textual documents containing classified data. These documents will differ from the unclassified news and opinion documents in several ways. In addition to containing new information, the classified data will have distinctive stylistic features, including classification markings and IC-specific jargon and abbreviations. Some unclassified examples with these stylistic features will be provided at Program Kickoff.

Phase 2

Phase 2 shall have a duration of 18 months. The goal of Phase 2 is to refine the capabilities of the methods developed in Phase 1 so that they function effectively on classified data and produce substantially larger effects. Performers will refine their systems to process the content and style of the IC's source reports using unclassified examples, but they will not have access to classified data. Performers will receive actionable summary level unclassified feedback from the independent cleared T&E that they can use to refine the capabilities of their methods and systems.

Performer systems' TA1 and TA2 capabilities will be tested over one cycle each. Performer systems' TA3 capabilities will be tested over two cycles and one final exam, using cleared intelligence analysts as participants.

3. Recommended Team Expertise

Collaborative efforts and teaming among Offerors are highly encouraged. It is anticipated that teams will be multidisciplinary and may include expertise in one or more of the disciplines listed below. This list is included only to provide guidance for Offerors; satisfying all the areas of technical expertise below is not a requirement for selection, and unconventional or innovative team expertise may be needed based on the proposed research. Proposals should include a description and the mix of skills and staffing that the Offeror determines will be necessary to carry out the proposed research and achieve Program metrics.

- Applied epistemology
- Argumentation
- Cognitive psychology
- Experimental design
- Informal logic
- Judgment and decision making
- Linguistics
- Natural language processing
- Philosophy of language
- Psychometrics
- Rationality
- Software engineering
- Systems engineering
- Systems integration

4. Program Scope and Limitations

Proposals shall explicitly address all the following:

- **Underlying Theory:** Proposed strategies to meet Program-specified metrics must have firm theoretical bases that are described with enough detail that reviewers will be able to assess the viability of the approaches. Proposals shall properly describe and reference previous work upon which their approach is founded.

- **R&D Approach:** Proposals shall describe the technical approach to meeting Program metrics.
- **Technical Risks:** Proposals shall identify technical risks and proposed mitigation strategies for each.
- **Software Development:** Proposals shall describe the approach to software architecture and integration.

The following areas of research are **out of scope** for the REASON Program:

- Purely automated production of analytic reports.
- Approaches that process non-textual inputs such as:
 - Images
 - Video
 - Audio
 - Structured data sources
 - However, it is permissible to use textual clues (e.g., image captions) to locate and retrieve non-textual items
- Approaches aimed at processing text in languages other than English.
- Approaches that require Performer access to classified information or data. **All** Performer research will be strictly unclassified.

5. Program Data

The REASON program will use both data provided by the Government Team and data provided by Performers. Proposals must specify the data needed to carry out the proposed research and what data characteristics are necessary for the Proposer's approach(es) to be successful at meeting program objectives. These details should be provided for using Government-provided data as well as Performer-provided data.

a. Government-Provided Data

The Government will obtain data as a corpus of source documents and make it available to Performers via a T&E testbed. At the beginning of Phase 1 this will be a corpus of unclassified news articles and analytic reports. At the beginning of each phase the Government team will also provide access to a small sample of unclassified draft reports similar in form to the classified draft reports that will be used in T&E testing in that phase.

The unclassified data provided by the Government for training and testing REASON systems is intended to serve as a surrogate for the intelligence items that would be considered by an IC analyst. For planning purposes, Performers may assume that this corpus of data will include at least 25 years of output from at least 20 major reputable media outlets. The type of information contained in the unclassified corpus will be diverse, matching the breadth of textual information types available to analysts on classified networks. In addition to news reports, the corpus will include analysis and opinion articles and reference materials.

The data to be used in classified tuning and testing of Performer systems will not be directly visible to Performers. The data will reside on a classified testbed and will consist of source reports and analytic products covering the same time period as the unclassified corpus.

At the beginning of the program the history available in both corpora will extend back at least 25 years. The corpora will be kept up to date as the REASON Program progresses.

In addition to the bulk corpora described above, Performers will be provided with annotated examples for 5 Challenge Problems each for TA1, TA2, and TA3 REASON Comment Quality. These annotated examples will include Challenge Problems, example solutions, and evaluation of these solutions. Performers will not be provided with any annotations for data beyond these example Challenge Problems.

b. Performer-Provided Data

Each Performer is expected to have a unique technical solution to the REASON challenges and may require additional data for model training, model running, internal evaluation, or other research needs. Proposals must present a dataset development plan detailing how the team intends to obtain the data required. This documentation should account for any other associated labor to curate and facilitate use of data that are acquired.

As part of their proposal, each team shall prepare a REASON Privacy Plan Version 1.0 that comprehensively describes the efforts the team will take to protect personally identifiable information and safeguard the security of any personal data collected or services involved in collection, transmission, processing, and storage of these data. Any claims that data are anonymous must be based on evidence and supported with sufficient information regarding how the data have been anonymized.

This version 1.0 of the REASON Privacy Plan shall be included in the Proposer's proposal as Attachment 6 that covers all external datasets to be leveraged as part of the proposed research approaches. The REASON Privacy Plan shall be updated at the beginning of each Phase and when new sources of data or datasets are proposed for use within a Performer's REASON research activities, including data used for either development or evaluation purposes.

6. Test and Evaluation (T&E)

T&E will be conducted by an independent team of contractor staff carrying out evaluation and analyses of Performer research deliverables using program test datasets and protocols. In addition to independent T&E, the program will regularly gauge interim progress of Performer research activities towards REASON objectives and target metrics using T&E results measured and reported by the Performer teams themselves.

The REASON Program will pursue rigorous and comprehensive T&E to ensure that research outcomes are well characterized, deliverables are aligned with program objectives, and performance is measured across the full range of conditions. T&E activities will inform IARPA and Government stakeholders on REASON research progress and serve as invaluable feedback to Performers to improve their research approaches, training practices, and system development.

Performers will have specific Deliverable Milestones driven by the REASON evaluation cycle schedule at which all subcomponent and system algorithms and software will be delivered to IARPA and its designated T&E Team. The T&E Team will then conduct independent evaluations with the objective of characterizing the quality, functionality, and performance of the REASON systems. In addition to quantitative measurements, T&E assessments will be carried out to establish a thorough understanding of the progress, status, and limitations of the Performer's research.

For classified testing, the T&E Team will retrain Performer systems to classified data as necessary, using scripts or processes provided by the Performers.

T&E results and feedback will be provided to Performers at regular intervals to keep them abreast of current independent performance measurements and to inform and improve their R&D approaches and methods. T&E will provide unclassified feedback summarizing the results of the unclassified testing and the classified testing to Performers. T&E results from all Performers will be shared with all teams to establish an understanding of the current state and progress of REASON research; T&E results will also be shared with USG external stakeholders, including their contractors, for Government purposes. IARPA may conduct other supplemental evaluations or measurements at its sole discretion to evaluate the Performers' research and Deliverables.

A notional evaluation cycle schedule is indicated as part of the overall REASON Program Schedule in Figure 1. For each TA, an evaluation cycle will consist of approximately 25 Challenge Problems developed by T&E. The format for Challenge Problems will vary across the TAs and will be specified in the Phase 1 T&E Plan at Program Kickoff. Within an evaluation cycle each Performer system will receive the same Challenge Problems. Challenge Problems will differ across evaluation cycles. For TA1, TA2, and TA3 REASON Comment Quality evaluations, T&E will provide 5 Practice Challenge Problems as examples prior to the first cycle for that type of evaluation. The Practice Challenge Problems will include the inputs to Performer systems, an emulated Performer system solution, and annotation of that solution according to the evaluation procedure in the T&E plan.

7. Program Metrics

Achievement of metrics is a performance indicator under IARPA research contracts. IARPA has defined REASON program metrics to evaluate effectiveness of the proposed solutions in achieving the stated program goal and objectives, and to determine whether satisfactory progress is being made. The metrics described in this BAA are shared with the intent to scope the effort, while affording maximum flexibility, creativity, and innovation to Proposers proposing solutions to the stated problem.

The REASON T&E protocols and evaluation methodology are currently under development; further details will be provided at Program Kickoff in the Phase 1 REASON T&E Plan. Program metrics may be refined during the various phases of the REASON program; if metrics change, revised metrics will be communicated in a timely manner to Performers. The evaluation methodology may be revised by the Government at any time during the program lifecycle to better meet program needs. The preliminary program metrics and target scores are provided below.

The TA1 metric is a modified version of alpha normalized discounted cumulative gain ($\alpha nDCG$), which will use the union of the outputs (evidence items) from all Performers and combine it with

the outputs of a manual search for evidence by the T&E team in order to approximate the ideal results. The formula for α nDCG will be:

$$\alpha\text{nDCG} = \frac{\alpha\text{DCG}(\text{Performer results})}{\max(\alpha\text{DCG}(\text{All Performer results} \cup \text{T\&E discovered items}))}$$

The scoring process will be:

1. T&E performs a manual search of the corpus for evidence at the time they create each TA1 Challenge Problem. Some of their search results will be cited in the draft report, which is used as the input to Performer systems; others will be reserved but not cited.
2. The Performer systems produce a set of up to 8 ordered evidence items found in the corpus as the output for the Challenge Problem.
3. The output evidence item result sets from the several Performer systems are combined with the reserved evidence items from step 1. The same item may be returned by multiple Performers or may match the T&E items.
4. Each of the items in the resulting set from step 3 are evaluated:
 - a. Is the item redundant to the cited evidence in the draft report?
 - b. What is the relevance of the item?
 - c. What category does the item belong to? For example, if the analysis report deals with a potential military invasion, then one category might include evidence of troop movements, another might include public statements by leaders, a third might include previous examples of similar circumstances, etc. The categories will be used to calculate the diversity of the cited evidence.
5. For each candidate subset of 8 items from the result set compiled in step 3 as assessed in step 4, determine the α -DCG. Take the maximum value as the denominator for computing α -nDCG.

The reason for including all Performer outputs as candidates for the denominator of the α -nDCG metric is a recognition that T&E may not a priori find the maximal set of diverse, relevant evidence for the Challenge Problem in the corpus. It is possible that Performer systems will identify evidence not located in a manual search.

TA2 has two metrics: Reasoning Explanation Quality (REQ) and F1. REQ will assess the explainability of the identified strengths and weaknesses. T&E raters will evaluate the correctness and clarity of each explanation of a reasoning strength or weakness on a 1-4 scale. Details for assigning REQ scores will be provided at Program Kickoff in the Phase 1 T&E Plan.

T&E will measure Performer system's identification of strengths and weaknesses in reasoning of draft report evaluated using F1 Score, which gives credit for two features:

- If the system says X is a strength or weakness, is the system correct (*i.e.* is the system output a true positive?) or is it wrong (*i.e.* the system output is a false positive).
- If X is a strength or weakness, does the system says so? (If not, then the system output is a false negative)

TA3 has two metrics. The first is REASON Comment Quality (RCQ). T&E raters will evaluate the comments provided by the Performer TA3 system. RCQ scores will be based on correctness, appropriateness, and clarity of the comments, using a 1 (poor) - 4 (excellent) scale. Details for assigning RCQ scores will be provided at Program Kickoff in the Phase 1 T&E Plan.

The second TA3 metric applies to the final exam. The finished analytic reports produced by the human participants will be evaluated by T&E raters using Report Quality Score (RQS). RQS is based on scores of six of the IC Analytic Tradecraft Standards: sourcing, uncertainty, assumptions, alternatives, logic, and accuracy. Each finished report will be graded on each standard, with a range from 1 (poor) to 4 (excellent), so RQS values range from 6 to 24. Each performer system’s RQS will be compared to the RQS for the control group.

A summary of metric targets by Phase is shown in Table 1; these are subject to change over the course of the program. Final Phase 1 metrics will be presented at kickoff.

Table 1: REASON Program Target Metrics

Task	Metric	Phase 1 Target	Phase 2 Target
TA1: Identify Additional Evidence	α -nDCG	> 0.25	> 0.40
TA2: Identify Reasoning Strengths and Weaknesses	Reasoning Explanation Quality (REQ)	> 2.75	> 3.5
	F1	> 0.65	> 0.80
TA3: Produce Comments to Increase Quality of Argumentation	REASON Comment Quality (RCQ)	> 2.75	> 3.5
	Report Quality Score (RQS)	Δ RQS > 1.5	Δ RQS > 3.0

8. Program Waypoints, Milestones, and Deliverables

Waypoints, Milestones, and Deliverables are established from the Program’s onset to ensure alignment with REASON objectives, organize research activities in a logical and reportable manner, and facilitate consistent and efficient communication among all stakeholders – IARPA, REASON T&E, USG Stakeholders, and Research Performers. A schedule of key program milestones and deliverables is shown in Figure 1.

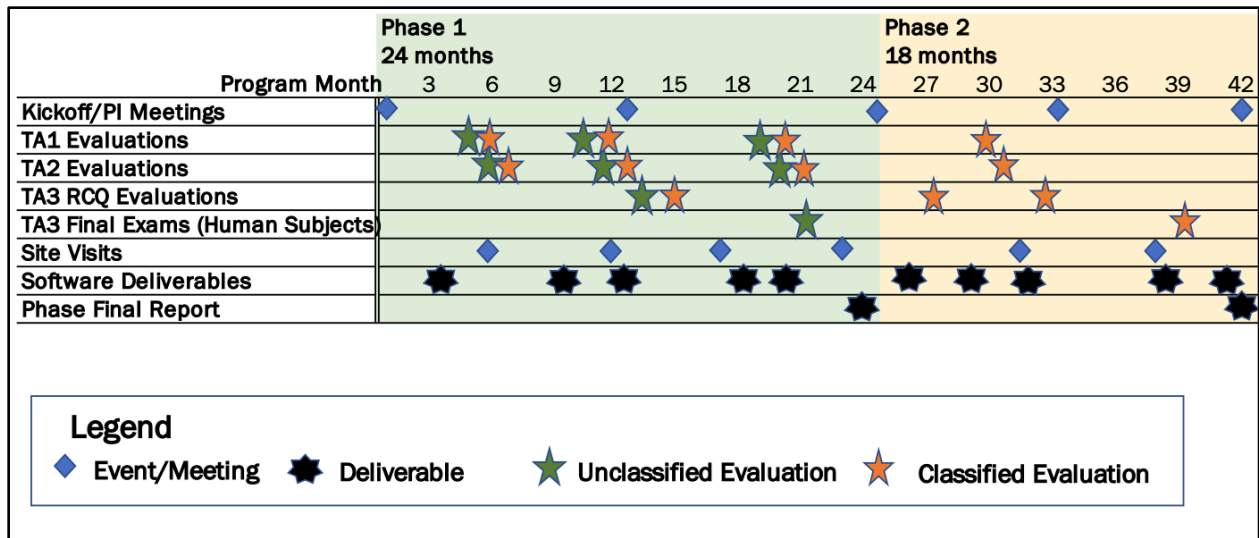


Figure 1. Schedule of Key Milestones and Deliverables

a. Program Milestone, Waypoint, and Deliverables Timeline

Phase	Month	Event	Description	Comment	Deliverable
1-2	All	Waypoint	Monthly Status Report	Due on 15 th of each month	MSR
1-2	All	Waypoint	Progress and Status Meeting	Monthly teleconference with REASON PM	N/A
1	1	Waypoint	Kickoff Meeting	DC Metro Area	Presentation Materials
1	1	Waypoint	Sample Data	Provided as GFI	N/A
1	4	Waypoint	Site Visit	Performer Site	N/A
1	5	Deliverable	TA 1 and 2, Cycle 1	Performer system output and software	Software Container
1	10	Deliverable	TA 1 and 2, Cycle 2	Performer system output and software	Software Container
1	12	Waypoint	Site Visit	Performer Site	N/A
1	13	Waypoint	PI Meeting	DC Metro Area	Presentation Materials
1	14	Deliverable	TA 3, Cycle 1	Performer system output and software	Software Container
1	16	Waypoint	Site Visit	Performer Site	N/A
1	18	Deliverable	TA 1 and 2, Cycle 3	Performer system output and software	Software Container
1	19	Deliverable	TA 3, Final Exam	Performer system output and software	Software Container

Phase	Month	Event	Description	Comment	Deliverable
1	22	Waypoint	Site Visit	Performer Site	N/A
1	24	Deliverable	Phase 1 Final Software Delivery	Performer system output and final Phase 1 software	Software Container
1	24	Deliverable	Phase 1 Final Report		Report
2	25	Waypoint	Kickoff Meeting	DC Metro Area	N/A
2	25	Waypoint	Sample Data	Provided as GFI	N/A
2	27	Deliverable	TA 3, Cycle 2	Performer system output and software	Software Container
2	28	Waypoint	Site Visit	Performer Site	N/A
2	29	Deliverable	TA 3, Cycle 4	Performer system output and software	Software Container
2	31	Deliverable	TA 1 and 2, Cycle 4	Performer system output and software	Software Container
2	32	Waypoint	PI Meeting	DC Metro Area	Presentation Materials
2	33	Waypoint	Site Visit	Performer Site	N/A
2	34	Deliverable	TA 3, Cycle 3	Performer system output and software	Software Container
2	38	Deliverable	TA 3, Final Exam	Performer system output and software	Software Container
2	39	Waypoint	Site Visit	Performer Site	N/A
2	41	Waypoint	PI Meeting	DC Metro Area	Presentation Materials
2	42	Deliverable	Phase 2 Final Software Delivery		Software Container
2	42	Deliverable	Phase 2 Final Report		Report

b. Software Deliverable Formatting

Performers will be required to provide algorithm and software deliverables (including source code and executables) in a manner that conforms to a standardized industrial method or methods that will be provided at Program Kickoff. To facilitate planning, Offerors may assume that the standardized configuration will require the use of software containerization technology (e.g., Docker and a REST API). This means that the entirety of a Performer’s system for TA1, TA2, and TA3 REASON Comment Quality evaluations, including pre- and post-processing, must be included within the delivered software container. These systems must be able to accept inputs in the form of Challenge Problems from an API to be developed by the T&E team and to submit outputs to that API. All official evaluations performed by T&E will use the computational

resources available on the testbeds to be developed by T&E. Performers are not required to identify or estimate the costs for these resources.

For TA3 Final Exams, the portion of Performer software facing analysts will be required to run within a word processing application. For planning purposes, Offerors may assume that this will be a Microsoft Word 365 add-in. These TA3 components will be permitted to access containerized TA1 and TA2 components running on the same testbed. They will not be permitted to access resources outside of the testbed.

For software that includes models that require initial training, the expectation is for the initial model training to occur on Performer systems, with the ability for the T&E Team to re-train and test the model with the same and/or other data.

If Offerors plan to use cloud computing resources for model development and training, they should include descriptions of these requirements in their technical approach descriptions. Retraining of Performer systems for T&E purposes will be subject to limitations on system retraining time and resources. Those limitations will be briefed at Program Kickoff. Offerors must specify the runtime resources and services required for their delivered software in terms equivalent to a configuration on either Amazon Web Services, Microsoft Azure, or Google Cloud.

Each team is required to include among their Key Personnel a Lead System Integrator (LSI) who shall be responsible for preparing software deliverable subcomponents, modules, and systems, performing quality control of deliverables, and integrating key components into the primary REASON system(s). The LSI will also oversee communication and coordination across a Performer's research teams including subcontractors, if applicable, to ensure that research products are functional, integrated and following software coding best practices (e.g., inline comments, documentation). Additional team members and roles are dependent on the proposed research, as such, there is no predetermined or required skill mix.

c. Program API

The REASON Program will use a standardized API for all software deliverables and evaluations. The first version of the REASON API will be provided to Performers at the Phase 1 Kickoff Meeting and updated periodically thereafter. The API will define function calls and data structures for operating and evaluating REASON software in a standardized manner. The API will be functionally identical for unclassified and classified testing. Specifically, the API will provide access to the document corpus for automated, unsupervised retraining of Performer systems, delivery of the Challenge Problems used in T&E evaluations, and submission of result sets for Challenge Problems.

d. End of Phase Final Reports

At the end of each Program Phase Performers will be required to submit a comprehensive Final Report that describes their efforts and results during the Phase. These reports shall include an executive summary, a description of the technical approach taken, details on the results, findings, and technical insights gained from the R&D effort, lessons learned, and suggested future research directions. The Final Report shall also include high level system design documentation for the final software deliverable. This design documentation shall include any hardware requirements

and dependencies on third-party software libraries.

9. Meeting, Travel, and Publication Requirements

Performers are expected to assume responsibility for administration of their projects and to comply with contractual and program requirements for reporting, attendance at program workshops, and availability for site visits. The following paragraphs describe typical expectations for meetings and travel for IARPA programs as well as the contemplated frequency and locations of such meetings. In addition to ensuring that all necessary details of developed software, algorithm, and operational instructions are clear and complete, each Performer will be required to be available for questions and troubleshooting from the T&E Team via electronic mail or in periodic technical exchange meetings.

a. Workshops

All Performer teams are expected to attend workshops, to include Key Personnel from prime and subcontractor organizations.

The REASON Program intends to hold a program Kickoff Meeting workshop in the first month of the program and first month of the subsequent program phase. In addition, the program will hold a PI Review Meeting at the end of each phase and at the phase midpoint. Kickoff Meetings and PI Review Meetings may be combined for logistical convenience.

Both types of meetings will likely be held in the Washington, D.C. metropolitan area, but IARPA may opt to co-locate the meeting with a relevant external conference or workshop to increase synergy with stakeholders. IARPA reserves the right to hold the meeting virtually for logistical or health and safety reasons.

Kickoff Meetings will typically be one day in duration and will focus on plans for the coming Phase, Performer planned research, and internal program discussions. PI Review Meetings will typically be two days in duration and will have a greater focus on communicating program progress and plans to USG stakeholders. These meetings will include additional time allocated to presentation and discussion of research accomplishments.

In both cases, the workshops will focus on technical aspects of the program and on facilitating open technical exchanges, interaction, and sharing among the various program participants. Program participants will be expected to present the technical status and progress of their projects to other participants and invited guests. Individual sessions for each Performer team with the REASON Program Manager and the T&E Team may be scheduled to coincide with these workshops. Non-proprietary information will be shared by Performers in the open meeting sessions; proprietary information sharing shall occur during individual breakout sessions with the REASON Program Manager and the T&E team.

b. Site Visits

Site visits by the Government Team will generally take place semiannually during the life of the program. These visits will occur at the Performer's facility and last no longer than two days. Reports on technical progress, details of successes and issues, contributions to the program goals,

and technology demonstrations will be expected at such site visits. IARPA reserves the right to conduct additional site visits on an as-needed basis.

c. Publication Approval

It is anticipated that research funded under this program will be unclassified research that will not require a pre-publication review. However, performers should note that pre-publication approval of research information associated with IARPA may be required if it is determined that the release of such information may result in the disclosure of sensitive information. Prior to public release, a courtesy soft copy of any work submitted for publication must be provided to the IARPA Program Manager and the Contracting Officer Representative (COR), as well as a copy of the publication.

10. Period of Performance

The REASON program is envisioned as a 42-month effort that is intended to begin October 1, 2023.

Phase 1 (Base Period): October 1, 2023 – September 30, 2025

Phase 2 (Option 1): October 1, 2025 - March 31, 2027

11. Place of Performance

Performance will be conducted at the Performers' sites.

12. Security

Proposals must be entirely unclassified. If a proposer wishes to cite prior classified efforts, they may only provide an unclassified summary of this work.

All Performer work will be unclassified. Performer systems will be tested using classified data, but Performers will not be able to review that classified data. Performers will be provided with unclassified summary results from classified testing. Even if a Performer has cleared personnel, they will not receive additional classified feedback.

13. Human Subjects Research

Performer human subjects research for REASON is encouraged but not required. Performers planning on conducting human subjects research as part of their technical approach must identify this in their proposal, along with plans for obtaining Institutional Review Board (IRB) approval. IRB approval documents must be provided to the Government before commencing any internal human subjects research. DFARS clause 252.235-7004 is applicable to this solicitation and will be included in any resultant contract award that support research that includes or may include human subjects research.

Performers are not responsible for obtaining IRB approval for official T&E evaluation events. For these events the T&E organization will obtain the necessary approvals.

B. Federal Award Information

Anticipated awards will be made in the form of procurement contracts and are subject to the availability of appropriations. Multiple awards are anticipated. Funding for the Option Period will be contingent upon satisfactory performance and the availability of funds.

The BAA shall result in selection of proposals addressing all phases of REASON and awarding of funds aligning with Phase 1 research activities. Funding for the Option Period shall depend upon performance during the Base Period (and succeeding Option Period) against the program goals and metrics, the availability of funding, and IARPA priorities. Funding of the Option Period is at the sole discretion of the Government.

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 offerors. The Government also reserves the right to conduct discussions if it is deemed necessary. Additionally, the Government reserves the right to accept proposals in their entirety or to select only portions of proposals for negotiations of award, in the event that the Government desires to award only portions of a proposal.

Awards under this BAA shall be made to offerors on the basis of the Evaluation Criteria listed in Section II.E.1 of the BAA, as well as program balance, and availability of funds. Proposals selected for negotiation may result in a procurement contract.

The Government shall contact offerors whose proposals are selected for negotiations to obtain additional information for award. The Government may establish a deadline for the close of fact-finding and negotiations that allows a reasonable time for the award of a contract. Offerors that are not responsive to Government deadlines established and communicated with the request will be removed from award consideration. Offerors will also be removed from award consideration should the parties fail to reach agreement within a reasonable time on contract terms, conditions, and cost/price.

The ACC-APG RTP Division has the authority to award a variety of instruments on behalf of ARL-ARO. The ACC-APG RTP Division reserves the right to use the type of instrument most appropriate for the effort proposed. Applicants should familiarize themselves with these instrument types and the applicable regulations before submitting a proposal. Following is a brief description of the possible award instrument.

1. Procurement Contract. A legal instrument, consistent with 31 U.S.C. 6303, which reflects a relationship between the Federal Government and a State Government, a local government, or other entity/contractor when the principal purpose of the instrument is to acquire property or services for the direct benefit or use of the Federal Government.

Contracts are primary governed by the following regulations:

- a. Federal Acquisition Regulation (FAR) <https://www.acquisition.gov/browse/index/far>

- b. Defense Federal Acquisition Regulation Supplement (DFARS)
<https://www.federalregister.gov/defense-federal-acquisition-regulation-supplement-dfars->
- c. Army Federal Acquisition Regulation Supplement (AFARS)
<https://www.acquisition.gov/afars>

C. Eligibility Information

1. Eligible Applicants:

Eligible applicants under this BAA include Institutions of higher education (foreign and domestic), nonprofit organizations, and for-profit concerns (large and small businesses). Proposals are encouraged from Historically Black Colleges and Universities (as determined by the Secretary of Education to meet requirements of Title III of the Higher Education Act of 1965, as amended (20 U.S.C. §1061) and from Minority Institutions defined as institutions “whose enrollment of a single minority or a combination of minorities exceeds 50 percent of the total enrollment.” [20 U.S.C. § 1067k(3) and 10 U.S.C. § 4144]. However, no funds are specifically allocated for HBCU/MI participation.

Foreign entities and/or individuals may participate to the extent that such participants comply with any necessary Non-Disclosure Agreements, Security Regulations, and all U.S. Export Control Laws and regulations, and other governing statutes applicable under the circumstances to include the International Traffic in Arms Regulations (ITAR), 22 CFR Parts 120 through 130, the Export Administration Regulations (EAR), 15 CFE Parts 730 through 799, as amended, in the performance of any future contract. Offerors are expected to ensure that the efforts of foreign participants do not either directly or indirectly compromise the laws of the United States, nor its security interests. As such, both foreign and domestic Offerors should carefully consider the roles and responsibilities of foreign participants as they pursue teaming arrangements.

In the absence of available license exemptions or exceptions, the offeror shall be responsible for obtaining the appropriate licenses or other approvals, if required, for exports of (including deemed exports) hardware, technical data, and software, or for the provision of technical assistance. The offeror shall be responsible for obtaining export licenses, if required, before utilizing foreign persons in the performance of any future contract, including instances where the work is to be performed on-site at any Government installation (whether in or outside the United States), where the foreign person will have access to export-controlled technologies, including technical data or software. The offeror shall be responsible for all regulatory record keeping requirements associated with the use of licenses and license exemptions or exceptions. The offeror shall appropriately mark all contract deliverables controlled by ITAR and/or EAR.

Proposals will be evaluated only if they are for fundamental scientific study and experimentation directed towards advancing the scientific state of the art or increasing basic knowledge and understanding. Proposals focused on specific devices or components are beyond the scope of this BAA.

2. Cost Sharing or Matching:

There is no requirement for cost sharing, matching, or cost participation to be eligible for award under this BAA. Cost sharing and matching is not an evaluation factor used under this BAA.

3. Federally Funded Research and Development Centers and University Affiliated Research Centers:

Federally Funded Research & Development Centers (FFRDCs), including Department of Energy National Laboratories, and University Affiliated Research Centers (UARCs) are not eligible to receive awards, as primes or sub-awardees, under this BAA.

D. Application and Submission Information

1. Addresses to View Broad Agency Announcement

This BAA may be accessed from the following:

- a. SAM (<https://sam.gov>)
- b. ARL website (<https://www.arl.army.mil/business/broad-agency-announcements/>)
- c. IARPA website (<https://www.iarpa.gov>)

Amendments, if any, to this BAA will be posted to these websites when they occur. Interested parties are encouraged to periodically check these websites for updates and amendments.

The following information is for those wishing to respond to the BAA:

2. Content and Form of Application Submission

a. General Information

A proposal submitted under this BAA must address unclassified fundamental research. Proposal submissions will be protected from unauthorized disclosure in accordance with applicable laws and DoD regulations. Applicants are expected to appropriately mark each page of their submission that contains proprietary information. The participating DoD and other USG agencies will provide no funding for direct reimbursement of proposal development costs. Technical and cost proposals (or any other material) submitted in response to this BAA will not be returned. It is the policy of participating DoD agencies to treat all proposals as sensitive, competitive information and to disclose their contents only for the purposes of evaluation.

Post-Employment Conflict of Interest: There are certain post-employment restrictions on former federal officers and employees, including special government employees (Section 207 of Title 18, U.S.C.). If an applicant believes a conflict of interest may exist, the situation should be discussed with Point of Contact listed in Section II.G: Agency Contacts, who will then coordinate with appropriate ARO/ARL legal personnel prior to having applicant expend time and effort in preparing a proposal.

Statement of Disclosure Preference: Please complete ARO Form 52 or 52A stating your preference for release of information contained in your proposal. Copies of these forms are available at <http://www.arl.army.mil/resources/baa-forms/>

Equipment: Normally, title to equipment or other tangible property purchased with Government funds vests with nonprofit institutions of higher education or with nonprofit research organizations if vesting will facilitate scientific research performed for the Government. For profit organizations are expected to possess the necessary plant and equipment to conduct the proposed research. Deviations may be made on a case-by-case basis to allow commercial organizations to purchase equipment but disposition instructions must be followed.

b. Proposal Format

To facilitate the evaluation of the proposal, the government encourages the offerors to submit proposals which: are clear and concise; limited to essential matters sufficient to demonstrate a complete understanding of the Government's requirements; include sufficient detail for effective evaluation; and provide convincing rationale to address how the offeror intends to meet these requirements and objectives, rather than simply rephrasing or restating the Government's requirements and objectives.

All proposals shall be in the format given below. Non-compliant proposals may be rejected without review. Proposals shall consist of "Volume 1 - Technical and Management Proposal" and "Volume 2 - Cost Proposal." All proposals shall be written in English.

Additionally, text should be black and paper size 8-1/2 by 11-inch, white in color with 1" margins from paper edge to text or graphic on all sides. The Government desires Times New Roman font with font size not smaller than 12-point. The Government desires that the font size for figures, tables and charts not be smaller than 10-point. All contents shall be clearly legible with the unaided eye. Excessive use of small font, for other than figures, tables, and charts, or unnecessary use of figures, tables, and charts to present information may render the proposal non-compliant. Front and backside of a single sheet are counted as two (2) pages if both sides are printed upon. Foldout pages are not permitted. The page limitation for full proposals includes all figures, tables, and charts. All pages should be numbered. No other materials may be incorporated in any portion of the proposal by reference, as a means to circumvent page count limitations. All information pertaining to a volume shall be contained within that volume. Any information beyond the page limitations will not be considered in the evaluation of offerors.

The Government anticipates proposals submitted under this BAA will be UNCLASSIFIED.

Each proposal submitted in response to this BAA shall consist of the following:

Volume 1 – Technical & Management Proposal

Section 1 - Cover Sheet - Technical (see Section II.H) & Transmittal Letter (not included in page count)

Section 2 – Summary of Proposal, not to exceed 5 pages

Section 3 – Detailed Proposal, not to exceed 15 pages

Section 4 – Attachments (Not included in page count of Volume 1, but number appropriately for elements included. Templates are in Section II.H of this BAA.)

- i. Academic Institution Acknowledgment Letter, if required
- ii. IP Rights, estimated not to exceed 4 pages
- iii. OCI Notification or Certification
- iv. Bibliography
- v. Relevant Papers (up to three)
- vi. Consultant Letters of Commitment
- vii. Human Use Documentation
- viii. A Three Chart Summary of the Proposal
- ix. Research Data Management Plan (RDMP), estimated not to exceed 3 pages
- x. Privacy Plan, no page limit

Volume 1: Technical and Management Proposal

Volume 1, Technical and Management Proposal, may include an attached bibliography of relevant technical papers or research notes (published and unpublished) which document the technical ideas and approach on which the proposal is based. Copies of not more than three relevant papers can be included with the submission. The submission of other supporting materials along with the proposal is strongly discouraged and shall not be considered for review. Except for the cover sheet, transmittal letter, table of contents (optional), and the required attachments stated in the BAA, Volume 1 shall not exceed 21 pages. Any pages exceeding this limit shall be removed and not considered during the evaluation process. Full proposals should be accompanied by an official transmittal letter, using contractor format. All full proposals shall be written in English.

Section 1: Cover Sheet & Transmittal Letter

- a. Cover Sheet: (See Section II.H for template)
- b. Official Transmittal Letter

The transmittal letter shall include the following (not to exceed one page): Introduction of offeror and team (subcontractors and consultants), the BAA number, IARPA program name, offerors' Program name, the proposal validity period, the type of contract vehicle being requested (procurement contract) with a short rationale, any non-negotiable conditions on which the offer is based such as contract type (cost type, FFP), IP restrictions, etc., and the offeror's points of contact information including: name, email and phone number for both technical and administrative issues.

Note: Any information required elsewhere in the proposal must be included in the appropriate section of the proposal (i.e., including the information in the transmittal letter alone may not be sufficient). If there is a conflict between the transmittal letter and the proposal the proposal shall control.

Section 2: Summary of Proposal (not to exceed 5 pages)

Section 2 shall provide an overview of the proposed work as well as introduce associated technical and management issues. This section shall contain a technical description of technical approach to

the research as well as a succinct portrayal of the uniqueness and benefits of the proposed work. It shall make the technical objectives clear and quantifiable and shall provide a project schedule with definite decision points and endpoints. Offerors shall address:

- A. A technical overview of the proposed research and plan. This section is the centerpiece of the proposal and shall succinctly describe the proposed approach and research. The overview shall provide an intuitive understanding of the approach and design, technical rationale, and constructive plan for accomplishment of technical objectives and deliverable production. The approach shall be supported by basic, clear calculations. Additionally, proposals shall clearly explain the innovative claims and technical approaches that shall be employed to meet or exceed each program metric and provide ample justification as to why approaches are feasible. The use of non-standard terms and acronyms should be avoided. This section shall be supplemented with a more detailed plan in Volume 1, Section 3 of the proposal.
- B. Summary of the products, transferable technology and deliverables associated with the proposed research results. Define measurable deliverables that show progress toward achieving the stated Program Milestones. 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 shall be detailed in Volume 1 - Section 4 - IP Rights. If there are no proprietary claims, this should be stated. Should no proprietary claims be made, Government rights shall be unlimited to any resultant IP.
- C. Schedule and milestones for the proposed research. Summarize, in table form and clearly legible for all activity, the schedule and milestones for the proposed research. Do not include proprietary information with the milestones. If designed as a Gantt chart or large table, a representative image of the information can be embedded as a small image, referencing an appendix Excel file of the entire schedule and milestones list.
- D. Related research. General discussion of other research in this area, comparing the significance and plausibility of the proposed innovations against competitive approaches to achieve Program objectives.
- E. Project contributors. Include a clearly defined and clearly legible organizational chart of all anticipated project participants, organized under functional roles for the effort, and also indicating associated task number responsibilities with individuals.
- F. Technical Resource Summary:
 - Summarize total level of effort by labor category and technical discipline (i.e., research scientist/chemist/physicist/engineer/administrative, etc.) and affiliation (prime/subcontractor/consultant). Key Personnel shall be identified by name. Provide a brief description of the qualifications for each labor category (i.e., education, certifications, years of experience, etc.)
 - Summarize level of effort by labor category and technical discipline for each major task.
 - Identify software and intellectual property required to perform, by affiliation (list each item separately)

- Identify materials and equipment (such as IT) required to perform, by affiliation (list each item separately)
- Identify any other resources required to perform (i.e., services, data sets, data set repository, facilities, government furnished property, etc.), by affiliation (list each item separately)
- Summarize level of effort required to prepare research data for public access.
- Estimated travel, including purpose of travel and number of personnel per trip, by affiliation.
- The above information shall cross reference to the tasks set forth in the offerors statement of work, and shall be supported by the detailed cost and pricing information provided in the offeror's Volume 2 Cost Proposal.

Section 3: Detailed Proposal Information (Up to 15 pages)

This section of the proposal shall provide the detailed, in-depth discussion of the proposed research as well as supporting information about the offeror's capabilities and resources. Specific attention shall be given to addressing both the risks and payoffs of the proposed research and why the proposed research is desirable for IARPA to pursue. This part shall provide:

- A. Statement of Work (SOW) - In plain English, clearly define the technical tasks and subtasks to be performed, their durations and the dependencies among them. A template will be provided to assist in the development of consistent SOWs for all proposals (See Section II, H for an example). For each task and sub-task, provide:
- A general description of the objective;
 - A detailed description of the approach to be taken, developed in an orderly progression and in enough detail to establish the feasibility of accomplishing the goals of the task;
 - Identification of the primary organization responsible for task execution (prime, subcontractor, team member, etc.) by name;
 - The exit criteria for each task/activity (i.e., a product, waypoint or milestone that defines its completion); and
 - Definition of all deliverables (e.g., data (including public access), reports, software, etc.) to be provided to the Government in support of the proposed research tasks/activities.

Note: Do not include any proprietary information in the SOW.

At the end of this section of the proposal, provide a Gantt chart, showing all the tasks and sub-tasks on the left with the performance period (in years/quarters) on the right. All milestones shall be clearly labeled on the chart. If necessary, use multiple pages to ensure legibility of all information.

- B. A detailed description of the objectives, scientific relevance, technical approach and expected significance of the work. The key elements of the proposed work should be clearly identified and related to each other. Proposals should clearly detail the technical methods and/or approaches that shall be used to meet or exceed each program milestone,

and should provide ample justification as to why the proposed methods/approaches are feasible. Any anticipated risks should be described and possible mitigations proposed. General discussion of the problem without detailed description of approaches, plausibility of implementation, and critical metrics shall result in an unacceptable rating.

- C. State-of-the-art. Comparison with other on-going research, highlighting the uniqueness of the proposed effort/approach and differences between the proposed effort and the current state-of-the-art. Identify advantages and disadvantages of the proposed work with respect to potential alternative approaches.
- D. Data sources. Identification and description of data sources to be utilized in pursuit of the project research goals.

Offerors proposing to use existing data sets shall provide written verification that all data were obtained in accordance with U.S. laws and, where applicable, are in compliance with End User License Agreements, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Offerors shall identify any restrictions on the use or transfer of data sets being used, and, if there are any restrictions, the potential cost to the Government to obtain at least Government Purpose Rights in such data sets.

Offerors proposing to obtain new data sets shall ensure that their plan for obtaining the data complies with U.S. Laws and, where applicable, with End User License Agreement, Copyright Laws, Terms of Service, and laws and policies regarding privacy protection of U.S. Persons. Foreign offerors must ensure that their plan for obtaining the data complies with the privacy protections applicable within the country that they are based in, as well.

While not necessary, if offerors propose using human samples they must include the documentation required for Institutional Review Board (IRB) approval for use of Human samples or declaration of why IRB approval is not necessary. Documentation must be well written and logical; claims for exemptions from Federal regulations for human subject protection must be accompanied by a strong defense of the claims. The Human Use documentation and the written verification are not included in the total page count.

The Government reserves the right to reject a proposal if it does not appropriately address all data issues.

- E. Deliverables: Deliverables are identified in Section II.A.8 of the BAA.
The Government requires, at a minimum, Government Purpose Rights for all deliverables developed with mixed funding or that incorporate technical data or computer software developed at private expense; anything less shall be considered a weakness in the proposal. All other deliverables shall be delivered with unlimited rights in accordance with FAR clause 52.227-14.

In the “Restrictions on Intellectual Property Rights” attachment of the proposal, offerors shall describe the proposed approach to intellectual property for all deliverables, together with a supporting rationale of why this approach is in the Government’s best interest. This

shall include 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, and a brief explanation of how the offerors may use these materials in their program. To the greatest extent feasible, offerors should not include background proprietary technical data and computer software as the basis of their proposed technical approach.

If offerors (including their proposed teammates) desire to use in their proposed approach, in whole or in part, technical data or computer software or both that is proprietary to the offeror, any of its teammates, or any third party, in the “Restrictions on Intellectual Property Rights” attachment they should: (1) clearly identify such data/software and its proposed particular use(s); (2) identify and explain any and all restrictions on the Government’s ability to use, modify, reproduce, release, perform, display, or disclose technical data, computer software, and deliverables incorporating such technical data and computer software; (3) identify the potential cost to the Government to acquire GPR in all deliverables that use the proprietary technical data or computer software the offeror intends to use; (4) explain how the Government shall be able to reach its program goals (including transition) within the proprietary model offered; and (5) provide possible nonproprietary alternatives in any area in which a Government entity would have insufficient rights to transfer, within the Government or to Government contractors in support of a Government purpose, deliverables incorporating proprietary technical data or computer software, or that might cause increased risk or cost to the Government under the proposed proprietary solutions.

Offerors also shall identify all commercial technical data and/or computer software that may be embedded in any noncommercial deliverables contemplated under the research effort, along with any applicable restrictions on the Government’s use of such commercial technical data and/or computer software. If offerors do not identify any restrictions, the Government shall assume that there are no restrictions on the Government’s use of such deliverables. Offerors shall also identify all noncommercial technical data and/or computer software that it plans to generate, develop and/or deliver under any proposed award instrument in which the Government shall acquire less than unlimited rights. If the offeror does not submit such information, the Government shall assume that it has unlimited rights to all such noncommercial technical data and/or computer software. Offerors shall provide a short summary for each item (commercial and noncommercial) 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.

Additionally, if offerors propose the use of any open source or freeware, any conditions, restrictions or other requirements imposed by that software shall also be addressed in the “Restrictions on Intellectual Property Rights” attachment. Offerors should review the example format, found in Section II.H.5 for their response. The technical content of the “Restrictions on Intellectual Property Rights” attachment shall include only the information necessary to address the proposed approach to intellectual property; any other technical discussion in the attachment shall not be considered during the evaluation process. The attachment is estimated not to exceed 4 pages.

For this solicitation, the Government recognizes only the definitions of intellectual property rights in accordance with the terms as set forth in the Federal Acquisition Regulation (FAR) part 27, or as defined herein. If offerors propose intellectual property rights that are not defined in FAR part 27 or herein, offerors shall clearly define such rights in the “Restrictions on Intellectual Property Rights” attachment of their proposal. Offerors are reminded of the requirement for prime contractors to acquire sufficient rights from subcontractors to accomplish the program goals.

“Research data” is defined herein as “the digital recorded factual material commonly accepted in the scientific community as necessary to validate research findings including data sets used to support scholarly publications, but does not include laboratory notebooks, preliminary analyses, drafts of scientific papers, plans for future research, peer review reports, communications with colleagues, or physical objects, such as laboratory specimens.”

Section 4: Attachments

[Note: The attachments listed below shall be included with the proposal, under Volume 1, if applicable, but do not count against the Volume 1 page limit. For attachments which are not applicable, Offerors must still include a statement of “Attachment [X]: Not applicable”.]

- A. Attachment 1: Signed Academic Institution Acknowledgement Letter(s) (if applicable). A template is provided in Section II.H.2.
- B. Attachment 2: IP Rights. A template is provided in Section II.H.5. This attachment is estimated not to exceed 4 pages and shall address the following: Representation as to Rights. An Offeror shall provide a good faith representation that they either own or have sufficient licensing rights to all IP that will be utilized under their proposal. Program-Specific IP Approach. The Government requires sufficient rights to IP developed or used in the conduct of the proposed research to ensure that the Government can successfully: (a) manage the program and evaluate the technical output and deliverables, (b) communicate program information across Government organizations, and (c) support transition to and further use and development of the program results by Intelligence community (IC) users and others. The Government anticipates that achieving these goals for the REASON program may necessitate a minimum of Unlimited Rights in all deliverables. However, there may be any number of other approaches to intellectual property rights to achieve IARPA’s program goals. “Unlimited rights” means the rights of the Government to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, in any manner and for any purpose, and to have or permit others to do so. In addressing their approach to IP rights, Offerors should: (1) describe the intended use of patented invention(s) or data, including, technical data and computer software, in the conduct of the proposed research; (2) describe the rights being offered to the Government along with a justification if less than Unlimited Rights is being offered; (3) explain how IARPA will be able to reach its program goals (including transition) with the rights offered to the Government; (4) identify the cost to the Government to acquire additional or alternative rights beyond those being offered, if applicable; and (5) provide possible alternatives in any area in which the offered rights may

be insufficient for the Government to achieve its program goals (e.g., the possibility of future licensing of privately-developed software to U.S. Government agencies at a reasonable cost.)

Patented Inventions. Offerors shall include documentation using the format provided in Section II.H.5, proving ownership of or sufficient rights to all inventions (or inventions for which a patent application has been filed) that will be utilized under the proposal for the IARPA program. If a patent application has been filed for an invention that the proposal utilizes, but the application has not yet been made publicly available and contains proprietary information, the Offeror may provide only the serial number, inventor name(s), assignee names (if any), filing date, filing date of any related provisional application, and a summary of the patent title, together with either: (1) a representation that the Offeror owns the invention, or (2) proof of sufficient licensing rights in the invention. Offerors shall also indicate their intention to incorporate patented technology into any deliverable—i.e., if Offerors intend for any deliverable to embody any invention covered by any patent or patent application the Offerors listed in Volume 1, Attachment 2, Offerors should also specify in the Attachment the deliverable into which the Offerors expects to incorporate the invention. In doing so, the Government requests that Offerors further specify any rights offered to the Government for inventions that shall be utilized in the program (beyond the implied license that accompanies a patent owner’s sale of a patented product).

Noncommercial Data. Offerors shall identify all noncommercial data, including technical data and computer software, that it plans to generate, develop and/or deliver under any proposed award instrument in which the Government shall acquire less than unlimited rights. In doing so, Offerors must assert: (a) the specific restrictions the Government’s rights in those deliverables, (b) the basis for such restrictions, (c) the intended use of the technical data and noncommercial computer software in the conduct of the proposed research and development of applicable deliverables, and (d) a supporting rationale of why the proposed approach to data rights is in the Government’s best interest (please see program specific goals above). If no restrictions are intended, then the Offeror shall state “NONE.”

Commercial Data. Offerors shall identify all commercial data, including technical data and commercial computer software, that may be included in any deliverables contemplated under the research effort and assert any applicable restrictions on the Government’s use of such commercial data (please see program specific goals above). If no restrictions are intended, then the Proposer shall state “NONE.”

Data Developed with Mixed Funding. If mixed funding is anticipated in data generated, developed, and/or delivered under the research effort, the Government seeks at minimum “Government Purpose Rights” (GPR) for all noncommercial data deliverables; offering anything less shall be considered a weakness in the proposal. United States Government purposes include any activity in which the United States Government is a party, including cooperative agreements with international or multinational defense organizations, or sales or transfers by the United States Government to foreign

governments or international organizations. Government purposes include competitive procurement, but do not include the rights to use, modify, reproduce, release, perform, display, or disclose technical data or computer software for commercial purposes or authorize others to do so. Government Purpose Rights continue for a five-year period upon execution of the contract, and upon expiration of the five-year period, the Government obtains Unlimited Rights in the data.

Open Source. If Offerors propose the use of any open-source data or freeware, any conditions, restrictions or other requirements imposed by that software shall also be addressed. Offerors should leverage the format in Section II.H for their response.

Identification of Relevant Government Contracts. For all technical data and computer software that an Offeror intends to deliver with other than unlimited rights that are identical or substantially similar to technical data and computer software that the Offeror has produced for, delivered to, or is obligated to deliver to the Government under any contract or subcontract, the Offeror shall identify: (a) the contract number under which the data, software, or documentation was produced; (b) the contract number under which, and the name and address of the organization to whom, the data and software was most recently delivered or shall be delivered; and (c) any limitations on the Government's rights to use or disclose the data and software, including, when applicable, identification of the earliest date the limitations expire.

Definitions. For this solicitation, IARPA recognizes only the definitions of IP rights in accordance with the terms as set forth in the Federal Acquisition Regulation (FAR) part 27 or as defined herein. If Offerors propose IP rights that are not defined in FAR part 27 or herein, Offerors shall clearly define such rights in the "Intellectual Property Rights" Attachment of their proposal. Offerors are reminded of the requirement for prime contractors to acquire sufficient rights from subcontractors to accomplish the program goals.

Evaluation. The Government may use the asserted data rights during the evaluation process to evaluate the impact of any identified restrictions. The technical content of the "Intellectual Property Rights" Attachment shall include only the information necessary to address the proposed approach to IP; any other technical discussion in the attachment shall not be considered during the evaluation process.

- C. Attachment 3: OCI Notification or Certification Template provided in Section II.H.7.
- D. Attachment 4: Bibliography. A brief bibliography of relevant technical papers and research notes (published and unpublished) which document the technical ideas on which the proposal is based.
- E. Attachment 5: Relevant Papers. Copies of not more than three relevant papers may be included in the submission. The Offerors shall include a one-page technical summary of each paper provided, suitable for individuals who are not experts in the field.
- F. Attachment 6: Consultant Commitment Letters.
- G. Attachment 7: Human Use Documentation.

- H. Attachment 8: A Three Chart Summary of the Proposal. A PowerPoint summary that quickly and succinctly indicates the concept overview, key innovations, expected impact, and other unique aspects of the proposal. The format for the summary slides is included in Section II.H.8 to this BAA and does not count against the page limit. Slide 1 should be a self-contained, intuitive description of the technical approach and performance. These slides may be used during the evaluation process to present a summary of the proposal from the Offeror's view.
- I. Attachment 9: RDMP (estimated as 2 to 3 pages). Template provided in Section II.H.9.
- J. Attachment 10: Privacy Plan.

Volume 2 – Cost Proposal

Below are the outlines of the informational requirements for a cost proposal.

Cost Proposal – (No Page Limit). The cost proposal shall contain sufficient factual information to establish the Offeror's understanding of the project, the perception of project risks, the ability to organize and perform the work, and to support the realism and reasonableness of the proposed work, to the extent appropriate. The Government recognizes that undue emphasis on cost may motivate offerors to offer low-risk ideas with minimum uncertainty and to staff the effort with junior personnel in order to be in a more competitive posture. The Government discourages such cost strategies. Cost reduction approaches that shall be received favorably include innovative management concepts that maximize direct funding for technology and limit diversion of funds into overhead.

Reasoning for Submitting a Strong Cost Proposal

The ultimate responsibility of the Contracting Officer is to ensure that all prices offered in a proposal are fair and reasonable before contract award [FAR 15.4]. To establish the reasonableness of the offered prices, the Contracting Officer may ask the offeror to provide various supporting documentation that assists in this determination. The offeror's ability to be responsive to the Contracting Officer's requests can expedite contract award. As specified in Section 808 of Public Law 105-261, an offeror who does not comply with a requirement to submit information for a contract or subcontract in accordance with paragraph (a)(1) of FAR 15.403-3 may be ineligible for award.

DCAA-Accepted Accounting System

Before a contract can be awarded, the Contracting Officer must confirm that the offeror has a DCAA-accepted accounting system in place for accumulating and billing costs under Government contracts [FAR 53.209-1(f)]. If the offeror has DCAA correspondence, which documents the acceptance of their accounting system, this should be provided to the Contracting Officer (i.e., attached or referenced in the proposal). Otherwise, the Contracting Officer will submit an inquiry directly to the appropriate DCAA office and request a review of the offeror's accounting system.

If an offeror does not have a DCAA-accepted accounting system in place, the DCAA review process can take several months depending upon the availability of the DCAA auditors and the offeror's internal processes. This will cause a delay in contract award.

For more information about cost proposals and accounting standards, view the link titled “Information for Contractors” on their website at: <https://www.dcaa.mil/Guidance/Audit-Process-Overview/>.

Field Pricing Assistance

During the pre-award cost audit process, the Contracting Officer will solicit support from DCAA to determine commerciality and price reasonableness of the proposal [FAR 15.404-2]. Any proprietary information or reports obtained from DCAA field audits will be appropriately identified and protected within the Government.

The cost proposal has two (2) sections:

A. Section 1: Cover Sheet – Cost Proposal

The cover sheet shall include (see Section II.H for an example):

1. BAA number;
2. Technical area;
3. Lead Organization submitting proposal;
4. Type of business, selected among the following categories: “LARGE BUSINESS”, “SMALL DISADVANTAGED BUSINESS”, “OTHER SMALL BUSINESS”, “HBCU”, “MI”, “OTHER EDUCATIONAL”, OR “OTHER NONPROFIT”;
5. Contractor’s reference number (if any);
6. Other team members (if applicable) and type of business for each;
7. Proposal title;
8. Technical point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), electronic mail (if available);
9. Administrative point of contact to include: salutation, last name, first name, street address, city, state, zip code, telephone, fax (if available), and electronic mail (if available);
10. Award instrument requested: cost-plus-fixed-fee (CPFF), cost-contract—no fee, cost sharing contract – no fee, or other type of procurement contract (specify).
11. Place(s) and period(s) of performance;
12. Total proposed cost separated by basic award and option(s) (if any);
13. Name, address, and telephone number of the proposer’s cognizant Defense Contract Management Agency (DCMA) administration office (if known);
14. Name, address, and telephone number of the proposer’s cognizant Defense Contract Audit Agency (DCAA) audit office (if known);
15. Date proposal was prepared;
16. DUNS number;
17. TIN number; and
18. Cage Code;
19. Subcontractor Information; and
20. Proposal validity period

21. Any Forward Pricing Rate Agreement, other such approved rate information, or such other documentation that may assist in expediting negotiations (if available).

B. Section 2: Estimated Cost Breakdown

Offerors shall submit numerical cost and pricing data using Microsoft Excel. The Excel document, in the format provided in Section II.H, shall include intact formulas and shall not be hard numbered. The base and option period cost data should roll up into a total cost summary. The Excel files may be write-protected but shall not be password protected. The Cost/Price Volume shall include the following:

- i. Completed Cost/Price Template - Offerors shall submit a cost element breakdown for the base period, each option period and the total program summary in the format provided in Section II.H.
- ii. Total cost broken down by major task.
- iii. Major program tasks by fiscal year.
- iv. A summary of projected funding requirements by month.
- v. A summary table listing all labor categories used in the proposal and their associated direct labor rates, along with escalation factors used for each base year and option year.
- vi. A summary table listing all indirect rates used in the proposal for each base year and option year

Additional details regarding the cost proposal, including samples tables, can be found further in this section.

Sample Elements of a Cost Proposal

To help guide offerors through the pre-award cost audit process, a sample cost proposal is detailed below. This sample also allows the offeror to see exactly what the Government is looking for; therefore, all cost and pricing back-up data can be provided to the Government in the first cost proposal submission. Review each cost element within the proposal and take note of the types of documentation that the Contracting Officer will require from the offeror.

A. Direct Labor

The first cost element included in the cost proposal is Direct Labor. The DoD requires each proposed employee to be listed by name and labor category.

Table 5: Example of Direct Labor Table Proposed by Sample Offeror

DIRECT LABOR		YEAR 1			YEAR 2		
Employee Name	Labor Category	Direct Hourly Rate	Hours	Total Direct Labor	Direct Hourly Rate	Hours	Total Direct Labor
Andy Smith	Program Manager	\$55.00	720.00	\$39,600.00	\$56.65	720.00	\$40,788.00
Bryan Andrew	Senior Engineer	\$40.00	672.00	\$26,880.00	\$41.20	672.00	\$27,686.40

DIRECT LABOR		YEAR 1			YEAR 2		
Employee Name	Labor Category	Direct Hourly Rate	Hours	Total Direct Labor	Direct Hourly Rate	Hours	Total Direct Labor
Cindy Thomas	Principal Engineer	\$50.00	512.00	\$25,600.00	\$51.50	512.00	\$26,368.00
David Porter	Entry Level Engineer	\$10.00	400.00	\$4,000.00	\$10.30	400.00	\$4,120.00
Edward Bean	Project Administrator	\$25.00	48.00	\$1,200.00	\$25.75	48.00	\$1,236.00
Subtotal Direct Labor (DL)				\$97,280.00			\$100,198.40

For this cost element, the Contracting Officer requires the offeror to provide adequate documentation in order to determine that each labor rate for each employee/labor category is fair and reasonable. The documentation will need to explain how these labor rates were derived. For example, if the rates are DCAA-approved labor rates, provide the Contracting Officer with copies of the DCAA documents stating the approval. This is the most acceptable means of documentation to determine the rates fair and reasonable. Other types of supporting documentation may include General Service Administration (GSA) contract price lists, actual payroll journals, or Salary.com research. If an employee listed in a cost proposal is not a current employee (maybe a new employee, or one contingent upon the award of this contract), a copy of the offer letter stating the hourly rate - signed and accepted by the employee - may be provided as adequate documentation. Sometimes the hourly rates listed in a proposal are derived through subjective processes, i.e., blending of multiple employees in one labor category, or averaged over the course of the year to include scheduled payroll increases, etc. These situations should be clearly documented for the Contracting Officer.

Another cost element in Direct Labor is labor escalation, or the increase in labor rates from Year 1 to Year 2. In the example above, the proposed labor escalation is 3% (ex., Andy Smith increased from \$55.00/hr in Year 1, by 3% to \$56.65/hr in Year 2). Often times, an offeror may not propose escalation on labor rates during a 24-month period. Whatever the proposed escalation rate is, please be prepared to explain why it is fair and reasonable [ex., a sufficient explanation for our sample escalation rate would be the Government's General Schedule Increase and Locality Pay for the same time period (name FY) in the same location (name location) was published as 3.5%, therefore a 3% increase is fair and reasonable]

B. Other Direct Costs (ODCs)

This section of the cost proposal includes all other directly related costs required in support of the effort, i.e., materials, subcontractors, consultants, travel, etc. Any cost element that includes various items will need to be detailed in a cost breakdown to the Contracting Officer.

Direct Material Costs: This subsection of the cost proposal will include any special tooling, test equipment, and material costs necessary to perform the project. Items included in this section will be carefully reviewed relative to need and appropriateness for the work proposed,

and must, in the opinion of the Contracting Officer, be advantageous to the Government and directly related to the specific topic.

The Contracting Officer will require adequate documentation from the offeror to determine the cost reasonableness for each material cost proposed. The following methods are ways in which the Contracting Officer can determine this [FAR 15.403-1].

- **Adequate Price Competition.** A price is based on adequate price competition when the offeror solicits and receives quotes from two or more responsible vendors for the same or similar items or services. Based on these quotes, the offeror selects the vendor who represents the best value to the Government. The offeror will be required to provide copies of all vendor quotes received to the Contracting Officer. Note: Price competition is not required for items at or below the micropurchase threshold (\$10,000) [FAR 15.403-1]. If an item’s unit cost is less than or equal to \$10,000, price competition is not necessary. However, if an item’s total cost over the period of performance (unit cost * quantity is higher than \$10,000, two or more quotes must be obtained by the offeror.
- **Commercial Prices.** Commercial prices are those published on current price lists, catalogs, or market prices. This includes vendors who have prices published on a GSA-schedule contract. The offeror will be required to provide copies of such price lists to the Contracting Officer.
- **Prices set by law or regulation.** If a price is mandated by the Government (i.e. pronouncements in the form of periodic rulings, reviews, or similar actions of a governmental body, or embodied in the laws) that is sufficient to set a price.

Table 6: Example of Direct Material Costs as Proposed by Sample Offeror

DIRECT MATERIAL COSTS:	YEAR 1	YEAR 2
Raw Materials	\$35,000.00	\$12,000.00
Computer for experiments	\$4,215.00	\$0.00
Cable (item #12-3657, 300 ft)	\$1,275.00	\$0.00
Software	\$1,825.00	\$1,825.00
Subtotal Direct Materials Costs (DM):	\$42,315.00	\$13,825.00

Raw Materials: This is a generic label used to group many material items into one cost item within the proposal. The Contracts Officer will require a detailed breakout of all the items that make up this cost. For each separate item over \$10,000 (total for Year 1 + Year 2), the offeror must be able to provide either competitive quotes received, or show that published pricing was used.

Computer for experiments: Again, this item is most likely a grouping of several components that make up one system. The Contracts Officer will require a detailed breakout of all the items that make up this cost. For each separate item over \$10,000 (total for Year 1 + Year 2), the offeror must be able to provide either competitive quotes received, or show that published pricing was used.

Cable: Since this item is under the simplified acquisition threshold of \$10,000, competitive quotes or published pricing are not required. Simply provide documentation to show the Contracting Officer where this price came from.

Software: This cost item could include either one software product, or multiple products. If this includes a price for multiple items, please provide the detailed cost breakdown. Note: The price for Year 1 (\$1,825) is below the simplified acquisition threshold; however, in total (Year 1 + Year 2) the price is over \$10,000, so competitive quotes or published pricing documentation must be provided.

Due to the specialized types of products and services necessary to perform these projects, it may not always be possible to obtain competitive quotes from more than one reliable source. Each cost element over the simplified acquisition threshold (\$10,000) must be substantiated. There is always an explanation for HOW the cost of an item was derived; show us how you came up with that price!

When it is not possible for an offeror to obtain a vendor price through competitive quotes or published price lists, a Contracting Officer may accept other methods to determine cost reasonableness. Below are some examples of other documentation, which the Contracting Officer may accept to substantiate costs:

- a. Evidence that a vendor/supplier charged another offeror a similar price for similar services. Has the vendor charged someone else for the same product? (Two (2) to three (3) invoices from that vendor to different customers may be used as evidence.)
- b. Previous contract prices. Has the offeror charged the Government a similar price under another Government contract for similar services? If the Government has already paid a certain price for services, then that price may already be considered fair and reasonable. (Provide the contract number, and billing rates for reference.)
- c. DCAA approved. Has DCAA already accepted or verified specific cost items included in your proposal? (Provide a copy of DCAA correspondence that addressed these costs.)

Table 7: Example of ODCs, Including Equipment, as Proposed by Example Offeror

OTHER DIRECT COSTS:	YEAR 1	YEAR 2
Equipment Rental for Analysis	\$5,500.00	\$5,600.00
Subcontractor – Widget, Inc.	\$25,000.00	\$0.00
Consultant: John Bowers	\$0.00	\$12,000.00
Travel	\$1,250.00	\$1,250.00
Subtotal ODCs:	\$31,750.00	\$18,850.00

Equipment Rental for Analysis: The offeror explains that the Year 1 cost of \$5,500 is based upon 250 hours of equipment rental at an hourly rate of \$22.00/hr. One (1) invoice from the vendor charging another vendor the same price for the same service is provided to the Contracting Officer as evidence.

Subcontractor – Widget, Inc.: The offeror provides a copy of the subcontractor quote to the Contracting Officer in support of the \$25,000 cost. This subcontractor quote must include sufficient detailed information (equivalent to the data included in the prime’s proposal to the Government), so that the Contracting Officer can make a determination of cost reasonableness.

- a. As stated in Section 3.5(c)(6) of the DoD Cost Proposal guidance, “All subcontractor costs and consultant costs must be detailed at the same level as prime contractor costs in regards to labor, travel, equipment, etc. Provide detailed substantiation of subcontractor costs in your cost proposal.”
- b. In accordance with FAR 15.404-3, “the Contracting Officer is responsible for the determination of price reasonableness for the prime contract, including subcontracting costs”. This means that the subcontractor’s quote/proposal may be subject to the same scrutiny by the Contracting Officer as the cost proposal submitted by the prime. The Contracting Officer will need to determine whether the subcontractor has an accepted purchasing system in place and/or conduct appropriate cost or price analyses to establish the reasonableness of proposed subcontract prices. Due to the proprietary nature of cost data, the Subcontractor may choose to submit their pricing information directly to the Contracting Officer and not through the prime. This is understood and encouraged.
- c. When a subcontractor is selected to provide support under the prime contract due to their specialized experience, the Contracting Officer may request sole source justification from the offeror.

Consultant – John Bowers: Again, the offeror shall provide a copy of the consultant’s quote to the Contracting Officer as evidence. In this example, the consultant will be charging an hourly rate of \$125 an hour for 96 hours of support. The offeror indicates to the Contracting Officer that this particular consultant was used on a previous contract with the Government (provide contract number), and will be charging the same rate. A copy of the consultant’s invoice to the offeror under the prior contract is available as supporting evidence. Since the Government has paid this price for the same services in the past, determination has already been made that the price is fair.

Travel: The Contracting Officer will require a detailed cost breakdown for travel expenses to determine whether the total cost is reasonable based on Government per diem and mileage rates. This breakdown shall include the number of trips, the destinations, and the number of travelers. It will also need to include the estimated airfare per round trip, estimated car rental, lodging rate per trip, tax on lodging, and per diem rate per trip. The lodging and per diem rates must coincide with the Joint Travel Regulations. Please see the following website to determine the appropriate lodging and per diem rates: <https://www.travel.dod.mil/>. Additionally, the offeror must provide why the airfare is fair and reasonable as well. Sufficient back up for both airfare and car rental would include print outs of online research at the various travel search

engines (Expedia, Travelocity, etc.) documenting the prices for airfare and car rentals thus proving why your chosen rate is fair and reasonable.

Table 8: Example of Travel Cost Breakout from ODCs by Example Offeror

TRAVEL		Trips	Travelers	Nights	Days	Unit Cost	Total Travel
Airfare	per roundtrip	1	1			\$996.00	\$996.00
Lodging	per day	1	1	1		\$75.00	\$75.00
Tax on Lodging (12%)	per day	1	1	1		\$9.00	\$9.00
Per Diem	per day	1	1		2	\$44.00	\$88.00
Automobile Rental	per day	1	1		2	\$41.00	\$82.00
Subtotal Travel							\$1,250.00

C. Indirect Rates

Indirect rates include elements such as Fringe Benefits, General & Administrative (G&A), Overhead, and Material Handling costs. The offeror shall indicate in the cost proposal both the indirect rates (as a percentage) as well as how those rates are allocated to the costs in the proposal.

Table 9: Example of Indirect Rates by Example Offeror

INDIRECTS	YEAR 1	YEAR 2
Subtotal Direct Labor (DL):	\$97,280.00	\$100,198.40
Fringe Benefits, if not included in Overhead, rate (15.0000 %) X DL =	\$14,592.00	\$15,029.76
Labor Overhead (rate 45.0000 %) X (DL + Fringe) =	\$50,342.40	\$51,852.67
Total Direct Labor (TDL):	\$162,214.40	\$167,080.83

In this example, the offeror includes a Fringe Benefit rate of 15.00% that it allocated to the Direct Labor costs. They also propose a Labor Overhead rate of 45.00% that is allocated to the Direct Labor costs plus the Fringe Benefits.

All indirect rates and the allocation methods of those rates must be verified by the Contracting Officer. In most cases, DCAA documentation supporting the indirect rates and allocation methods can be obtained through a DCAA field audit or proposal review. Many offerors have already completed such reviews and have this documentation readily available. If an offeror is unable to participate in a DCAA review to substantiate indirect rates, the Contracting Officer may request other accounting data from the offeror to make a determination.

D. Cost of Money (COM)

If Cost of Money (an imputed cost that is not a form of interest on borrowings (see FAR 31.205-20); an “incurred cost” for cost-reimbursement purposes under applicable cost-reimbursement contracts and for progress payment purposes under fixed-price contracts; and refers to: (1) Facilities capital cost of money (48 CFR 9904.414); and (2) Cost of money as an element of the cost of capital assets under construction (48 CFR 9904.417)) is proposed in accordance with FAR 31.205-10, a DD Form 1861 is required to be completed and submitted with the contractor’s proposal.

E. Fee/Profit

The proposed fee percentage will be analyzed in accordance with DFARS 215.404, the Weighted Guidelines Method.

c. Preparing an Application

This format applies to all proposals submitted via email. Offerors' proposals should show the location of each section of the proposal, as well as major subdivisions of the project description. Forms are available at <https://www.arl.army.mil/resources/baa-forms/>.

COVER Sheet: for Contract proposals submitted by email:

1. A Cover Sheet is required. Proposals will not be processed without a signed Cover Sheet.
2. Should the project be carried out at a branch campus or other component of the submitting organization, that branch campus or component should be identified in the cover sheet.
3. The title of the proposed project should be brief, scientifically representative, intelligible to a scientifically literate reader, and suitable for use in the public domain.
4. The proposed duration for which support is requested should be consistent with the program duration of forty-two (42) months.
5. Specification of a desired starting date for the project is important and helpful however, requested effective dates cannot be guaranteed.
6. To evaluate compliance with Title IX of the Education Amendments of 1972 {20 U.S.C. A§ 1681 Et. Seq.}, the Department of Defense 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 STEM disciplines. To enable this assessment, each application must also include the following forms completed as indicated:

Research and Related Senior/Key Person Profile (Expanded) form:

The Degree Type and Degree Year fields on the Research and Related Senior/Key Person Profile {Expanded} form will be used by DoD as the source for career information. In addition to the required fields on the form, applicants must complete these two fields for all individuals that are identified as having the project role of PD/PI or Co-PD/PI on the form. Additional senior/key persons can be added by selecting the "Next Person" button.

Research and Related Personal Data form:

This form will be used by DoD as the source of demographic information, such as gender, race, ethnicity, and disability information for the Project Director/Principal Investigator and all other persons identified as Co-Project Director(s)/Co-Principal Investigator(s). Each application must include this form with the name fields of the Project Director/Principal Investigator and any Co-Project Director(s)/Co-Principal Investigator(s) completed; however, provision of the demographic information in the form is voluntary. If completing the form for multiple individuals, each Co-Project Director/Co-Principal Investigator can be added by selecting the "Next Person" button. The demographic information, if provided, will be used for statistical purposes only and will not be made available to merit reviewers. Applicants who do not wish to provide some or all of the information should check or select the "Do not wish to provide" option.

7. Pursuant to 31 U.S.C. 7701, as amended by the Debt Collection Improvement Act of 1996 [Section 31001(I)(1), Public Law 104-134], federal agencies shall obtain each awardees' Taxpayer Identification Number (TIN). This number may be the Employer Identification Number for a business or non-profit entity or the Social Security Number for an individual. The TIN is being obtained for purposes of collecting and reporting on any delinquent amounts that may arise out of an awardees' relationship with the Government.
8. Offerors shall provide their organization's Unique Entity Identifier (formerly DUNS). This number is a nine-digit number assigned by Dun and Bradstreet Information Services. See Section II.B.3 of this BAA for requirements pertaining to the Unique Entity Identifier.
9. Offerors shall provide their assigned Commercial and Government Entity (CAGE) Code. The CAGE Code is a 5-character code assigned and maintained by the Defense Logistics Service Center (DLSC) to identify a commercial plant or establishment.

TABLE OF CONTENTS: Use the following Format for the Proposal Table of Contents, Forms are available at

<https://www.arl.army.mil/resources/baa-forms/>

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List Appendix Items: _____	

This format applies to proposals submitted via email. Offerors' proposals should show the location of each section of the proposal, as well as major subdivisions of the project description.

STATEMENT OF DISCLOSURE PREFERENCE (FORM 52 OR 52A): Complete and sign ARO Form 52 (Industrial Contractors) or ARO Form 52A (Educational and Nonprofit Organizations), form can be found at the following website: <https://www.arl.army.mil/resources/baa-forms/>.

RESEARCH AND RELATED Other Project Information: The form entitled “Research and Related Other Project Information” found at the following website: <https://www.arl.army.mil/resources/baa-forms/>, shall be completed and signed by all organizations.

PROJECT ABSTRACT:

1. The Project Abstract shall be completed on the form entitled “Publicly Releasable Project Abstract” found at the following website: <https://www.arl.army.mil/resources/baa-forms/>.
2. Unless otherwise instructed in this BAA, the Project Abstract shall include a concise statement of work and basic approaches to be used in the proposed effort. The abstract should include a statement of scientific objectives, methods to be employed, and the significance of the proposed effort to the advancement of knowledge.
3. The abstract should be no longer than one (1) page (maximum 4,000 characters).
4. The project abstract shall be marked by the applicant as publicly releasable. By submission of the project abstract, the applicant confirms that the abstract is releasable to the public. For a proposal that results in a grant award, the project abstract will be posted to a searchable website available to the general public to meet the requirements of Title VII (General Provisions), Section 8123, of the Department of Defense Appropriations Act, 2015. (Division C of the Consolidated and Further Continuing Appropriations Act, Public Law 113-235). The website address is: <https://dodgrantawards.dtic.mil/grants>.

TECHNICAL PROPOSAL (PROJECT DESCRIPTION):

The detailed technical portion of the proposal shall be no longer than 15 pages including tables and figures, single spaced text, size 12 Times New Roman font with one inch page margins, and shall contain the following:

1. **Technical Approach:** Introduce the problem to be addressed, survey related work, identify key obstacles, and outline the proposed solution and well-defined objective. Proposals should describe an approach to all technical areas with unambiguous and quantitative milestones. Proposers must justify the utility of the proposed work and highlight its benefits over the current state-of-the-art. Proposals should clearly address the expected key challenges and proposed methods to overcome these difficulties taking into consideration the current state of field. Proposers should set aggressive yearly quantitative milestones that define a path toward the end-of-the-program goals and analyze the impact if successful. Proposers should address any metrics they feel would be more appropriate to include in T&E evaluation. Proposers must address approach for completing T&E activities.
2. **Project Schedule, Milestones, and Deliverables:** A summary of the schedule of events, milestones, and a detailed description of the results and products to be delivered.
3. **Management Approach:** A discussion of the overall approach to the management of this effort, including brief discussions of: required facilities; relationships with any subawardees and with other organizations; availability of personnel; and planning, scheduling, and control procedures. A brief description of your organization, including if the offeror has extensive government contracting experience. If this information has been previously provided to the ARL/ARO, the information need not be provided again. A statement setting forth this condition should be made.
4. The names of other federal, state, local agencies, or other parties receiving the proposal and/or funding the proposed effort. If none, so state. Concurrent or later submission of the proposal to other organizations will not prejudice its review by the ARL/ARO if we are kept informed of the situation.
5. A statement regarding possible impact, if any, of the proposed effort on the environment considering as a minimum its effect upon water, atmosphere, natural resources, human resources, and any other values.
6. The offeror shall provide a statement regarding the use of Class I and Class II ozone-depleting substances. Ozone-depleting substances mean any substance designated as Class I by EPA, including but not limited chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform and any substance designated as Class II by EPA, including but not limited to hydrochlorofluorocarbons. See 40 C.F.R. Part 82 for detailed information. If Class I or II substances are to be utilized, a list shall be provided as part of the offeror's proposal. If none, so state.
7. The type of additional support, if any, requested (e.g., facilities, equipment, and materials). Government Furnished Information or Equipment (GFI/GFE) available to all proposers is described in I.A.8.a.

BIOGRAPHICAL SKETCHES:

This Section shall contain the biographical sketches for senior and key personnel only.

- a. Primary Principal Investigator: The “Primary” PI provides a single or initial point of communication between the sponsoring agency(s) and the awardee organization(s) about scientific matters. If not otherwise designated, the first PI listed will serve as the “Primary” PI. This individual can be changed with approval of the agency. The sponsoring agency(s) does not infer any additional scientific stature to this role among collaborating investigators.
- b. Co-Principal Investigators: The individual(s) a research organization designates as having an appropriate level of authority and responsibility for the proper conduct of the research and submission of required reports to the agency. When an organization designates more than one PI, it identifies them as individuals who share the authority and responsibility for leading and directing the research, intellectually and logistically. The sponsoring agency(s) does not infer any distinction among multiple PIs.
- c. Key personnel: The individual(s) a research organization designates as having a high level of technical expertise in the topics proposed to be researched and who will both play an active role in the research and supervise the work of more junior personnel on a daily basis.

The following information is required:

- a. Relevant experience and employment history including a description of any prior Federal employment within one year preceding the date of proposal submission.
 - b. List of up to three (3) publications most closely related to the proposed project and up to three (3) other significant publications, including those being printed. Patents, copyrights, or software systems developed may be substituted for publications.
 - c. List of persons, other than those cited in the publications list, who have collaborated on a project or a book, article, report or paper within the last four (4) years. Include pending publications and submissions. Otherwise, state "None."
 - d. Names of each investigator's own graduate or post graduate advisors and advisees. The information provided in "c" and "d" is used to help identify potential conflicts or bias in the selection of reviewers.
 - e. The time commitment of each senior or key person to this project.
3. For the personnel categories of postdoctoral associates, other professionals, and students (research assistants), the proposal may include information on exceptional

qualifications of these individuals that merit consideration in the evaluation of the proposal.

4. The biographical sketches are limited to three (3) pages per investigator and other individuals that merit consideration.

BIBLIOGRAPHY: A bibliography of pertinent literature is required. Citations must be complete (including full name of author(s), title, and location in the literature).

CURRENT AND PENDING SUPPORT:

1. All project support from whatever source must be listed. The list must include all projects requiring a portion of the principal investigator's and other senior personnel's time, even if they receive no salary support from the project(s) including Cooperative Research and Development Agreements (CRADAs) or other technology transfer agreements with federal labs. Funding provided under any award resulting from this BAA may only be used in support of the effort funded by that award, and not for any other project or purpose.

2. The information should include, as a minimum:

- (a) the project/proposal title and brief description,
- (b) the name and location of the organization or agency presently funding the work or requested to fund such work,
- (c) the award amount or annual dollar volume of the effort,
- (d) the period of performance, and
- (e) a breakdown of the time required of the principal investigator and/or other senior personnel.

FACILITIES, EQUIPMENT, AND OTHER RESOURCES: The offeror should include in the proposal a listing of facilities, equipment, and other resources already available to perform the research proposed.

COST PROPOSAL (including DD Form 1861):

1. Each proposal must contain a budget for each year of support requested and a cumulative budget for the full term of requested support. Locally produced versions may be used, but you may not make substitutions in prescribed budget categories nor alter or rearrange the cost categories as they appear on the form. The proposal may request funds under any of the categories listed so long as the item is considered necessary to perform the proposed work and is not precluded by applicable cost principles. Additionally, a budget by major proposed research tasks and sub-task using the same budget categories must be included. An example is provided in Section II.H.

2. A signed summary budget page must be included. The documentation pages should be titled "Budget Explanation Page" and numbered chronologically starting with the

budget form. The need for each item should be explained clearly.

3. All cost data must be current and complete. Costs proposed must conform to the following principles and procedures:

Educational Institutions: 2 CFR Part 200 (formerly OMB Circular A-21); Nonprofit Organizations: 2 CFR Part 200 (formerly OMB Circular A-122*); and Commercial Organizations: FAR Part 31, DFARS Part 231, FAR Subsection 15.403-5, and DFARS Subsection 215.403-5.

*For those nonprofit organizations specifically exempt from the provisions of 2 CFR Part 230, FAR Part 31 and DFARS Part 231 shall apply.

APPENDICES: Some situations require that special information and supporting documents be included in the proposal before funding can be approved. Such information and documentation should be included by appendix to the proposal.

d. Submission of Complete Research Proposals

Proposals must be submitted through the offeror's organizational office having responsibility for Government business relations. All signatures must be that of an official authorized to commit the organization in business and financial affairs. Proposals must be submitted electronically using the following format:

Proposals shall be submitted electronically through the IARPA Distribution and Evaluation System (IDEAS). Offerors interested in providing a submission in response to this BAA shall first register by electronic means in accordance with the instructions provided on the following web site: <https://iarpa-ideas.gov>. Offerors who plan to submit proposals for evaluation are strongly encouraged to register at least one week prior to the due date for the first round of proposals. Offerors who do not register in advance do so at their own risk, and the Government shall not extend the due date to accommodate such Offerors. Failure to register as stated shall prevent the Proposer's submittal of documents.

After registration has been approved, Offeror's should upload a proposal, scanned certifications and permitted additional information in 'pdf' format, or as otherwise directed (Excel, PowerPoint, etc.). Offerors are responsible for ensuring a compliant and timely submission of their proposals to meet the BAA submittal deadlines. Time management to upload and submit is wholly the responsibility of the Offeror. **Note: IDEAS will require Offerors to complete a proposal cover sheet within IDEAS at the time that the Volume 1 – Technical and Management Proposal is submitted. This is separate and distinct from the Technical and Cost Volume cover sheets referenced in II.D.2 (also provided in II.H.10 and H.11). Information requested within IDEAS will include basic cost information (Total funds requested from IARPA, proposed costs by option period and validity period).**

Upon completing the proposal submission, the Offeror shall receive an automated confirmation email from IDEAS. Please forward that automated message to dni-iarpa-

baa-w911nf-23-s-0007@iarpa.gov. The Government strongly suggests that the Offeror document the submission of their proposal package by printing the electronic receipt (time and date stamped) that appears on the final screen following compliant submission of a proposal to the IDEAS website.

Volume 1 submitted by any means other than IDEAS (e.g., hand-carried, postal service, commercial carrier and email) shall not be considered unless the Offeror attempted electronic submittal but was unsuccessful and notified the Government using the following procedure. The Offeror shall send an e-mail to dni-iarpa-baa-w911nf-23-s-0007@iarpa.gov prior to the proposal due date and time specified in the BAA and indicate that an attempt was made to submit electronically, and that the submittal was unsuccessful. This e-mail shall include contact information for the Offeror. Upon receipt of such notification, the Government will provide additional guidance regarding submission.

The full proposal submission shall be submitted by the date and time specified in the BAA, Application and Submission Information section, II.D.4 Submission Dates and Times for Initial Round of Selections, in order to be considered. Proposals received after this date are deemed to be late and will not be reviewed. Failure to comply with the submission procedures may result in the submittal not being evaluated.

All information uploaded into IDEAS shall be unclassified. Classified information is not permitted.

3. Unique Entity Identifier and System for Award Management (SAM)

Each applicant (unless the applicant is an individual or Federal awarding agency that is exempt from those requirements under 2 CFR §25.110(b) or (c), or has an exception approved by the Federal awarding agency under 2 CFR §25.110(d)) is required to:

- (i) Be registered in SAM before submitting its application;
- (ii) Provide a valid unique entity identifier in its application; and
- (iii) Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency.

The Federal awarding agency may not make a Federal award to an applicant until the applicant has complied with all applicable unique entity identifier and SAM requirements. If an applicant has not fully complied with the requirements by the time the Federal awarding agency is ready to make a Federal award, the Federal awarding agency may determine that the applicant is not qualified to receive a Federal award and use that determination as a basis for making a Federal award to another applicant.

4. Submission Dates and Times:

Proposals:

Proposals transmitted to be considered for award must be submitted in IDEAS **no later than 5:00 PM EDT on 8 MAY 2023.**

Applicants are responsible for submitting electronic proposals in sufficient time to insure IARPA IDEAS receives it by the time specified in this BAA. If the electronic proposal is received by IARPA IDEAS after the exact time and date specified for receipt of offers, it will be considered “late” and may not be considered for award. Acceptable evidence to establish the time of receipt by IARPA IDEAS includes documentary evidence of receipt maintained by IARPA IDEAS.

Because of potential problems involving the applicants’ own equipment, to avoid the possibility of late receipt and resulting in ineligibility for award consideration, it is strongly recommended that proposals be uploaded at least two business days before the deadline established in the BAA.

If an emergency or unanticipated event interrupts normal Government processes so that proposals cannot be received at IARPA IDEAS by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation closing date, the time specified for receipt of proposals will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

Proposal Receipt Notices – The Government will receive an email confirming the successful submission of a proposal to IARPA IDEAS within one (1) hour after submission, as long as the proposal was submitted no later than 5 PM EDT on the due date.

5. Intergovernmental Review:

Other Government Agencies will be involved in the review process.

6. Funding Restrictions:

Multiple 42-month awards are anticipated. The actual amount of each award will be contingent on availability of funds and the scope of the proposed work. Depending on the results of the proposal evaluation, there is no guarantee that any of the proposals submitted in response to a particular program goal will be recommended for funding. Proposals may be funded in part.

7. Other Submission Requirements:

Information to Be Requested from Successful Offerors - Offerors whose proposals are accepted for funding will be contacted before award to provide additional information required for award. The required information is normally limited to clarifying budget explanations, representations, certifications, and some technical aspects.

Statement of Work (SOW) - prior to award the Contracting Officer may request that the contractor submit an SOW for the effort to be performed, which will be incorporated into the contract at the time of award.

An applicant may withdraw a proposal at any time before award by written notice or by email. Notice of withdrawal shall be sent to the Contracting/Grants Officer identified in Section II.G of this BAA. Withdrawals are effective upon receipt of notice by the Contracting/Grants Officer.

E. Proposal Review Information:

1. Criteria:

The Government shall only review proposals against the evaluation criteria, and then against program balance, and availability of funds, and shall not evaluate them against other proposals, since they are not submitted in accordance with a common work statement. For evaluation purposes, a proposal is the document described in Section II.D.2.b of the BAA. Other supporting or background materials submitted with the proposal shall not be considered. Only Government personnel shall make evaluation and award determinations under this BAA

The factors used to evaluate and select proposals for negotiation for this Program BAA are described in the following paragraphs. Each proposal shall be evaluated on its own merits and its relevance to the Program goals rather than against other proposals submitted in response to this BAA. The proposals shall be evaluated based on technical, program, and funding availability factors. These are of equal importance. Within the technical evaluation factor, the specific technical criteria are in descending order of importance, as follows: Overall Scientific and Technical Merit, Effectiveness of Proposed Work Plan, Contribution and Relevance to the IARPA Mission and Program Goal, Relevant Experience and Expertise, and Resource Realism. Specifics about the evaluation criteria are provided below.

Award(s) shall be made to an offeror on the basis of the technical, program, and funding availability factors listed below, and subject to successful negotiations with the Government. Offerors are cautioned that failure to follow submittal instructions may negatively impact their proposal evaluation or may result in rejection of the proposal for non-compliance.

Overall Scientific and Technical Merit

Overall scientific and technical merit of the proposal is substantiated, including unique and innovative methods, approaches, and/or concepts. The offeror clearly articulates an understanding of the problem to be solved. The technical approach is credible and includes a clear assessment of primary risks and a means to address them. The proposed research advances the state-of-the-art.

Effectiveness of Proposed Work Plan

The feasibility and likelihood that the proposed approach shall satisfy the Program's milestones and metrics are explicitly described and clearly substantiated along with risk mitigation strategies for achieving stated milestones and metrics. The proposal reflects a mature and quantitative understanding of the Program milestones and metrics, and the statistical confidence with which they may be measured. Any offeror-proposed milestones and metrics are clear and well-defined, with a logical connection to enabling offeror decisions and/or Government decisions. The schedule to achieve the milestones is realistic and reasonable.

The roles and relationships of prime and sub-contractors is clearly delineated with all participants fully documented. Work plans shall demonstrate the ability to provide full Government visibility into and interaction with key technical activities and personnel, and a single point of responsibility for contract performance. Work plans shall also demonstrate that key personnel have sufficient time committed to the Program to accomplish their described Program roles.

The requirement and rationale for and the anticipated use or integration of Government resources, including, but not limited to, all equipment, facilities, information, etc., is fully described including dates when such Government Furnished Property (GFP), Government Furnished Equipment (GFE), Government Furnished Information (GFI) or other similar Government-provided resources shall be required.

The offeror's RDMP is complete, addressing the types of data to be collected or produced, describing how each type of data will be preserved and shared, including plans to provide public access to peer reviewed publications and the underlying research data, or provides justifiable rationale for not making this data available.

Contribution and Relevance to the IARPA and ARO Mission and Program Goals

The proposed solution meets the letter and intent of the stated program goals and all elements within the proposal exhibit a comprehensive understanding of the problem. The offeror clearly addresses how the proposed effort shall meet and progressively demonstrate the Program goals. The offeror describes how the proposed solution contributes to IARPA's mission to invest in high-risk/high-payoff research that can provide the U.S. with an overwhelming intelligence advantage.

The offeror's proposed intellectual property and data rights are consistent with the Government's need to be able to effectively manage the program and evaluate the technical output and deliverables, communicate program information across Government organizations and support transition and further use and development of the program results to Intelligence Community users at an acceptable cost. The proposed approach to intellectual property rights is in the Government's best interest.

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Relevant Experience and Expertise

The offeror's capabilities, related experience, facilities, techniques, or unique combination of these, which are integral factors for achieving the proposal's objectives as well as qualifications, capabilities, and experience of the proposed principal investigator, team leader, and key personnel critical in achieving the proposal objectives. Time commitments of key personnel must be sufficient for their proposed responsibilities in the effort.

Resource Realism

The proposed resources demonstrate a clear understanding of the program, a perception of the risks and the ability to organize and perform the work. The labor hours and mix are consistent with the technical and management proposal and are realistic for the work proposed. Material, equipment, software, data collection and management, and travel, especially foreign travel, are well justified, reasonable, and required for successful execution of the proposed work.

Program Balance

The Government will consider IARPA's overall mission and program objectives, which may include but are not limited to the following: broadening the variety of technical approaches to enhance program outcomes, transitioning the technology to Government partners, developing capabilities aligned with the priorities of the IC and national security.

Funding Availability Factor

Budget Constraints: The Government will seek to maximize the likelihood of meeting program objectives within program budget constraints. This may involve awarding one or more contracts.

Note: If the Offeror has submitted the proposal to other federal, state or local agencies or other parties that may fund the proposed effort, it may impact the Government's decision to fund the effort.

2. Review and Selection Process:

The Government conducts impartial, equitable, comprehensive proposal reviews to select the source (or sources) whose offer meets the Government's technical, policy and programmatic goals. For evaluation purposes, a proposal is the document described in Section D of the BAA. Other supporting or background materials submitted with the proposal shall not be considered.

The contract award process for this BAA has two steps. The first step is selection for negotiations and is made based on an integrated assessment of the evaluation factors (see BAA Section II.E.1). The second step is negotiation and contract award. The Government's decision to negotiate with any one offeror is solely at the Government's discretion. That negotiation may not be offered to other offerors. Contract award is contingent on Contracting Officer's determination of a fair and reasonable cost/price and agreement on terms and conditions.

Selection for negotiation will be conducted through a peer or scientific review process led by the REASON IARPA Program Manager (PM). This process entails establishing a Scientific Review Panel (SRP) made up of qualified Government personnel who will review and assess each proposal's strengths, weaknesses and risks against the technical evaluation criteria. If necessary, non-Government technical experts with specialized expertise may advise Government panel members and the PM. However, only Government personnel will make selection recommendations and decisions under this BAA.

Proposals will be reviewed individually and will not be compared against each other as they are not submitted in accordance with a common SOW. When SRP reviews are complete, the IARPA PM will prepare a recommendation to the IARPA Scientific Review Official (SRO) identifying proposals as recommended, recommended with modifications, or not recommended for negotiation based on consideration of all stated factors in Section II.E.1 (technical, program balance, and funding availability factors). The SRO will make the final decision as to selection

for negotiations. At this point, Offerors will be notified in writing by the Contracting Officer as to whether or not they have been selected for negotiation.

NOTE: A proposal may be handled for administrative purposes by support contractors. These support contractors are prohibited from competing on BAA proposals and are bound by appropriate non-disclosure requirements.

The Government may use Non-Government contractors who are employees of Booz Allen Hamilton, Whitney, Bradley & Brown, Inc. (WBB), Serco, Inc., Airlin Technologies, Bluemont Technology and Research, Navstar, Crimson Phoenix, Northwood Global Solutions, Onto & Quants, Inc., Tarragon Solutions, and subject matter experts from the DOE and DOD National Laboratories to provide expert advice regarding portions of the proposals submitted to the Government and to provide logistical support in carrying out the evaluation process. In addition to supporting evaluations, the following entities: Johns Hopkins Applied Physics Laboratory and the University of Maryland Applied Research Laboratory for Intelligence and Security will be supporting T&E activities for contracts awarded under this program and should be considered as part of an Offeror's OCI disclosure. These personnel shall have signed and are subject to the terms and conditions of non-disclosure agreements. By submission of its proposal, an offeror agrees that its proposal information may be disclosed to employees of these organizations for the limited purpose stated above. Offerors who object to this arrangement shall provide clear notice of their objection as part of their transmittal letter. If offerors do not send notice of objection to this arrangement in their transmittal letter, the Government shall assume consent to the use of contractor support personnel in assisting the review of submittal(s) under this BAA. Only Government personnel shall make evaluation and award determinations under this BAA.

3. Recipient Qualification

a. For CONTRACT Proposals:

(i) Contracts shall be awarded to responsible prospective contractors only. See FAR 9.104-1 for a listing of the general standards against which an applicant will be assessed to determine responsibility.

(ii) Applicants are requested to provide information with proposal submission to assist the Contracting Officer's evaluation of responsibility.

(iii) The Federal Awardee Performance and Integrity Information System (FAPIIS) will be checked prior to making an award. The web address is: <https://cpars.gov>. The applicant representing the entity may comment in this system on any information about the entity that the federal government official entered. The information in FAPIIS will be used in making a judgement about the entity's integrity, business ethics, and record of performance under Federal awards that may affect the official's determination that the applicant is qualified to receive an award.

FAR 52.209-11: Representation by Corporations Regarding Delinquent Tax Liability or a Felony Conviction under any Federal Law (Feb 2016)

(a) As required by sections 744 and 745 of Division E of the Consolidated and Further Continuing Appropriations Act, 2015 (Pub. L 113-235), and similar provisions, if contained in subsequent appropriations acts, the Government will not enter into a contract with any corporation that--

(1) Has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability, where the awarding agency is aware of the unpaid tax liability, unless an agency has considered suspension or debarment of the corporation and made a determination that suspension or debarment is not necessary to protect the interests of the Government; or

(2) Was convicted of a felony criminal violation under any Federal law within the preceding 24 months, where the awarding agency is aware of the conviction, unless an agency has considered suspension or debarment of the corporation and made a determination that this action is not necessary to protect the interests of the Government.

(b) The Offeror represents that—

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

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

F. Award Administration Information:

1. Award Notices:

Initial notification of selection of proposals for funding will be e-mailed by ARO to successful offerors. Unsuccessful offerors will be notified shortly thereafter by ARO.

The notification e-mail of selection for funding must not be regarded as an authorization to commit or expend funds. The Government is not obligated to provide any funding until a Government Contracting Officer signs the contract award document.

Applicants whose proposals are recommended for negotiation of award will be contacted by a Contract Specialist to discuss additional information required for award. This may include representations and certifications, revised budgets or budget explanations, certificate of current cost or pricing data, subcontracting plan for small businesses, and other information as applicable to the proposed award.

2. Administrative and National Policy Requirements:

a. Required Certifications

(i) Certifications Required for Contract Awards. Certifications and representations shall be completed by successful offerors prior to award. Federal Acquisition Regulation (FAR) Online Representations and Certifications are to be completed through SAM at website <https://www.SAM.gov>. Defense FAR Supplement and contract specific certification packages will be provided to the contractor for completion prior to award.

FAR 52.203-18, PROHIBITION ON CONTRACTING WITH ENTITIES THAT REQUIRE CERTAIN CONFIDENTIALITY AGREEMENTS OR STATEMENTS— REPRESENTATION (JAN 2017)

FAR 52.204-26, COVERED TELECOMMUNICATIONS EQUIPMENT OR SERVICES – REPRESENTATION (OCT 2020)

b. Policy Requirements

(i) MILITARY RECRUITING: This is to notify potential offerors that each contract awarded under this announcement to an institution of higher education shall include the following clause: Federal Acquisition Regulation (FAR) clause 52.209-1, Reserve Officer Training Corps and Military Recruiting on Campus.

(ii) SUBCONTRACTING: This section is applicable to contracts where the dollar threshold is expected to exceed to \$750,000.00. Pursuant to Section 8(d) of the Small Business Act [15 U.S.C. 637(d)], it is the policy of the Government to enable small business concerns to be considered fairly as subcontractors under all research agreements awarded to prime contractors. The required elements of the Subcontracting Plan are set forth by FAR 52.219-9 (DEVIATION 2013-O0014) and DFARS 252.219-7003.

Subcontracting Plan Goals. Small business subcontracting goals are established on an individual contract basis. The applicant is requested to consider, when appropriate, the Governments' subcontracting goals. When applied to R&D the small business-subcontractor plan should result in the best mix of cost schedule and performance.

(iii) EXPORT CONTROL LAWS: Applicants should be aware of and are responsible for complying with all applicable export control laws , including all International Traffic in Arms (ITAR) (22 CFR 120 et. Seq.) requirements. In some cases, developmental items funded by the Department of Defense are now included on the United States Munition List (USML) and are therefore subject to ITAR jurisdiction. Applicants should address in their proposals whether ITAR restrictions apply or do not apply, such as in the case when research products would have both civil and military application, to the work they are proposing to perform for the Department of Defense. The USML is available online at <https://www.ecfr.gov/cgi-bin/text-idx?node=pt22.1.121>. Additional information regarding the President's Export Control Reform Initiative can be found at <http://export.gov/ecr/index.asp> .

(iv) DRUG-FREE WORKPLACE: The appropriate clause(s) shall be added to the award.

(v) DEBARMENT AND SUSPENSION: The appropriate clause(s) shall be added to the award.

(vi) REPORTING SUBAWARDS AND EXECUTIVE COMPENSATION: The appropriate clause(s) shall be added to the award.

3. Reporting:

Reports including number and types will be specified in the award document, but will include as 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 upon before award. Reports and briefing material will also be required as appropriate to document progress in accomplishing program metrics.

Service Contract Reporting (SCR): See FAR 52.204-14, SAM Users Guide and DoD Guidebook for Service Contract Reporting in the System for Award Management at <https://dodprocurementtoolbox.com/cms/sites/default/files/resources/2020-10/SCR%20Guidebook%2021%20October%202020.pdf>.

G. Agency Contacts:

Questions of a technical nature or a programmatic nature shall be directed as specified below:

Technical Program Point of Contact:

IARPA Program Manager:
Dr. Steven Rieber
REASON Program Manager
IARPA/Analysis Office
Steven.riever@iarpa.gov
301-243-2087

Questions of a business nature shall be directed to the contact info, as specified below:

Schon Zwakman
Army Contracting Command- Aberdeen Proving Ground- Research Triangle Park
Division (ACC-APG-RTP)
Schon.zwakman.civ@army.mil

Comments or questions submitted should be concise and to the point, eliminating any unnecessary verbiage. In addition, the relevant part and paragraph of the Broad Agency Announcement (BAA) should be referenced.

H. Other Information:

1. Example of Technical Cover Sheet

(1) BAA Number	W911NF-22-S-0007
(2) Technical Area(s) – (TA)(s), if applicable	
(3) Lead Organization Submitting Proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Team Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Volume 1 no more than the specified page limit	Yes/No
(11) Restrictions on Intellectual property rights details provided in Appendix A format?	Yes/No
(12) Research Data Management Plan included?	Yes/No
(13) OCI Waiver Determination, Notification or Certification [see Section 3 of the BAA] Included?	Yes/No
(13a) If No, is written certification included (Appendix A)?	Yes/No
(14) Are one or more U.S. Academic Institutions part of your team?	Yes/No
(14a) If Yes, are you including an Academic Institution Acknowledgment Statement with your proposal for each U.S. Academic Institution that is part of your team (Appendix A)?	Yes/No
(15) Total Funds Requested from IARPA and the Amount of Cost Share (if any)	\$
(16) Date of Proposal Submission	

2. Example of Academic Institution Acknowledgement Letter

-- Please Place on Official Letterhead --

<Insert date>

To: Contracting Officer, ODNI/IARPA
Office of the Director of National Intelligence
Washington, D.C. 20511

Subject: Academic Institution Acknowledgment Letter Reference: Executive Order 12333, As Amended, Para 2.7

This letter is to acknowledge that the undersigned is the responsible official of <insert name of the academic institution>, authorized to approve the contractual relationship in support of the Office of the Director of National Intelligence's Intelligence Advanced Research Projects Activity and this academic institution.

The undersigned further acknowledges that he/she is aware of the Intelligence Advanced Research Projects Activity's proposed contractual relationship with <insert name of institution> through BAA# **W911NF-23-S-0007** and is hereby approved by the undersigned official, serving as the president, vice-president, chancellor, vice-chancellor, or provost of the institution.

3. Example of Technical SOW

- I. Task 1
 - a. Sub Task 1.a
 - b. Sub Task 1.b
 - c. Waypoints/Milestones & Associated Metrics
 - d. Deliverables
- II. Task 2
 - a. Sub Task 2.a
 - b. Sub Task 2.b
 - c. Waypoints/Milestones & Associated Metrics
 - d. Deliverables
- III. Task 3
 - a. Sub Task 3.a
 - b. Sub Task 3.b
 - c. Waypoints/Milestones & Associated Metrics
 - d. Deliverables
- IV. Travel Requirements
- V. Period of Performance
- VI. Place of Performance
- VII. Research and Compliance Requirements

4. **Example of Team Organization Table**

Participants	Org	Role	Unique, Relevant Capabilities	Role: Tasks	Clearance Level *	Time
Jane Wake	LMN Univ.	PI/Key Personnel	Electrical Engineering	Program Mgr & Electronics: 10		100%
John Weck, Jr.	OPQ Univ.	Key Personnel	Mathematical Physics	Programming: 1-5		50%
Dan Wind	RST Univ.	Key Personnel	Physics	Design, Fab, and Integration: 6-8		90%
Katie Wool	UVW Univ.	Contributor	Quantum Physics	Enhancement witness design: 4		25%
Rachel Wade	XYZ Corp.	Co-PI/Key Personnel	Graph theory	Architecture design: 6		55%
Chris West	XYZ Corp.	Significant Contributor	EE & Signal Processing	Implementation & Testing: 8-9		60%
Julie Will	JW Cons.	Consultant (Individual)	Computer science	Interface design: 10		200 hours
David Word	A Corp.	Consultant (A. Corp.)	Operations Research	Applications Programming: 2-3		200 hours

*if applicable

5. Example of Intellectual Rights Sheet

[Please provide here your good faith representation of ownership or possession of appropriate licensing rights to all IP that shall be utilized under the Program.]

Patents

PATENTS				
Patent number (or application number)	Patent name	Inventor name(s)	Patent owner(s) or assignee	Incorporation into deliverable
(LIST)	(LIST)	(LIST)	(LIST)	(Yes/No; applicable deliverable)

- 1) Intended use of the patented invention(s) listed above in the conduct of the proposed research;
- 2) Description of license rights to make, use, offer to sell, or sell, if applicable, that are being offered to the Government in patented inventions listed above;
- 3) How the offered rights will permit the Government to reach its program goals (including transition) with the rights offered;
- 4) Cost to the Government to acquire additional or alternative rights, if applicable;
- 5) Alternatives, if any, that would permit IARPA to achieve program goals.

Data (including Technical Data and Computer Software)

NONCOMMERCIAL or COMMERCIAL ITEMS			
Technical Data, Computer Software To be Furnished With Restrictions	Basis for Assertion	Asserted Rights Category	Name of Person Asserting Restrictions
(LIST)	(LIST)	(LIST)	(LIST)

- 1) Intended use of the data, including technical data and computer software, listed above in the conduct of the proposed research;
- 2) Description of Asserted Rights Categories, specifying restrictions on Government’s ability to use, modify, reproduce, release, perform, display, or disclose technical data, computer software, and deliverables incorporating technical data and computer software listed above;
- 3) How the offered rights will permit the Government to reach its program goals (including transition) with the rights offered;
- 4) Cost to the Government to acquire additional or alternative rights; if applicable;
- 5) Alternatives, if any, that would permit IARPA to achieve program goals.

6. Example of Contract Deliverables Table

Contract Deliverables				
SOW TASK#	Deliverable Title	Format	Due Date	Distribution/Copies
Continual	Monthly Contract Status Report	Gov't Format	10th of each month	Copy to PM, CO and COTR
Continual	Monthly Technical Status Reports	Gov't Format	10th of each month	Standard Distribution**
<p>** Standard Distribution: 1 copy of the transmittal letter <u>without the deliverable to the Contracting Officer</u>. 1 copy of the transmittal letter with the deliverable to the Primary PM and <u>COTR</u>.</p>				

7. Example of Organizational Conflicts of Interest Certification Letter

(Month DD, YYYY)

U.S. Army Research Office and
Office of the Director of National Intelligence
Intelligence Advanced Research Projects Activity (IARPA) REASON Program

ATTN: Schon Zwakman, Contracting Officer

Subject: OCI Certification

Reference: <Insert Program Name>, BAA# **W911NF-23-S-0007**, (Insert assigned proposal ID#, if received)

Dear _____,

In accordance with IARPA Broad Agency Announcement # **W911NF-23-S-0007**, Organizational Conflicts of Interest (OCI), and on behalf of (Offeror name) I certify that neither (Offeror name) nor any of our subcontractor teammates has as a potential conflict of interest, real or perceived, as it pertains to the REASON program. Please note the following subcontractors and their proposed roles:

[Please list all proposed contractors by name with a brief description of their proposed involvement.]

If you have any questions, or need any additional information, please contact (Insert name of contact) at (Insert phone number) or (Insert e-mail address).

Sincerely,

(Insert organization name)

(Shall be signed by an official that has the authority to bind the organization)

(Insert signature)

(Insert name of signatory) (Insert title of signatory)

8. Example of Three Chart Summary of the Proposal

Chart 1: Overview

- Self-contained, intuitive description of the technical approach and performance
 - Avoid acronyms! Especially those that are contractor specific.

Chart 3: Expected Impact

- Deliverable 1; Performance and Impact
- Deliverable 2; Performance and Impact
- Unique aspects of the proposal

9. Sample of the Research Data Management Plan

The Offeror must address each of the elements noted below.

The RDMP shall comply with the requirements stated in Section 4 of the BAA. In doing so, it will support the objectives of the ODNI Public Access Plan at <https://www.iarpa.gov/index.php/research-programs/public-access-to-iarpa-research>

1. **Sponsoring IARPA Program** (required):
2. **Offeror** (i.e., lead organization responding to BAA) (required):
3. **Offeror point of contact** (required):
The point of contact is the proposed principal investigator (PI) or his/her Designee.
 - a. **Name and Position:**
 - b. **Organization:**
 - c. **Email:**
 - d. **Phone:**
4. **Research data types** (required):
Provide a brief, high-level description of the types of data to be collected or produced in the course of the project.
5. **Standards for research data and metadata content and format** (required):
Use standards reflecting the best practices of the relevant scientific discipline and research community whenever possible.
6. **Plans for making the research data that underlie the results in peer-reviewed journal articles and conference papers digitally accessible to the public** at the time of publication/conference or within a reasonable time thereafter (required):
The requirement could be met by including the data as supplementary information to a peer reviewed journal article or conference paper or by depositing the data in suitable repositories available to the public.
 - a. **Anticipated method(s) of making research data publicly accessible:**
Provide dataset(s) to publisher as supplementary information (if publishers allow public access)

___ Deposit dataset(s) in Data Repository
___ Other (*specify*) _____
 - b. **Proposed research data repository or repositories** (for dataset(s) not provided as supplementary information):
Suitable repositories could be discipline-specific repositories, general purpose research data repositories, or institutional repositories, as long as they are publicly accessible.
 - c. **Retention period, at least three years after publication of associated research results:**
State the minimum length of time the data will remain publicly accessible.

d. **Submittal of metadata to IARPA:**

Offerors are required to make datasets underlying the results published in peer-reviewed journal or conferences digitally accessible to the public to the extent feasible. Here, the Proposer should state a commitment to submit metadata on such datasets to IARPA in a timely manner. Note: This does not supersede any requirements for deliverable data, as the award document may include metadata as a deliverable item.

7. **Policies and provisions for sharing and preservation (as applicable):**

a. Policies and provisions for appropriate protection of privacy, confidentiality, security, and intellectual property:

b. Descriptions of tools, including software, which may be needed to access and interpret the data:

c. Policies and provisions for re-use, re-distribution, and production of derivative works:

8. **Justification for not sharing and/or preserving data underlying the results of peer-reviewed publications (as applicable):**

If, for legitimate reasons, the data cannot be shared and preserved, the plan must include a justification detailing such reasons. Potential reasons may include privacy, confidentiality, security, IP rights considerations; size of data sets; cost of sharing and preservation; time required to prepare the dataset(s) for sharing and preservation.

10. Cover Sheet – Cost Proposal

(1) BAA Number	W911NF-23-S-0007
(2) Technical Area(s) (TA)(s)	
(3) Lead organization submitting proposal	
(4) Type of Business, Selected Among the Following Categories: “Large Business”, “Small Disadvantaged Business”, “Other Small Business”, “HBCU”, “MI”, “Other Educational”, or “Other Nonprofit”	
(5) Contractor’s Reference Number (if any)	
(6) Other Team Members (if applicable) and Type of Business for Each	
(7) Proposal Title	
(8) Technical Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(9) Administrative Point of Contact to Include: Title, First Name, Last Name, Street Address, City, State, Zip Code, Telephone, Fax (if available), Electronic Mail (if available)	
(10) Contract type/award Instrument Requested: specify	
(11) Place(s) and Period(s) of Performance	
(12) Total Proposed Cost Separated by Basic Award and Option(s) (if any)	
(13) Name, Address, Telephone Number of the Offeror’s Defense Contract Management Agency (DCMA) Administration Office or Equivalent Cognizant Contract Administration Entity, if Known	
(14) Name, Address, Telephone Number of the Offeror’s Defense Contract Audit Agency (DCAA) Audit Office or Equivalent Cognizant Contract Audit Entity, if Known	
(15) Date Proposal was Prepared	
(16) DUNS Number	
(17) TIN Number	
(18) CAGE Code	
(19) Proposal Validity Period [minimum of 180 days]	
(20) Cost Summaries Provided (Appendix B)	
(21) Size of Business in accordance with NAICS Code 541712	

11. Example of Prime Contractor/Subcontract Cost Element Sheet for Volume 2: Cost Proposal

Prime Contractor/Subcontractor Cost Element Sheet for Volume 2: Cost Proposal					
Complete a Cost Element Sheet for the Base Period and each Option Period					
COST ELEMENT	BASE	RATE	AMT		
DIRECT LABOR (List each labor category separately. Identify all Key Personnel by name.)	# of Hours	\$	\$		
TOTAL DIRECT LABOR			\$		
FRINGE BENEFITS	\$	%	\$		
TOTAL LABOR OVERHEAD	\$	%	\$		
SUBCONTRACTORS, IOTS, CONSULTANTS (List separately. See below table.)			\$		
MATERIALS & EQUIPMENT (List each material and equipment item separately.)	Quantity	\$ unit price	\$		
SOFTWARE & IP (List separately. See table below.)	\$	\$	\$		
TOTAL MATERIALS & EQUIPMENT			\$		
MATERIAL OVERHEAD	\$	%	\$		
TRAVEL (List each trip separately.)	# of travelers	\$ price per traveler	\$		
TOTAL TRAVEL			\$		
OTHER DIRECT COSTS (List each item separately.)	Quantity	\$ unit price	\$		
TOTAL ODCs			\$		
G&A	\$	%	\$		
SUBTOTAL COSTS			\$		
COST OF MONEY	\$	%	\$		
TOTAL COST			\$		
PROFIT/FEE	\$	%	\$		
TOTAL PRICE/COST			\$		
GOVERNMENT SHARE, IF APPLICABLE			\$		
RECIPIENT SHARE, IF APPLICABLE			\$		
SUBCONTRACTORS/IOTs) & CONSULTANTS PRICE SUMMARY					
A	B	C	D	E	F
SUB-CONTRACTOR IOT & CONSULTANT NAME	SOW TASKS PERFORMED *	TYPE OF AWARD	SUB-CONTRACTOR, IOT & CONSULTANT QUOTED	COST PROPOSED BY PRIME FOR SUBCONTRACTOR, IOT & CONSULTANT	DIFFERENCE (Column D - Column E) IF APPLICABLE
TOTALS					
*Identify Statement of Work, Milestone or Work Breakdown Structure paragraph, or provide a narrative explanation as an addendum to this Table that describes the effort to be performed.					

13. **Glossary of Acronyms:**

Term	Definition
α -nDCG	Alpha-Normalized Discounted Cumulative Gain
API	Application Programming Interface
CO	Contracting Officer
COTR	Contract Officer Technical Representative
F1	Harmonic Mean of Precision and Recall (Equally Weighted)
IC	Intelligence Community
ICD	Intelligence Community Directive
IP	Intellectual Property
PM	Program Manager
REASON	Rapid Explanation, Analysis, and Sourcing Online
RCQ	REASON Comment Quality
REQ	REASON Explanation Quality
RQS	REASON Quality Score
TA	Task Area
T&E	Test and Evaluation

14. References

- Intelligence Community Directive 203 Analytic Standards,
<https://www.dni.gov/files/documents/ICD/ICD%20203%20Analytic%20Standards.pdf>.
- Tradecraft Primer: Structured Analytic Techniques for Improving Intelligence Analysis,
<https://www.cia.gov/static/955180a45afe3f5013772c313b16face/Tradecraft-Primer-apr09.pdf>
- A Tradecraft Primer: Basic Structured Analytic Techniques,
<https://www.dia.mil/FOIA/FOIA-Electronic-Reading-Room/FileId/161442/>